ANE Armada Nowlit

CLIVE FACILITY CONCEPT PLAN

Presented By:
Armada Nowlit Energy Ltd.

Presented To:
Lacombe County

LACOMBE COUNTY

LSD 8-16-040-24 W4M,

Lacombe County, Alberta

1-403-990-2695
www.armada-nowlit.com
563 Hurricane Dr, Calgary, T3Z 3S8

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1.0 Purpose of Concept Plan

The purpose of this Concept Plan is to support Lacombe County's review of the proposed Armada Nowlit Clive Facility and the associated rezoning application for a defined development area within LSD 8, Section 16, Township 040, Range 24, West of the 4th Meridian (8-16-040-24 W4M) in Lacombe County, Alberta. The proposed development consists of an integrated natural gas-fired power generation facility and associated on-site modular data processing infrastructure within a compact, controlled site footprint.

This Concept Plan has been prepared in response to Lacombe County's direction that the next municipal step for the project is a rezoning application, supported by a concept plan and technical studies addressing environmental matters, site drainage, and traffic impacts. The Concept Plan is intended to provide the County with a clear planning framework for evaluating the proposed land use, site layout, access strategy, drainage approach, environmental considerations, compatibility measures, and the overall suitability of the proposed development in its rural context.

More specifically, this Concept Plan is intended to:

a) Describe the proposed development and its principal components, including power generation equipment, modular data processing units, associated utility connections, access, and ancillary site infrastructure;
b) identify the subject lands, surrounding context, and existing site conditions relevant to municipal review;
c) establish the overall site development concept, including the intended development footprint, access, circulation, setbacks, and buffering considerations;
d) summarize the planning, environmental, and operational considerations that support the suitability of the proposed location;
e) provide a framework for coordinating the supporting technical studies requested by Lacombe County, including environmental, drainage, and traffic-related materials; and
f) support subsequent County review processes, including Council presentation, public consultation, and any future development permit considerations following successful rezoning.

The proposed Clive Facility is intended to function as site-specific industrial development in a managed rural setting. The Concept Plan therefore focuses on demonstrating that the proposed development can be planned and operated in a manner that is orderly, technically supportable, and compatible with surrounding lands, while remaining subject to applicable provincial and municipal review requirements.

2.0 Planning Justification

The proposed Armada Nowlit Clive Facility is supportable from a planning and land use perspective as a compact, site-specific industrial development within a larger rural parcel in Lacombe County. The development is intended to accommodate integrated natural gas-fired power generation and associated on-site modular data processing infrastructure within a clearly defined project footprint, while allowing municipal review of siting, access, drainage, environmental considerations, and compatibility through the rezoning and subsequent development approval process.

2.1 Limited and Site-Specific Development

The proposed development is confined to an approximately 1.734 ha (4.28 ac.) facility area, together with a 0.049 ha (0.12 ac.) access road, for a total surveyed project area of 1.783 ha (4.40 ac.). Associated equipment includes selective catalytic reduction (SCR) systems, modular data processing containers, closed-loop liquid-cooling systems, electricity distribution systems, natural gas supply connection, internal access, fencing, and ancillary site services. The project is not proposed as a multi-lot industrial park, public commercial site, or general-purpose industrial subdivision. Rather, it is a single-purpose infrastructure development that should be evaluated as a site-specific land use request rather than a broad conversion of the surrounding rural area to conventional industrial development.

2.2 Efficient Infrastructure Siting

The Clive Facility has been planned to take advantage of an existing rural infrastructure context, including nearby road access and existing natural gas infrastructure. Fuel supply is intended to be provided through a 3-inch tie-in to an existing gas distribution pipeline, and electricity generated at the site will be used entirely on-site, with no export to the Alberta Interconnected Electric System proposed at this time. This supports efficient infrastructure siting and reduces the need for major off-site utility expansion.

The proposal also does not depend on urban-style infrastructure extensions, retail traffic, customer visitation, or high-volume daily employee movements. Instead, it functions more like utility-scale infrastructure in a rural setting, with the most significant transportation activity expected during construction and much lower traffic volumes during routine operation.

2.3 Rural Compatibility

The site is located in a rural area characterized by cultivated agricultural land, dispersed rural residences, and existing utility / energy-related infrastructure in the broader area. The Clive EPEA application identifies the regional land use context as predominantly

agricultural, interspersed with oil and gas infrastructure, farmsteads, and nearby gas-processing / compression facilities. The project can therefore be understood as a development within a working rural landscape, rather than in an undisturbed natural area.

Compatibility with surrounding lands is intended to be addressed through:

- a clearly defined and limited project footprint,
- site access planning,
- supporting technical studies,
- noise and air compliance measures,
- drainage management, and
- lighting, buffering, and overall site control.

2.4 Supported by Technical and Provincial Review

The planning justification for the rezoning is strengthened by the fact that the project is being advanced alongside technical assessment and provincial review processes. The supporting documents include the air dispersion modelling, noise impact assessment, environmental review, erosion and sediment control planning, emergency response planning, and reclamation plan.

2.5 Consistent with the County Review Process

Lacombe County has already confirmed that the next municipal step is a rezoning package supported by a concept plan and technical studies addressing environmental matters, site drainage, and traffic impacts. After review of those materials, the County will advise on next steps including Council presentation and public consultation.

The County's Land Use Bylaw also provides a framework for reviewing data processing centre and related industrial development with attention to matters such as fire safety, lighting, landscaping and buffering, noise attenuation, and mitigation of dust, traffic, noise, and visual impacts. This supports the conclusion that the project is one that can be reviewed and managed through the County's land use framework.

2.6 Statutory Policy Context and Site-Specific Land Use Rationale

The proposed Armada Nowlit Clive Facility is intended to be reviewed as a site-specific industrial development within a rural area of Lacombe County. The project is not proposed as a multi-lot industrial park, a public commercial development, or a subdivision-style conversion of the subject lands. Rather, it is a compact, controlled infrastructure development intended to accommodate integrated natural gas-fired power generation and associated on-site modular data processing infrastructure within a defined development area.

From a municipal planning perspective, the proposal should be considered in the context of the County's broader rural and agricultural land use framework. The project footprint occupies only a limited portion of the subject lands and is intended to remain confined to a clearly defined and secure operational area. The balance of the parcel is not proposed for broader industrial conversion through this Concept Plan.

The planning rationale for the proposal is based on the following land use considerations:

- the development is limited in size and site-specific in nature;
- the project does not create a multi-lot subdivision pattern;
- the development does not require urban-style municipal water or wastewater servicing;
- the project is intended to function as secure infrastructure rather than a public-facing commercial use;
- the site has been selected to take advantage of existing rural road access and nearby utility / energy-related infrastructure; and
- the development can be reviewed together with supporting technical studies addressing traffic, drainage, environmental considerations, noise, air emissions, and fire safety.

The proposed Clive Facility is distinct from conventional industrial park development. It does not involve multiple tenants, public visitation, retail activity, or ongoing heavy commercial traffic of the type typically associated with broader industrial subdivision development. Natural gas will be supplied through existing infrastructure, generated electricity is intended to be consumed entirely on-site, and routine operational traffic is expected to remain low following construction completion.

The proposal is also intended to support orderly rural development by concentrating the principal operational components of the project within a compact and internally organized footprint. By confining development to a limited area, the project minimizes unnecessary

land disturbance and reduces the likelihood of broader land use conflict across the remainder of the parcel.

Compatibility with surrounding rural lands is intended to be addressed through the overall design and review framework established by this Concept Plan and the supporting technical materials. The project is therefore being advanced as a technically supported and managed form of rural infrastructure development rather than an open-ended industrial land conversion.

For clarity, this Concept Plan does not propose a multi-lot subdivision, does not establish a general industrial entitlement over the entire parcel, and does not seek to create a broad precedent for conventional industrial park development in the surrounding rural area. The intent is to establish a planning framework for County consideration of a defined, site-specific development area only, with any future approvals to remain subject to Lacombe County's rezoning, public consultation, development permit, and other applicable review processes.

3.0 Project Overview

The proposed Armada Nowlit Clive Facility is an integrated distributed power generation and co-located modular data processing development located on privately owned land in Lacombe County, Alberta, legally described as LSD 8, Section 16, Township 040, Range 24, West of the 4th Meridian (8-16-040-24 W4M). Table 1 provides a project summary of the project.

3.1 Project Information

The facility is planned at an approximate gross installed capacity of 19.8 MW and electricity generated at the site is intended to be consumed entirely on-site, with no export to the Alberta Interconnected Electric System (AIES) proposed at this time.

Table 1: Project Summary

Item	Description
Project Name	Armada Nowlit Clive Facility
Location	LSD 8-16-040-24 W4M, Lacombe County, Alberta
Project Type	Integrated natural gas-fired power generation and on-site modular data processing facility
Gross Installed Capacity	Approximately 19.8 MW
Power Use	Generated electricity consumed entirely on-site
AIES Export	No export proposed at this time
Site Character	Compact, secured, single-purpose industrial infrastructure
Development Form	Single-site industrial development within one managed operational area; not a multi-lot subdivision
Phasing	No staged subdivision is proposed; development is intended to proceed as a single phase, subject to regulatory approvals
Primary Traffic Profile	Construction-phase equipment and material deliveries; low ongoing operational traffic
Water Servicing	No municipal water servicing is proposed
Wastewater / Sanitary Servicing	No municipal sanitary servicing is proposed; sanitary requirements for construction and operations will be addressed through site-specific temporary or permanent servicing arrangements as confirmed through detailed design
Fire Protection	Fire protection measures and emergency response requirements will be addressed through the site Fire Safety Plan and County / emergency services review process

3.2 Regulatory Framework and Required Approvals

This section outlines the primary regulatory agencies, their scope of review, and the associated approvals required for the construction and operation of the Clive facility. Table 2 identifies the principal approval authorities, their review scope, and the status of key regulatory and municipal approvals for the proposed Clive Facility.

Table 2: Regulatory Framework and Required Approvals

Agency	Jurisdiction & Scope of Review	Status
Alberta Utilities Commission (AUC)	Regulates the generation, transmission, and distribution of electricity in Alberta under the Hydro and Electric Energy Act	Submitted
Alberta Environment and Protected Areas (AEPA)	Environmental Protection and Enhancement Act (EPEA)	Submitted
Alberta Ministry of Arts, Culture and Status of Women (via OPAC)	Regulates the protection of archaeological, paleontological, Indigenous, and historical sites under the Historical Resources Act (HRA)	Approved, please refer to *Appendix XIII: Historical Resources Act Approval*
Lacombe County	Municipal development authority under the Municipal Government Act and the Lacombe County Land Use Bylaw	Current Application Stage

4.0 Site Context and Existing Conditions

The site is situated approximately 5.5 kilometers (straight-line distance) of the Village of Clive, which equates to an 8.5 kilometers driving distance. The facility is accessed from the surrounding rural municipal road network via Range Road 243, a paved Secondary Local Main Road. The broader area is characterized by a rural agricultural landscape with cultivated farmland, dispersed rural residences and farmsteads, municipal road infrastructure, and existing utility and energy-related development in the region. Figure 1 below provides the local context for the facility, including surrounding transportation routes, adjacent parcels, existing energy infrastructure, and nearby land uses.

Figure 1: Local Context Map

4.1 Existing Land Use

The subject lands are located within a rural agricultural area of Lacombe County and are currently characterized by cultivated agricultural use within a larger privately owned parcel. The proposed Clive Facility footprint has been selected within an already modified agricultural setting and does not require the conversion of an undeveloped natural landscape or the establishment of a new settlement pattern.

The surrounding area is generally characterized by agricultural land, dispersed farmsteads and rural residences, municipal road infrastructure, and existing utility / energy-related

development in the broader area. In this context, the subject lands form part of a working rural landscape rather than an isolated natural area or an urbanizing fringe.

4.2 Topography, Soils, and Drainage

The subject lands are generally flat to gently rolling, with no steep slopes, major terrain constraints, coulees, or unstable landforms identified within the proposed development footprint. The broader site setting is consistent with an agricultural landscape characterized by gently rolling prairie terrain and minor agricultural drainage patterns typical of the region.

Figure 2 illustrates the AGRASID soil mapping for the project area, including AGRASID Polygon ID 13725, which provides site-specific context for the mapped agricultural soil unit, associated soil characteristics, and related suitability within the proposed development area.

Drainage within the site is characterized by minor agricultural drainage features only. Based on the information reviewed to date, there are no identified intermittent or permanent drainage channels crossing the proposed development footprint and no obvious terrain constraints that would preclude development of the site.

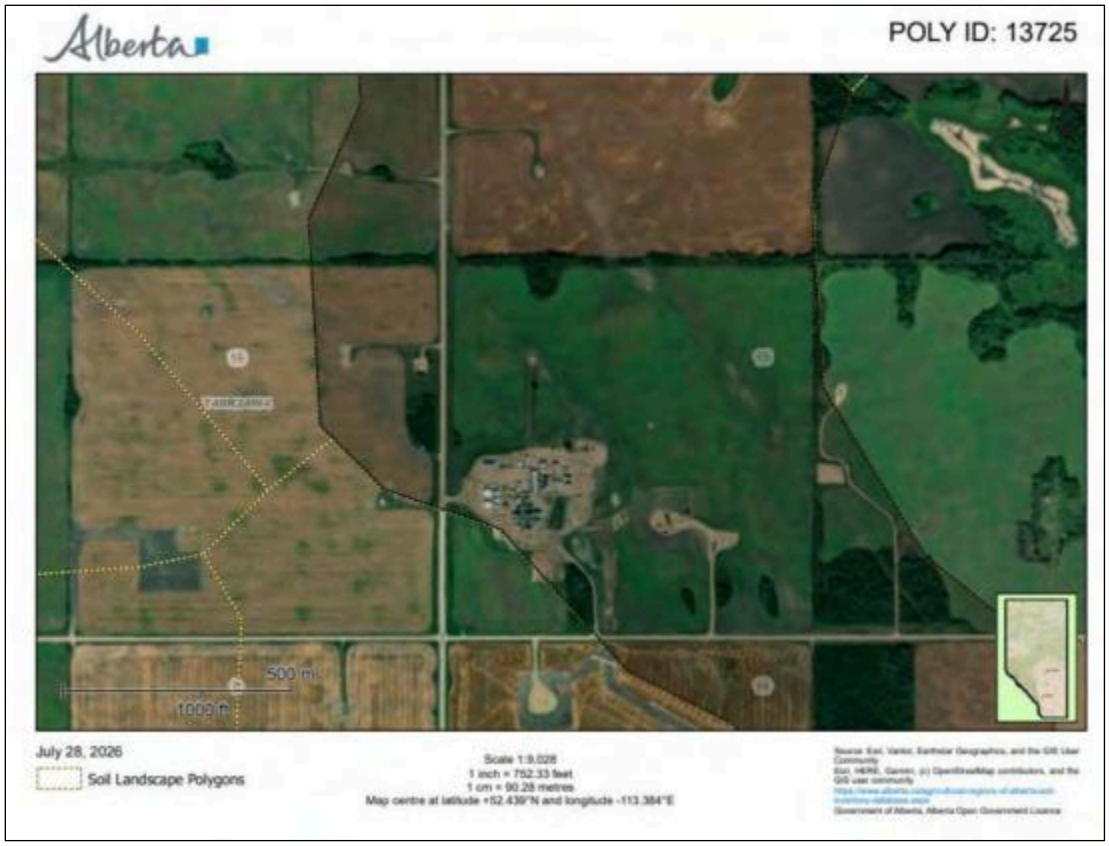


Figure 2: AGRASID Soil Data

4.3 Surface Water and Wetland Context

Based on desktop review, no mapped wetland or watercourse is identified within the proposed facility disturbance footprint; however, a wetland feature is present east of the facility boundary and will be field verified prior to ground disturbance. Figure 3 presents the Alberta Merged Wetland Inventory mapping for the project area and identifying nearby wetland context east of the facility boundary.

The nearest named waterbody is identified as the Parlby Creek / Rosebud River system, located several kilometers from the site, with no direct hydrological connection to the project footprint. This suggests that, while drainage and runoff management remain important design considerations, the site itself is not constrained by direct disturbance to mapped wetlands or watercourses within the proposed development area.

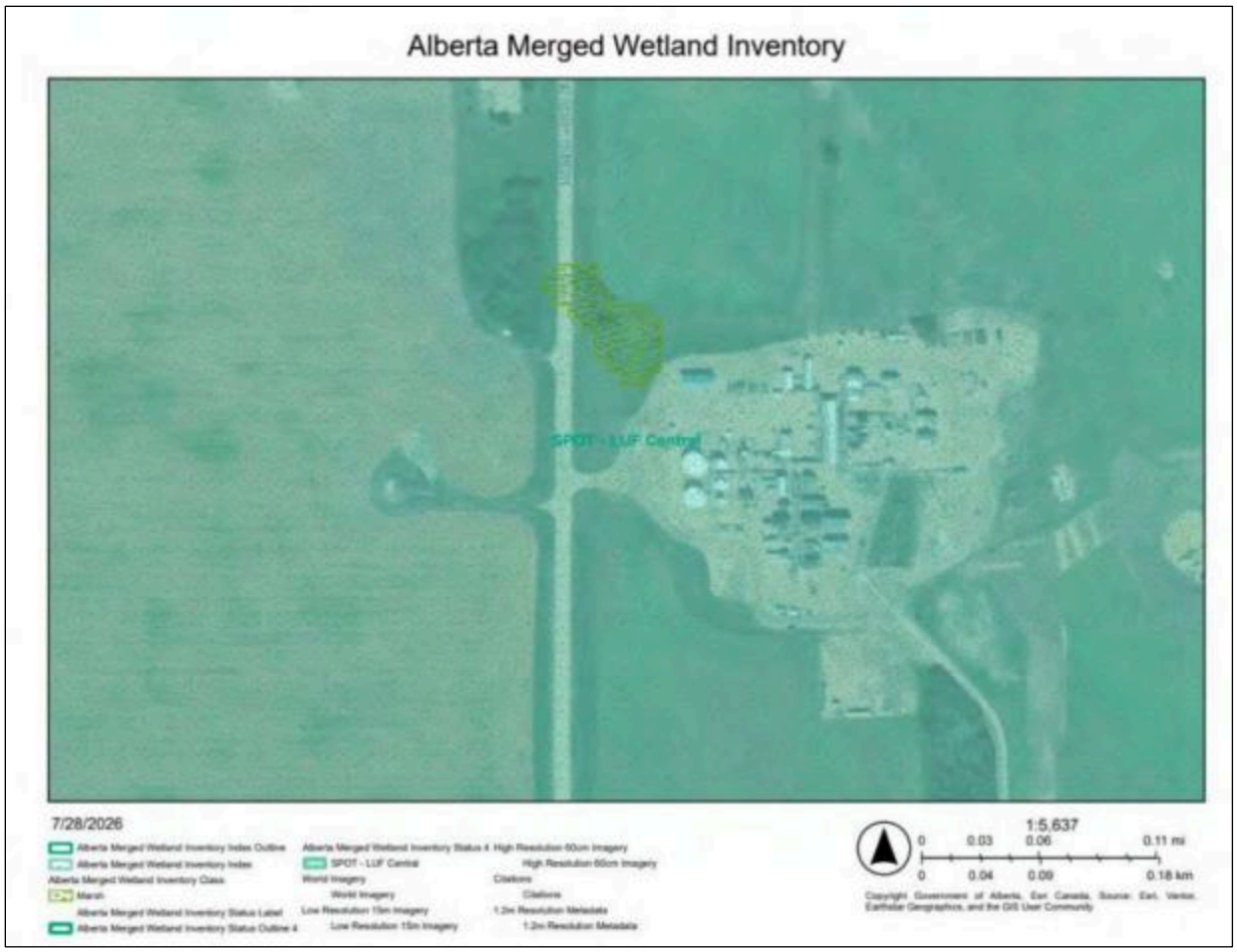


Figure 3: Alberta Merged Wetland Inventory

4.4 Groundwater and Hydrogeological Context

The Clive application describes the local hydrogeological setting as being associated with glacial till and localized surficial deposits, with shallow groundwater resources in the broader region commonly supporting private wells. However, the desktop review summarized in the application indicates that no registered water wells or public groundwater infrastructure intersect the proposed footprint, and no springs, dugouts, or visible groundwater discharge features were identified within or adjacent to the site. Based on the information reviewed to date, no unusual hydrogeological sensitivities have been identified that would preclude the proposed development. This hydrogeological overview is intended to address site suitability and environmental sensitivity at the concept planning level. Confirmation of any operational water sourcing, if required, will be addressed separately through detailed design and project servicing arrangements, as applicable to the final facility design.

4.5 Vegetation, Wildlife, and Habitat

The site is actively cultivated cropland with limited native vegetation and low habitat value. No key wildlife habitat, riparian habitat, native prairie, or environmentally significant areas were identified within the proposed disturbance footprint.

Appendix VI: Environmental Evaluation using the Fish and Wildlife Internet Mapping Tool (FWMIS) and Alberta Conservation Information Management System (ACIMS) did not identify any confirmed records of the Bald Eagle, Sharp-tailed Grouse, or other species-at-risk occurrences within the project footprint. However, Alberta wildlife sensitivity mapping reviewed through AbaData identified that the site overlaps broad, screening-level sensitive ranges for both the Bald Eagle and Sharp-tailed Grouse leks. Importantly, these AbaData mapping layers represent only screening-level sensitivities; they do not confirm the actual presence of active nests, leks, or critical habitat on site.

Based on the cultivated land use, absence of confirmed sensitive wildlife features within the footprint, and implementation of standard wildlife protection measures, no significant adverse environmental effects to vegetation, wildlife, or habitat are anticipated.

4.6 Nearby Residences and Receptors

The surrounding area includes dispersed rural residences and farmsteads typical of the broader agricultural region. While the site is not located within an urban settlement area, nearby receptors remain relevant to project planning, particularly for noise, lighting, traffic, and visual compatibility. Please refer to *Appendix I: Land Sketch Plan* for the receptor map.

4.7 Site Context Conclusion

Overall, the subject lands can be characterized as a modified agricultural site within a broader rural working landscape. Existing conditions indicate a compact development area on cultivated land, with generally manageable topography, no mapped wetlands or watercourses within the footprint, limited ecological sensitivity, and an infrastructure context that supports site access and utility integration. Based on the information reviewed to date, the site appears suitable for consideration of the proposed development, subject to the detailed technical review and mitigation measures that will accompany the County's rezoning process.

5.0 Development Concept

The proposed Armada Nowlit Clive Facility is planned as a compact, secured, single-purpose industrial development within a defined project area on the subject lands. The development concept is based on concentrating all principal infrastructure required for on-site power generation and associated data processing within a controlled footprint, while minimizing unnecessary land disturbance and supporting orderly site planning in a rural setting.

5.1 Development Area

The proposed development is intended to remain confined to a clearly defined site area. The development is not intended to establish a multi-lot industrial pattern or a broader subdivision framework, but rather a single integrated facility within one managed operational area. Figure 4 shows the surveyed development area and sketch plan for the proposed facility, illustrating the defined operational footprint and its relationship to the surrounding parcel.

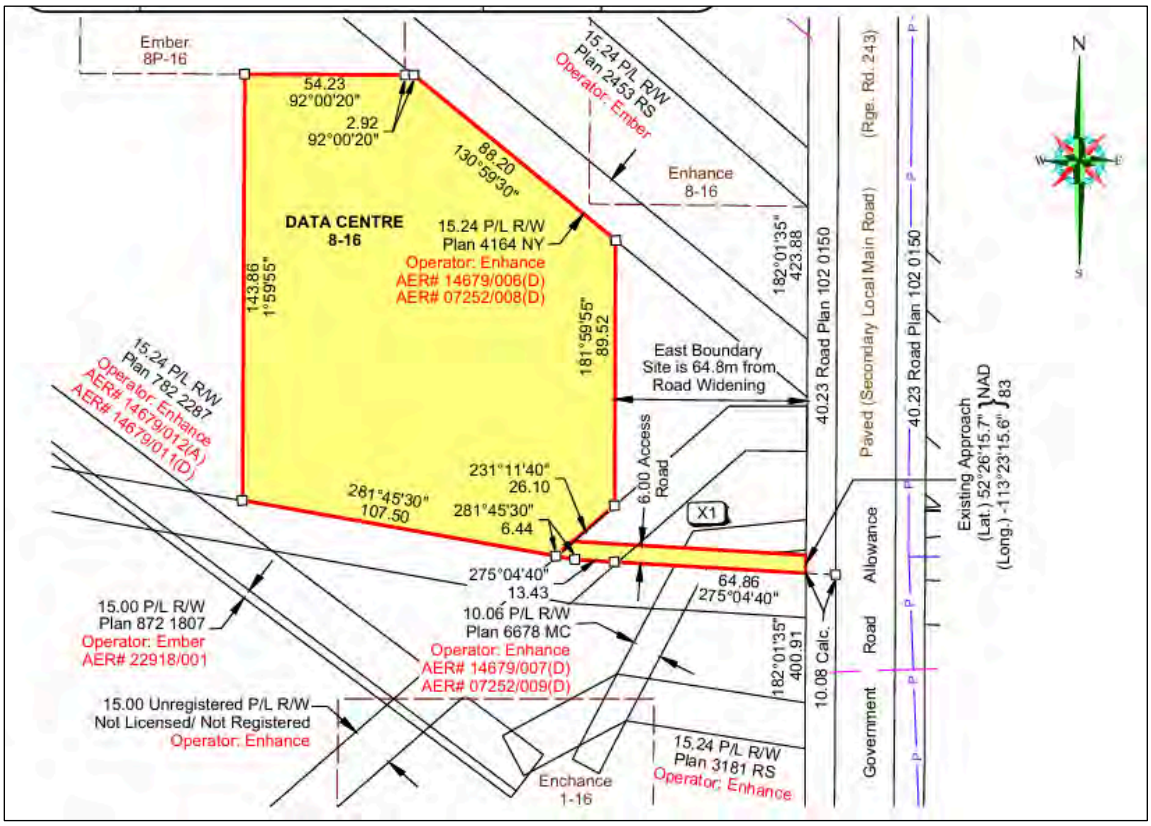


Figure 4: Surveyed Development Area

5.2 Site Layout and Functional Organization

The layout of the facility is provided in Figure 5 to support safe, efficient, and logical operation of the site.

The site layout is intended to group related operational components in a way that supports:

- efficient infrastructure connections,
- safe equipment spacing and access,
- manageable construction sequencing,
- operational security, and
- compatibility with surrounding lands through a compact overall form.

Figure 5: Site Plan

5.3 Access, Circulation, and Site Operations

The development concept includes controlled access from the surrounding municipal road network and internal circulation sufficient to support construction, maintenance, and operational needs.

Internal circulation and laydown areas are intended to support both construction-phase logistics and safe long-term operation. The overall design objective is to maintain a site that is functional without creating unnecessary external traffic or operational sprawl.

5.4 Setbacks, Buffers, and Site Definition

The development concept is based on a clearly defined and secured site footprint that maintains separation from parcel boundaries, the public road interface, and surrounding rural lands.

Buffering and screening measures may include fencing, controlled gate access, orderly equipment arrangement, site grading, and landscaping or visual screening where required through the County review process. These measures are intended to support compatibility with surrounding lands and to ensure that the site presents a controlled and well-defined industrial form rather than an open or sprawling rural disturbance area.

5.5 Utilities and Supporting Infrastructure

The Clive Facility is designed to operate as a self-contained industrial site with highly efficient utility integrations designed to minimize its regional environmental footprint. The facility's power generation fleet comprises nine MWM TCG3020 natural gas generators, each rated at 2.2 MW, which operate in tandem with associated modular data processing containers. The generator units and the data processing infrastructure employ an advanced closed-loop hydro-cooling configuration. Therefore, source capacity is easily satisfied by a single commercial delivery truck during the commissioning phase, requiring no municipal draw, permanent storage tanks, or local aquifer reliance.

The water requirements for the development are exceptionally modest and strictly limited to the initial commissioning phase. The total volume of fluid required is restricted to the initial fill of the engine jackets, intercoolers, and container cooling loops, which demands a localized volume of approximately 250 to 300 Liters of water-glycol coolant mixture per unit. All initial cooling fluids and subsequent minor top-ups during scheduled maintenance cycles will be trucked directly to the site by licensed commercial service providers. Consequently, development requires no connection to municipal water infrastructure, nor does it require the drilling of local groundwater water wells.

All electricity generated by the asset will be consumed entirely on-site by the co-located data processing infrastructure, meaning no power will be exported to the Alberta Interconnected Electric System (AIES). This localized consumption model eliminates the need for any major off-site electrical transmission line or sub-station corridor expansions. Due to the highly automated and unstaffed nature of routine operations, permanent sanitary infrastructure is unnecessary; all temporary sanitary requirements for visiting inspection and maintenance personnel will be managed via contracted portable sanitation units serviced in accordance with provincial regulations.

6.0 Transportation and Access

The proposed Armada Nowlit Clive Facility will be accessed from the surrounding municipal road network and is intended to function as a controlled-access industrial site within a rural setting in Lacombe County. The site is legally described as LSD 8-16-040-24 W4M, with access proposed from Range Road 243 by way of a new permanent access connection serving the development area.

From a transportation perspective, the project is expected to have two distinct activity periods:

1. construction-phase traffic, consisting of temporary delivery of equipment, materials, workers, and service vehicles; and
2. operational-phase traffic, consisting primarily of low-frequency maintenance, inspection, and occasional service access.

Prior to any construction approach, the project team will submit detailed engineering designs to the Lacombe County Operations Department for formal approval. This intersection approach will be constructed to meet all municipal design standards outlined in Lacombe County Policy OP(29) Approaches. To mitigate local traffic impacts, a formal Traffic Accommodation Plan will be compiled and submitted to the County for review prior to the initiation of any physical construction or material delivery phases. This plan will detail specific safety protocols including temporary construction signage positions, flagger deployments during heavy equipment arrivals, and strict delivery scheduling designed to minimize friction with local agricultural operations and regular rural traffic.

6.1 Overview

Transportation access to the proposed Clive Facility will utilize the existing regional and municipal road system. This approach minimizes the need for broader roadway expansion and supports the project's overall planning objective of concentrating activity within a compact development footprint. Consistent with the project's modular design, transportation effects are expected to be most noticeable during the temporary construction phase, with only minimal traffic generated once the facility is operational. To ensure complete regulatory compliance, all heavy vehicle logistics, over-dimensional load coordination, and axle-weight permitting will be managed directly through RoaData in accordance with Lacombe County requirements.

6.2 Regional Access Route

Transportation access to the proposed Clive Facility will utilize the existing regional and provincial highway systems before transitioning to local municipal corridors near the

project site. Equipment, materials, and structural components originating from the Calgary staging area (563 Hurricane Drive) will access the Trans-Canada Highway (AB-1 East) and transition to Highway 2 northbound as the primary freight corridor. Heavy vehicles will travel north on Highway 2 into Red Deer County, taking Exit 391 (McKenzie Road / Township Road 374). From there, the route proceeds east via Highway 595 (AB-595 E) and Highway 11 (AB-11 E) before crossing into Lacombe County. The final approach segment turns directly onto Range Road 243, terminating at the facility site (near 40205 Range Road 243). Range Road 243 is designated by Lacombe County as a paved Secondary Local Main Road, built to accommodate standard commercial vehicle configurations.

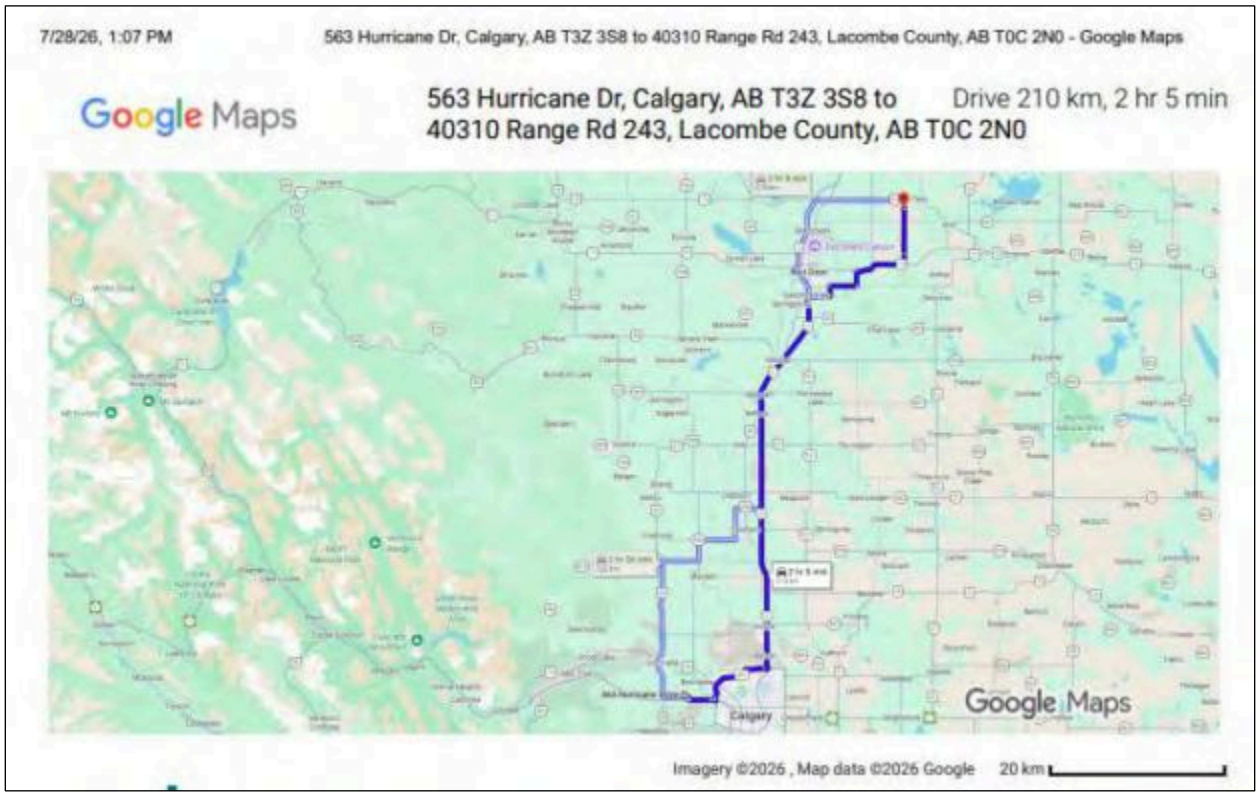


Figure 6: Transportation and Access Route Map

6.3 Site Access and Approach

Access to the Clive Facility will occur via a controlled connection from Range Road 243. The site access is intended to support construction traffic, equipment delivery, operations personnel, and emergency response. As part of site development, minor access improvements may be undertaken as required to ensure safe ingress and egress, including gravel reinforcement, localized grading, and approach construction suitable for the anticipated vehicle types and turning movements.

6.4 Construction Phase Traffic

Construction activities will generate temporary traffic associated with delivery of materials, equipment, and construction personnel. Construction deliveries are expected to include the following:

1. Heavy Equipment
   - excavators
   - loaders
   - cranes
   - telehandlers
2. Construction Materials and Equipment
   - structural steel
   - concrete for foundations and equipment pads
   - generator units and electrical switchgear
   - modular data centre containers
   - transformers
   - natural gas piping
   - electrical conduit and cabling
   - gravel and engineered fill
   - topsoil for final grading and reclamation

Limited vegetation clearing debris or other minor construction waste may also be removed from site as required. The majority of heavy traffic is therefore expected to occur during site preparation, foundation and pad construction, equipment delivery, and commissioning.

6.5 Construction Traffic Volumes

At the concept planning level, the anticipated construction traffic volumes are considered relatively modest for a rural industrial development of this scale. Figure 3 summarizes estimated construction traffic volumes for peak and typical activity periods, including weekly, hourly, and total project load assumptions.

Table 3: Construction Traffic Volumes

Traffic Metric	Estimated Volume
Peak weekly loads	30–60 loads per 7-day period
Typical weekly loads	10–30 loads
Peak hourly traffic	Up to 2–4 loads per hour
Typical hourly traffic	0–1 loads per hour
Total project loads	Approximately 250–450 loads

Traffic levels are expected to fluctuate depending on construction activities such as foundation placement, equipment delivery, site grading, and final site preparation. These volumes support the conclusion that project traffic is temporary and construction-driven, rather than a long-term burden on the rural road network.

6.6 Construction Schedule

The construction period is expected to be approximately one month due to the facility's reliance on prefabricated modular infrastructure, minimal site grading requirements, and the absence of complex structural buildings, deep municipal utility trenching, or off-site electrical transmission expansions. Construction hauling activities are expected to occur during standard daytime construction hours consistent with rural development practices. For planning purposes, the anticipated schedule is as follows:

This table outlines the anticipated construction start, construction completion, and commercial operation timing for the proposed facility, subject to required approvals.

Table 4: Anticipated Construction Schedule

Schedule Component	Expected Timing
Construction starts	March 2027
Construction completion	April 2027
Commercial operation date	April to May 2027

Typical hauling hours are expected to be:

- Monday to Friday
- approximately 7:00 a.m. to 6:00 p.m.

Limited Saturday hauling may occur during peak construction periods if required. No nighttime hauling is anticipated as part of normal project activity.

6.7 Truck Types and Configurations

Construction traffic is expected to utilize standard commercial construction vehicles appropriate for rural infrastructure development. Anticipated vehicle types include:

Table 5 summarizes the anticipated construction vehicle types, typical configurations, and primary purposes associated with material delivery, equipment transport, and site support.

Table 5: Anticipated Construction Vehicle Types and Configurations

Truck Type	Typical Configuration	Purpose
Dump trucks	Tandem or truck-and-pup (3–5 axle)	Gravel and fill transport

Ready-mix trucks	Tandem or triaxle	Concrete delivery
Tractor-trailer semi units	5-axle highway configuration	Equipment and generator transport
Flatbed / step-deck trailers	5-axle semi	Container transport
Lowboy trailers	Heavy equipment transport	Delivery of cranes or large equipment
Pickup trucks / vans	Light duty	Contractors, supervision, maintenance staff

6.8 Operational Phase Traffic

Once construction is complete and the facility enters normal operations, traffic volumes are expected to be limited. Operational traffic will consist primarily of:

- periodic maintenance personnel;
- inspection visits;
- occasional service vehicle access; and
- periodic operational support access.

No regular hauling of bulk materials or routine heavy trucking is anticipated during operations. Natural gas will be supplied by pipeline, and operations are not expected to require routine fuel delivery, aggregate transport, or ongoing large equipment movement. Operational traffic is therefore expected to be limited primarily to light-duty vehicles, with only occasional service or maintenance-related deliveries.

6.9 Oversize Loads, Road Impacts, and County Coordination

The modular nature of the Clive Facility significantly reduces the likelihood of extraordinary heavy-haul requirements. Large components such as generators, transformers, and containers are expected to be delivered using standard commercial transport configurations commonly accommodated on the regional transportation network. However, if any oversized loads are required, the project proponent will obtain all applicable transport permits and coordinate with relevant authorities as necessary.

Based on the anticipated construction traffic volumes and the use of provincial highways for most of the transport route, impacts on municipal roads are expected to be manageable. Nevertheless, Lacombe County may determine through its review process that additional transportation-related requirements are appropriate, such as:

- traffic review or confirmation of anticipated volumes;
- approved haul route conditions;
- road condition assessments before and after construction;
- localized road or approach improvements; and/or

- road use or maintenance-related conditions during construction.

The project proponent will work cooperatively with Lacombe County to address any transportation requirements identified through the municipal review process.

6.10 Transportation Summary

The transportation strategy for the Clive Facility has been designed to minimize impacts on the municipal road network by:

- utilizing the existing regional and municipal road system;
- concentrating heavy traffic within the temporary construction phase;
- limiting long-term operational traffic volumes;
- using standard commercial vehicle types suited to rural infrastructure development;
- maintaining controlled site access from Range Road 243.

Overall, the proposed transportation and access strategy supports the conclusion that the Armada Nowlit Clive Facility can be served in a manner that is functional, orderly, and compatible with the surrounding rural road network and land use context. Where required by Lacombe County, the project proponent will coordinate on matters such as approach design, haul route confirmation, road use conditions, pre- and post-construction road condition review, and any mitigation measures reasonably required to protect the municipal road network during construction. This coordination is expected to occur as part of detailed design and pre-construction planning rather than as a change to the overall site concept.

7.0 Drainage and Stormwater Management

The proposed Armada Nowlit Clive Facility is located on lands characterized by flat to gently rolling terrain within a rural agricultural landscape. Existing site conditions indicate minor agricultural drainage patterns typical of cultivated land, with no defined intermittent or permanent watercourses within the proposed development footprint and no mapped wetlands or waterbodies within the site area. In this context, the drainage and stormwater strategy for the project is based on maintaining the site's existing hydrologic function, managing runoff within the local catchment, and ensuring that development does not create adverse impacts on adjacent lands or downstream drainage conditions.

The proposed development occupies a compact and defined footprint within a broader rural parcel context. As a result, the overall hydrologic function of the site is expected to remain largely unchanged outside the immediate disturbed area. The drainage strategy therefore focuses on practical site design measures that preserve existing drainage behavior, maintain downstream function, and avoid the creation of new concentrated discharge conditions.

7.1 Existing Drainage Conditions

The subject lands currently function within a typical agricultural drainage regime characterized by shallow overland flow, localized infiltration, and drainage toward existing rural runoff pathways. The site does not contain significant topographic depressions, steep slopes, coulees, or defined channel systems that would materially constrain development. Existing drainage conditions are therefore considered manageable through conventional grading and stormwater design measures appropriate to a compact rural industrial site.

The key drainage considerations for the site are to:

- maintain existing drainage directions where practicable,
- preserve downstream conveyance function,
- limit increases in effective imperviousness, and
- manage runoff through grading, infiltration, and localized surface control rather than extensive engineered detention systems.

7.2 Development Drainage Catchment

The proposed Clive Facility occupies only a limited and clearly defined portion of the subject lands. Because the project footprint is compact relative to the overall rural parcel context, post-development drainage conditions are expected to remain generally consistent with the existing site drainage regime, provided appropriate grading and runoff management measures are implemented.

Stormwater generated within the development area will be managed within the local site catchment and directed in a controlled manner toward existing drainage pathways consistent with surrounding site conditions. The development is not intended to introduce new drainage outlets, channelized discharges, or material alterations to downstream hydrologic patterns.

Figure 7: Conceptual Drainage and Stormwater Management Plan

7.3 Pre-Development and Post-Development Runoff Objective

The core drainage objective for the site is that post-development runoff conditions remain functionally consistent with pre-development conditions. In practical terms, this means the site should be designed so that:

- post-development runoff does not create adverse impacts on adjacent lands,
- runoff rates and volumes remain manageable within the rural drainage context,
- natural drainage pathways remain functional, and
- the project does not create new erosion, ponding, or concentrated discharge issues.

The limited scale of the development footprint, combined with the use of gravel surfaces, open site areas, and localized infiltration opportunities, supports a stormwater strategy that is proportionate to the site and compatible with the surrounding agricultural landscape.

7.4 Stormwater Management Approach

The stormwater management approach for the Clive Facility is expected to rely on a combination of:

- surface grading to direct runoff in a controlled manner,
- localized infiltration into surrounding soils where appropriate,
- temporary surface storage within gravelled yard areas where feasible,
- maintenance of existing drainage directions where practicable, and
- controlled runoff conveyance toward existing drainage pathways.

No major urban-style stormwater system is anticipated to be required for the development. Rather, the site is expected to use a limited-scope rural stormwater strategy appropriate to a compact industrial development with relatively modest impervious coverage and a broader surrounding area that remains in a rural condition.

7.5 Minor and Major Drainage Routes

The drainage design for the site should recognize both minor and major stormwater pathways.

Minor drainage will manage normal rainfall events through grading, sheet flow across gravel or stabilized surfaces, and localized infiltration.

Major drainage during larger storm events will be directed toward the site's existing downstream drainage context without introducing unsafe or concentrated discharge conditions. Existing rural drainage pathways should remain unobstructed so that stormwater can continue to move through the landscape in a manner generally consistent with current conditions.

This approach provides a clear planning basis for site drainage and supports orderly site development without reliance on disproportionate engineered infrastructure.

7.6 Construction-Phase Erosion and Sediment Control

Construction represents the period of highest risk for sediment transport, soil disturbance, and localized drainage disruption. For that reason, the drainage strategy for the Clive Facility will include construction-phase erosion and sediment control measures designed to protect adjacent lands and downstream drainage features until final stabilization is achieved. These measures may include:

- stabilized construction entrances,
- silt fencing or equivalent perimeter controls,
- controlled stockpile areas,

- temporary berms or sediment control measures,
- staged grading and progressive stabilization, and
- protection of disturbed soils until final grading and surface treatment are complete.

The objective during construction is to maintain orderly runoff conditions, prevent sediment migration, and avoid temporary adverse effects associated with exposed soils or incomplete grading.

7.7 Downstream Drainage Protection

A key principle of the project drainage strategy is that the development will not introduce new concentrated discharge flows or create downstream drainage impacts that would not otherwise occur under existing site conditions. The compact footprint, limited disturbance area, and proportionate grading and stormwater measures are intended to ensure that downstream lands continue to function within the broader agricultural drainage context as they do today.

This is an important land use consideration because it supports compatibility with adjacent rural lands and confirms that the project can be developed without shifting drainage problems onto neighboring properties.

8.0 Environmental Management Framework

The proposed Armada Nowlit Clive Facility is intended to operate within a comprehensive environmental management framework that integrates site design, emissions controls, monitoring, drainage management, spill prevention, and operational procedures appropriate to a compact rural industrial development. The overall objective is to ensure that the project can be constructed, operated, and maintained in a manner that is compatible with surrounding lands and responsive to applicable environmental performance requirements.

The facility is planned as a contained and controlled infrastructure site with defined operational areas, identified emission sources, limited traffic during operations, and no public-facing use. This supports a focused environmental management approach in which the principal environmental considerations are known and can be addressed through design, mitigation, monitoring, and ongoing site management.

8.1 Air Emissions Management

To ensure strict compliance with provincial environmental criteria, an Air Quality Dispersion Modelling Assessment was completed for the Clive Power Project by Calvin Consulting Group Ltd, provided in *Appendix II: Air Quality Assessment*. using the U.S. EPA AERMOD v.24142 dispersion model in accordance with the 2021 Alberta Air Quality Model Guideline (AQMG). The assessment specifically evaluated ground-level Nitrogen Dioxide (NO_2) concentrations associated with the continuous operation of the facility's stationary combustion alongside ambient regional background concentrations and neighboring industrial emissions. Ambient background values were derived from historical monitoring data at the Caroline Monitoring Station, establishing a one-hour background concentration of 9.0 µg/m^3 and an annual background concentration of 3.7 µg/m^3.

The dispersion modelling results demonstrate that all maximum predicted ground-level NO_2 concentrations comfortably comply with the applicable Alberta Ambient Air Quality Objectives (AAAQOs) at and beyond the project fenceline. For the short-term averaging period, the reported ninth-highest predicted one-hour average ground-level NO_2 concentration (including background) is 183.7 µg/m^3, which remains well below the strict AAAQO limit of 300 µg/m^3. This maximum concentration is localized approximately 509 meters east-southeast of the Gen3 exhaust stack. For the long-term averaging period, the maximum predicted annual ground-level NO_2 concentration (including background) is 19.5 µg/m^3, remaining well within the mandatory AAAQO annual threshold of 45 µg/m^3 at a location roughly 541 meters east-southeast of the stack. Based on these rigorous

engineering estimates, the assessment concluded that no significant air quality impacts will occur in association with the facility's operations.

8.2 Noise Management

To ensure acoustic compatibility with nearby rural residences, a comprehensive Noise Impact Assessment (NIA) was conducted for the Clive Facility by aci Acoustical Consultants Inc., provided in *Appendix IV: Noise Impact Assessment*. The assessment modeled Baseline, Application, and Cumulative Case conditions against the strict permissible sound levels (PSLs) established by Alberta Utilities Commission (AUC) Rule 012. The NIA concluded that the cumulative existing and project-related noise levels, inclusive of the average ambient sound level of 35 dBA, will remain strictly below the AUC Rule 012 nighttime PSL of 40 dBA for all residential receptors.

Furthermore, while the modeling projected that dBC sound levels will be 20 dB greater than the dBA sound levels, the overall baseline dBA noise levels will remain below 30 dBA for all locations. As a result, it is not anticipated that there will be any issues with low-frequency tonal noise for nearby residents. During the facility's construction phase, noise will be rigorously mitigated by conducting construction activities exclusively between the hours of 07:00 and 22:00, ensuring all internal combustion engines are fitted with appropriate muffler systems, and actively advising nearby residents of significant noise-causing events.

8.3 Stormwater, Runoff, and Site Drainage

Stormwater and runoff management form an important part of the project's environmental framework. As described in Section 7.0, the site is intended to use a limited-scope rural drainage strategy based on controlled grading, minor and major drainage pathways, localized infiltration / surface storage, and construction-phase erosion and sediment control. This approach is intended to preserve existing hydrologic function and avoid adverse off-site impacts.

The environmental management objective is to ensure that disturbed areas are stabilized, runoff is managed in an orderly manner, and sediment transport is controlled during construction and operation. These measures are central to protecting adjacent lands, roadside drainage systems, and the broader rural drainage context.

8.4 Soil and Surface Protection

The project will be developed within a defined footprint in order to limit unnecessary disturbance of surrounding lands. Soil and surface protection measures are expected to include:

- clearly defined disturbance limits,

- controlled construction access and laydown areas,
- topsoil stripping and storage where required,
- stabilization of disturbed areas,
- careful handling of materials and equipment, and
- site restoration and reclamation planning following project cessation.

These measures are important not only for construction management, but also for preserving long-term land capability and reducing the risk of erosion, compaction, or contamination associated with uncontrolled site activity.

8.5 Spill Prevention and Response

Because the facility will contain mechanical, electrical, and operational equipment within a defined industrial footprint, spill prevention and response are a key component of the environmental framework. The management approach is expected to include:

- designated operational and storage areas,
- inspection and maintenance procedures,
- containment and housekeeping practices,
- controlled response protocols in the event of a release, and
- record keeping and corrective action where required.

The purpose of this approach is to reduce the likelihood of accidental releases and to ensure that, if a release occurs, it can be addressed promptly and in a manner that minimizes risk to soils, drainage pathways, and surrounding lands.

8.6 Inspection, Monitoring, and Operational Management

A strong environmental management framework depends not only on initial design, but also on ongoing operational oversight. For the Clive Facility, this is expected to include:

- routine equipment inspection,
- maintenance of emissions-related systems,
- monitoring of drainage and site conditions,
- corrective action where performance issues are identified, and
- periodic review of site controls over the life of the facility.

This operating approach supports environmental performance by making site management an active and continuous part of the project rather than a one-time design exercise.

8.7 Reclamation and Long-Term Stewardship

The environmental management framework for the project also extends beyond active operations. The facility is intended to remain within a defined footprint and to be capable of decommissioning and site restoration at the end of its operating life. This includes removal of above-grade infrastructure, treatment of disturbed areas, and restoration measures appropriate to the long-term land use context.

9.0 Lighting, Landscaping, and Screening

The design framework for the Clive Facility balances operational efficiency, site safety, and rural compatibility. To mitigate the visual footprint of the facility on adjacent agricultural lands and nearby rural receptors, a comprehensive design interface has been established.

9.1 Industrial Lighting Design and Nuisance Mitigation

To eliminate off-site light spill, glare, and night-sky disruption, all permanent exterior lighting for the Clive Facility will strictly adhere to Dark Sky compliance principles and Lacombe County Land Use Bylaw standards.

- All exterior illumination will utilize monochromatic, low-glare LED fixtures with an absolute color temperature restriction of 3000K or lower. High-intensity floodlighting is prohibited.
- Every light fixture will feature total, sharp-cutoff shielding (International Dark-Sky Association approved). Fixtures will be oriented downward and inward toward the internal gravel pathways and equipment pads.
- Under routine night operations, primary illumination will remain off or dimmed, triggering to full operational brightness only during active on-site maintenance or emergency response events.

9.2 Landscaping Framework

Landscaping for the project is intended to be functional and compatible with the rural site context, rather than ornamental in character. Recommended tree species for visual buffering include White Spruce (Picea glauca) and Trembling Aspen (Populus tremuloides), which provide year-round screening and rapid establishment.

Because the facility is a secured infrastructure site, landscaping is expected to focus on key interface areas where visual softening, screening, or site definition may be beneficial. Final landscaping requirements can be refined through detailed design and County review, but the concept plan anticipates that landscaping may be applied in a manner that:

- supports compatibility with the surrounding rural environment,
- softens views from public roads or other sensitive interfaces where appropriate,
- works in coordination with fencing and potential screening elements,
- avoids interference with drainage, access, utilities, and operational safety, and
- uses hardy, site-appropriate plant materials suited to the local climate where planting is required.

To ensure long-term operational integrity and safety, planting grids will maintain a minimum 5 m safety clearance from all high-voltage transformers, modular data center containers,

and natural gas tie-in infrastructure. Trees will be positioned to prevent root encroachment into engineered drainage channels.

9.3 Fencing, Screening, and Perimeter Berming

Screening and buffering measures may be incorporated where required to reduce visual impacts and reinforce the contained character of the facility. Depending on final site design and County direction, screening will include:

- The entire operational footprint will be secured by a heavy-duty industrial security fence equipped, secured access gates.
- A continuous, engineered earthen berm will be constructed along the eastern and southern boundaries of the development footprint. The berm will feature a minimum height of 1.5 m, a crest width of 1.0 m, prevent localized erosion, and facilitate mechanical vegetation maintenance.

9.4 Public Road Interface

The western boundary directly interfaces Range Road 243. This corridor requires premium visual treatment to maintain a neat, professional appearance.

- All principal infrastructure components will maintain strict setbacks from the property line in accordance with Heavy Industrial 'I-HI' District requirements.
- No screening structure, berm, or vegetation canopy will encroach into the main access approach.

10.0 Fire Safety, Emergency Planning, and Long-Term Stewardship

The proposed Armada Nowlit Clive Facility is intended to operate as a secured industrial site with controlled access, defined operational areas, and site management procedures appropriate to the nature of the development. Fire safety, emergency planning, and long-term stewardship are integral components of the overall project framework and are intended to support safe operations, incident response, environmental protection, and responsible site restoration over the life of the facility.

A site-specific Emergency Response Plan (ERP) has been prepared for the Clive Facility and is included in *Appendix VIII: Emergency Response Plan*. The ERP establishes the structure, roles, response procedures, emergency classifications, notification requirements, evacuation and muster procedures, communications protocols, hazard identification, functional response procedures, environmental protection during incidents, and post-incident management framework for the facility. It applies to construction, commissioning, operations, and closure-related activities.

A site-specific Environmental Protection Plan (EPP) has also been prepared and is included in *Appendix V: Environmental Protection Plan*. The EPP sets out measures to avoid, reduce, and mitigate environmental effects through all project phases and includes operational guidelines, accountabilities, hazardous materials management, spill response, emergency notification, traffic and access management, wildlife protection measures, soil handling, surface water management, erosion and sediment control, reclamation planning, and long-term monitoring considerations. Together, the ERP and EPP provide a detailed operational framework that supports both emergency preparedness and long-term site stewardship.

10.1 Fire Safety and Emergency Planning Approach

Fire safety and emergency planning for the Clive Facility are intended to be integrated into the overall site design, operating procedures, and emergency preparedness framework. The site will contain power generation equipment, electrical infrastructure, utility systems, and associated industrial components within a defined operational footprint. As a result, the fire safety approach must address both site layout and site procedures.

At a concept-plan level, the fire safety and emergency planning framework includes:

- safe site organization and controlled equipment placement,
- clear access routes for emergency response,
- defined operational and equipment areas,
- incident notification and response procedures,

- coordination with emergency services where required, and
- supporting emergency and environmental response documentation through the project ERP and EPP.

10.2 Emergency Access and Site Circulation

Emergency vehicle access is a key part of the site planning framework. The project is intended to operate with controlled access from the municipal road network and internal circulation sufficient to support construction, maintenance, and emergency response. Site access and internal circulation should therefore be maintained in a manner that allows emergency personnel to reach the principal operational areas of the facility when required.

The emergency access approach is intended to support:

- safe ingress and egress for emergency vehicles,
- access to principal equipment and utility areas,
- unobstructed movement within the secured site where required,
- clear identification of access points and operational zones, and
- compatibility between normal site security and emergency response needs.

10.3 Emergency Response Framework

The project ERP establishes a structured incident response framework for the site, including:

- incident command roles and responsibilities,
- emergency classification and activation triggers,
- immediate life safety and fire response steps,
- notification chains and external reporting,
- evacuation, shelter-in-place, and accountability procedures,
- hazard-specific response procedures, and
- reporting, investigation, recovery, and continuous improvement measures.

The ERP addresses a range of potential incidents including:

- fire / explosion,
- gas release,
- hazardous materials release,
- severe weather,
- wildfire / grassfire,
- medical emergencies,
- security threats, and

- utility failure.

This provides a strong operational basis for emergency preparedness and demonstrates that the project has been planned with a defined response structure rather than relying on generic site practices alone.

10.4 Environmental Protection During Incidents

The project EPP complements the ERP by setting out environmental protection procedures relevant to emergency planning and incident management. These include:

- hazardous materials handling and storage controls,
- spill prevention and preparedness,
- spill-to-drain prevention and response,
- emergency notification procedures,
- surface water and erosion / sediment protection measures,
- traffic and access management during construction and operations, and
- recordkeeping, corrective actions, and audit processes.

This is important from a planning perspective because it shows that emergency response at the site is linked not only to life safety, but also to protection of soils, drainage pathways, surface water, and surrounding lands in the event of an incident.

10.5 Long-Term Stewardship and Reclamation

Long-term stewardship for the Clive Facility is based on the principle that the project will remain within a defined development footprint and will be managed in a manner that supports eventual site restoration at the end of its operating life. A reclamation framework addressing progressive reclamation has provided in *Appendix XII: Decommissioning and Reclamation Plan*, final reclamation activities, soil salvage, storage and handling, erosion and sediment control during reclamation, monitoring, and success criteria.

From a planning perspective, the long-term stewardship framework is intended to ensure that:

- the project does not function as an unmanaged or open-ended land conversion,
- disturbed areas are handled in a controlled and documented manner,
- soils are salvaged, stored, replaced, and stabilized appropriately,
- erosion and sediment risks are managed during closure and restoration, and
- the site is restored to stable long-term conditions following cessation of operations.

This supports the broader planning rationale that the development is confined, manageable, and capable of responsible closure.

10.6 Fire Safety Plan Requirement

The *Appendix XI: Fire Safety Plan* included for project's municipal review, detailed design, and implementation process to address any requirements of Lacombe County and the applicable fire authority. The Fire Safety Plan will build on the emergency management framework established in the ERP and EPP and will address the specific fire safety, access, notification, equipment isolation, operational response, and responder coordination requirements of the final site design.

10.7 Ongoing Operational Readiness and Stewardship

Fire safety, emergency planning, and stewardship obligations should remain active throughout the operating life of the facility. This includes maintaining access routes, emergency contacts, response procedures, training, inspection practices, environmental controls, and operational records in current condition, and ensuring that any updates to the site or its operations are reflected in the applicable management documents.

List of Appendices

Appendix I: Land Sketch Plan

ARMADA NOWLIT

SKETCH PLAN

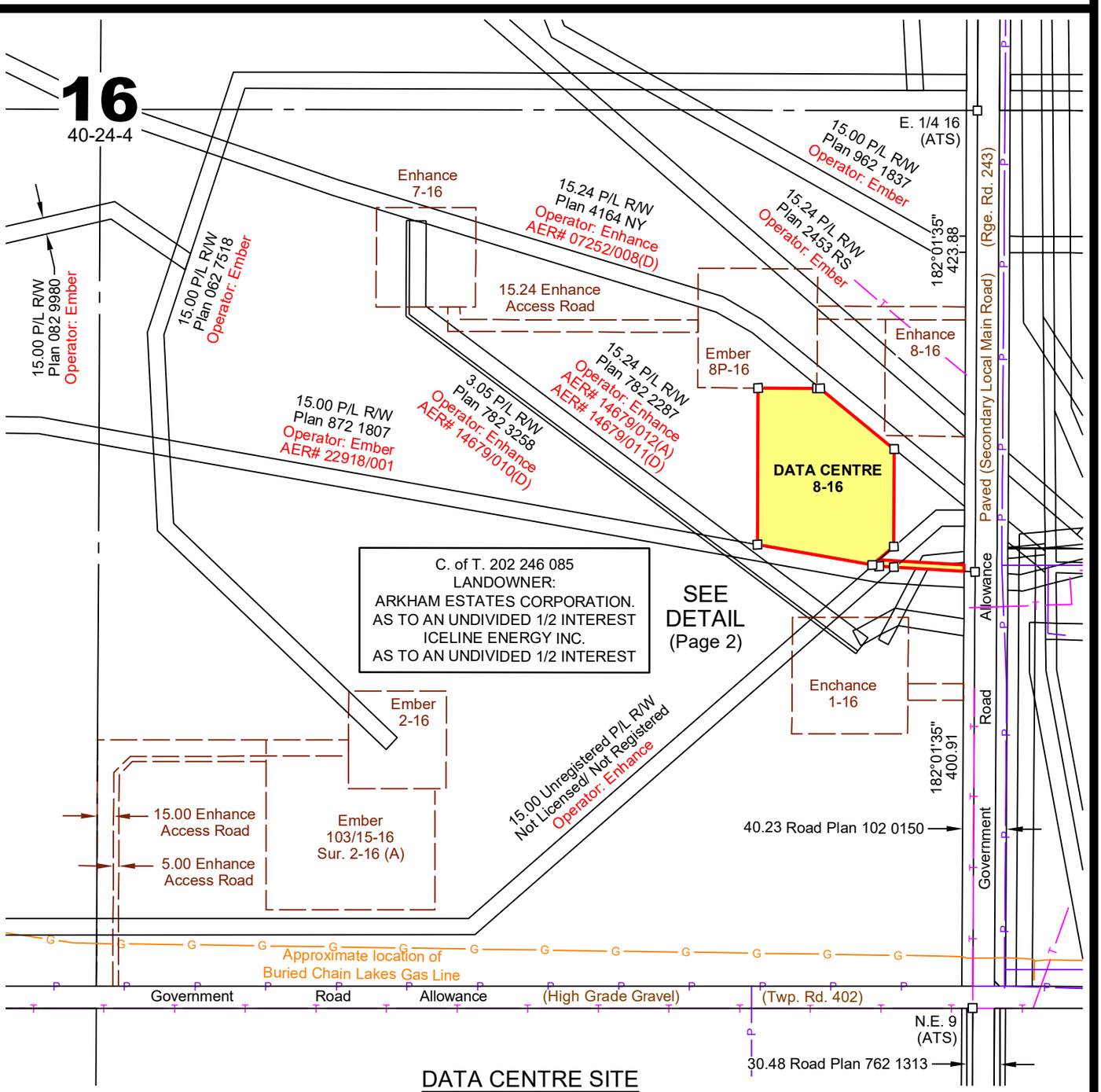
SHOWING

DATA CENTRE 8-16-40-24

WITHIN

S.E. 1/4 Sec. 16 - Twp. 40 - Rge. 24 - W. 4M.

LACOMBE COUNTY



DATA CENTRE SITE

Scale 1:5000

AREAS:

Data Centre Site	= 1.734 ha (4.28 ac.)
Access Road	= 0.049 ha (0.12 ac.)
Total	= 1.783 ha (4.40 ac.)

LEGEND

Calculated Point shown thus . . . . . □

Distances are in metres and decimals thereof.

Portions referred to shown thus . . . . . ▭

Certified correct this 10th day of June, 2026.

PRELIMINARY

(June 11, 2026)

ALBERTA LAND SURVEYORS' ASSOCIATION
PERMIT NUMBER
P202
Precision Geomatics Inc.

DARREN EKLUND, A.L.S.

I/We, the Landowner(s) and/or Occupants(s), consent to the location of the Data Centre site as shown.
Dated the _____ day of _____, ____.

_____ _____

PRECISION GEOMATICS INC.
Indigenous Owned

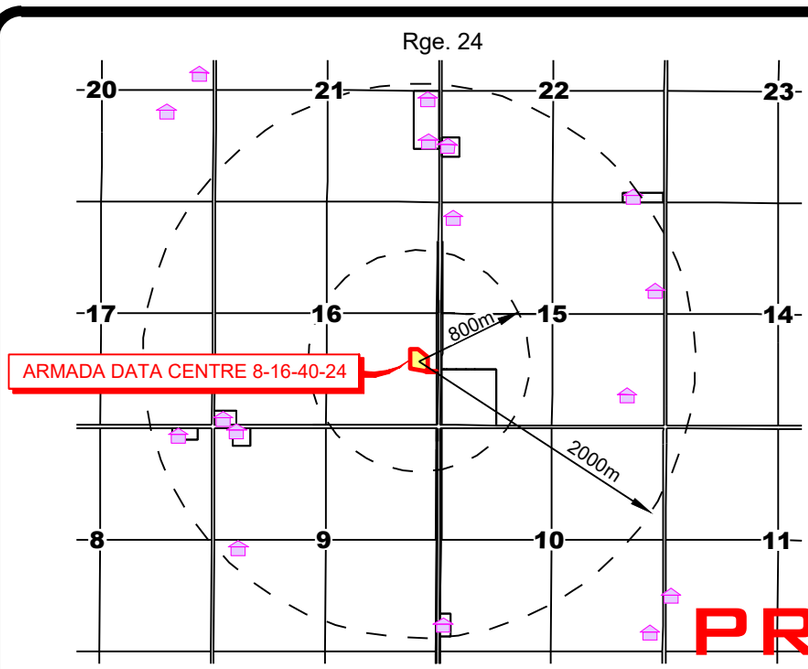
EDMONTON
Phone: 780-470-4000
Toll Free: 1-888-470-4001

DRAYTON VALLEY
Phone: 780-542-5252
www.precisiongeo.ca
info@precisiongeo.ca

CALGARY
Phone: 403-266-6647
Toll Free: 1-877-266-6649

No.	Svy.	Dwn.	Ckd.	REVISIONS	Date
	__	MD	CF	Updated Area's	Jun. 11, 2026
0	__	MD	DE	Plan Issued	Jun. 11, 2026

DWG FILE: C26-017356 SK(0) | CLIENT FILE: _____ | PAGE 1/3 | REV. 1



RESIDENCE SKETCH

Scale 1:50 000

Residences shown thus . . . . . .

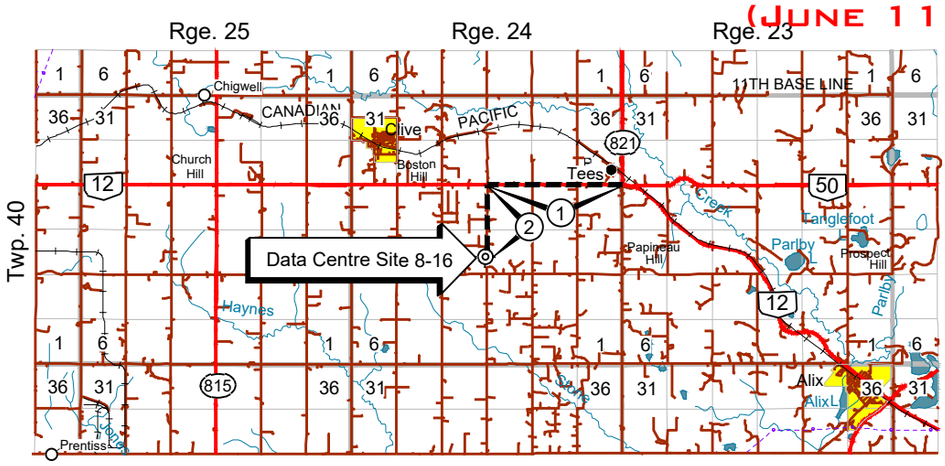
Abandoned residences shown thus . . . . . .

Note: Nearest Surface Development is ±260m South East of the Data Centre (S.W. 15-40-24 W 4M)

Note: Nearest Residence is ±1.0km North East of the Data Centre (N.W. 15-40-24 W. 4M.)

PRELIMINARY

(JUNE 11, 2026)



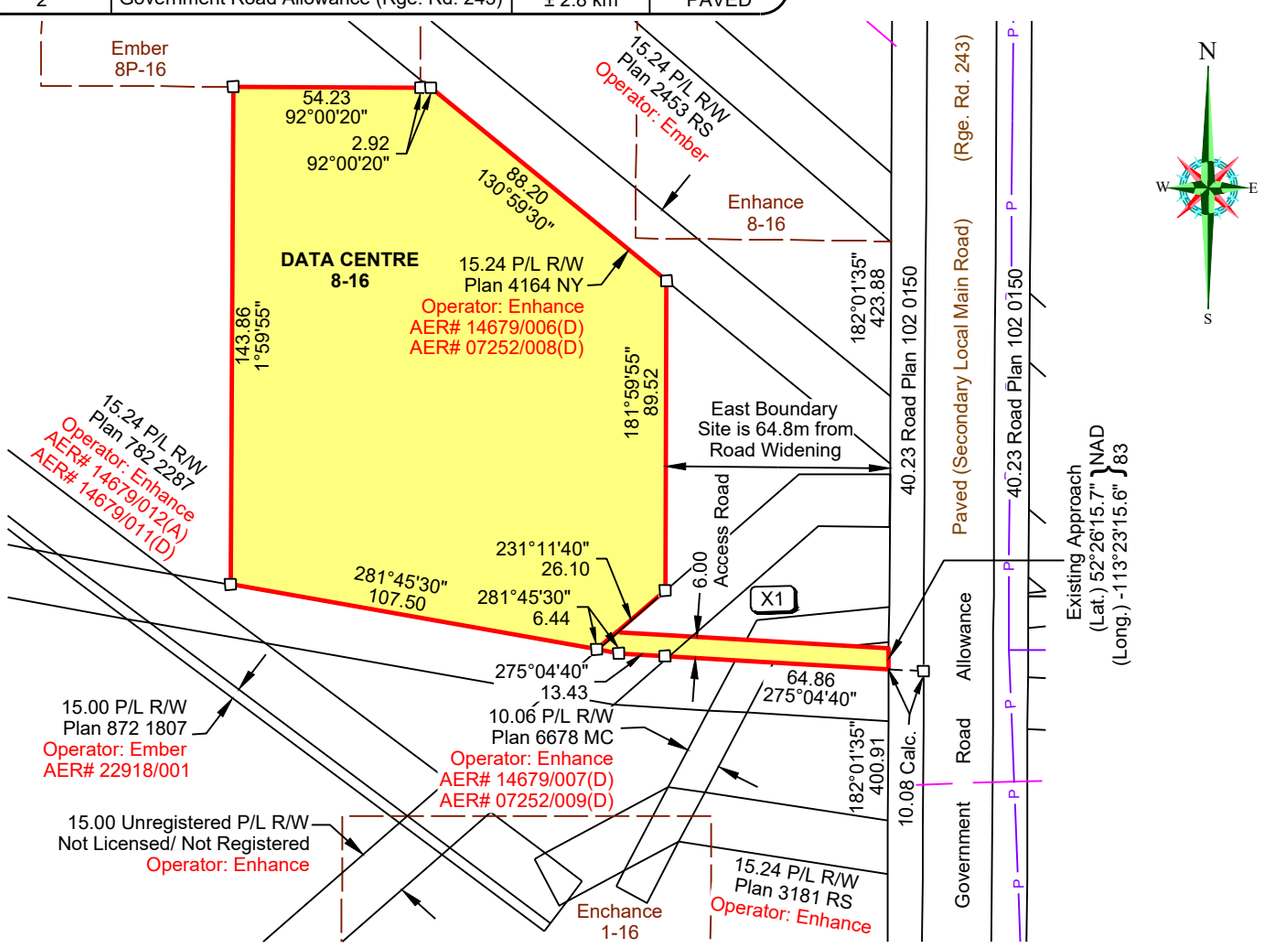
ACCESS MAP

Scale 1:250 000

ACCESS DISTANCES

SEGMENTS	ROAD OPERATORS	DISTANCE	STATUS
1	Highway #12	± 4.8 km	PAVED
2	Government Road Allowance (Rge. Rd. 243)	± 2.8 km	PAVED

Note: Nearest Urban Centre is the Hamlet of Tees ±5.7km North East of Data Centre.

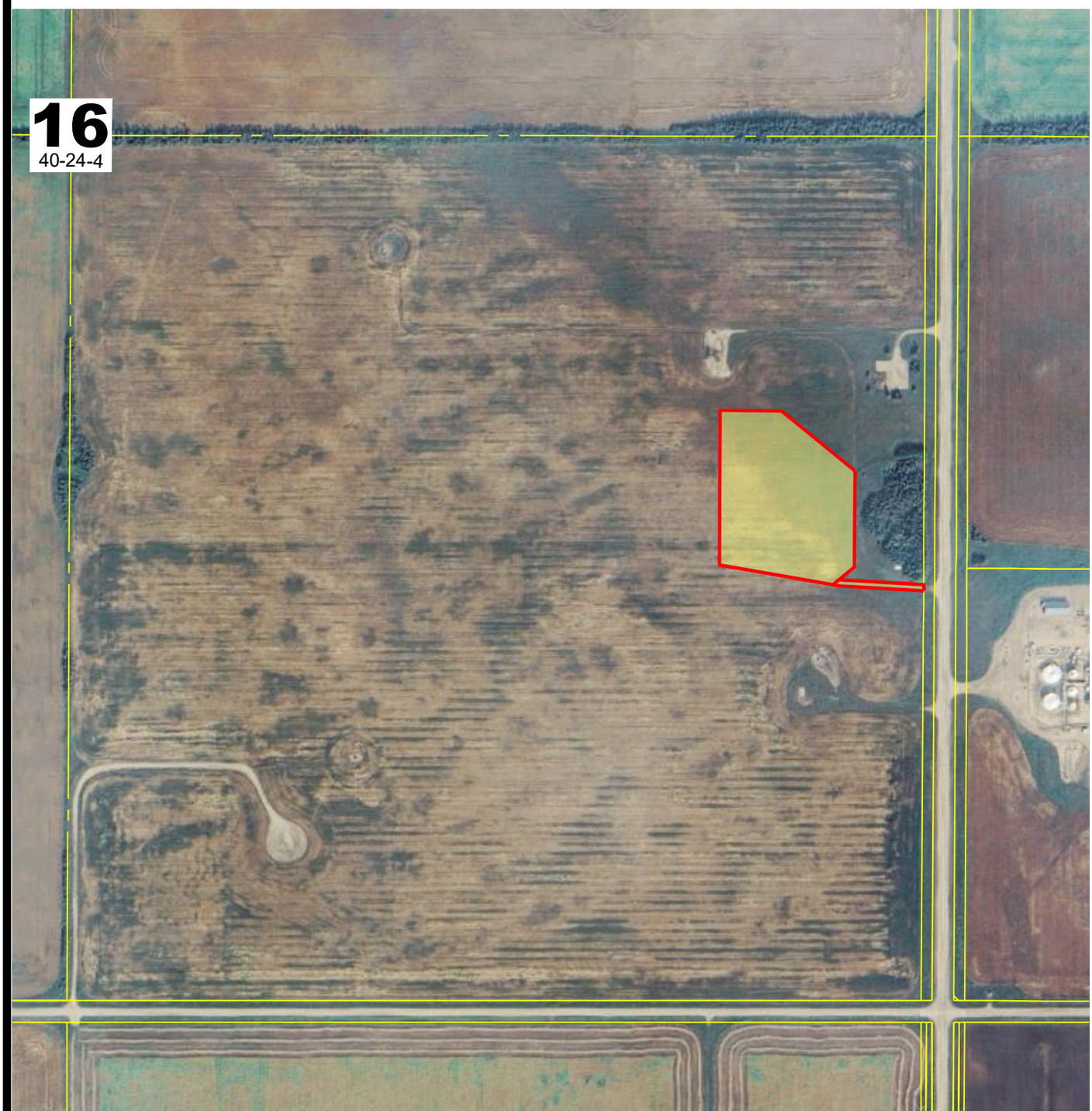


DETAIL

Scale 1:2000

ACCESS CROSSINGS TO 8-16-40-24-4 DATA CENTRE

No.	TYPE	DESCRIPTION
X1	Pipe	10.06 Enhance P/L R/W Plan 6678 MC



AIR PHOTO DATE: August 26, 2024

AIR PHOTO SKETCH

Scale 1:5 000

PRELIMINARY

(JUNE 11, 2026)

Appendix II: Air Quality Assessment

CALVIN CONSULTING GROUP LTD.
SUITE 1A, 3850 - 19TH STREET N.E., CALGARY, ALBERTA T2E 6V2
PHONE: 403-547-7557
EMAIL: info@calvinconsulting.ca

REVISED
AIR QUALITY
DISPERSION MODELLING ASSESSMENT
FOR CLIVE POWER PROJECT
LSD 08-16-040-24 W4M

Prepared for:
Armada Nowlit Energy Ltd.
6 - 563 Hurricane Drive
Calgary, Alberta T3Z 3S8

Prepared by:
Calvin Consulting Group Ltd.
Suite 1A, 3850 - 19th Street N.E.
Calgary, Alberta T2E 6V2

Job No. J2026-059R

July 20, 2026

CALVIN CONSULTING GROUP LTD.
SUITE 1A, 3850 - 19TH STREET N.E., CALGARY, ALBERTA T2E 6V2
PHONE: 403-547-7557
EMAIL: info@calvinconsulting.ca

Author

Signature

Mr. Shyamal Petiot — Name
Intermediate Consultant — Title

Peer Review

Signature

Mr. Barry Lough, EP, P.Phys. — Name
Principal Consultant — Title

QA/QC

Signature

Ms. Laura Charlton, EP — Name
Principal Consultant — Title

CALVIN CONSULTING GROUP LTD.
SUITE 1A, 3850 - 19TH STREET N.E., CALGARY, ALBERTA T2E 6V2
PHONE: 403-547-7557
EMAIL: info@calvinconsulting.ca

July 20, 2026 J2026-059R

Armada Nowlit Energy Ltd.

SENT BY EMAIL: fred.wan@armada-nowlit.com

Attention: Mr. Fred Wan, Project Manager

Subject: **Revised Air Quality Dispersion Modelling Assessment for Clive Power Project**

At the request of Armada Nowlit Energy Ltd. (Armada), Calvin Consulting Group Ltd. (Calvin Consulting) completed a revised Air Quality Dispersion Modelling Assessment (Assessment) for the proposed Clive Power Project (Project), which will be located in Alberta at Legal Subdivision (LSD) 08-16-040-24 W4M. The purpose of this revised Assessment is to determine if the maximum predicted ground-level Nitrogen Dioxide (NO_2) concentrations associated with stationary combustion sources at the Project comply with the applicable Alberta Ambient Air Quality Objectives (AAAQOs). This Assessment is a revision of the previous dispersion modelling assessment that was completed by Calvin Consulting on 12-Feb-2026 to incorporate a revised site layout.

If you require any additional information, or have any comments or concerns pertaining to these results, please do not hesitate to contact Mr. Barry Lough by phone at 403-547-7557 or by email at barry.lough@calvinconsulting.ca. Thank you for the opportunity to work on this project.

Sincerely,
Calvin Consulting Group Ltd.

Shyamal Petiot
Partner

CALVIN CONSULTING GROUP LTD.
SUITE 1A, 3850 - 19TH STREET N.E., CALGARY, ALBERTA T2E 6V2
PHONE: 403-547-7557
EMAIL: info@calvinconsulting.ca

DISCLAIMER

Calvin Consulting Group Ltd. (Calvin Consulting) has prepared this report to provide Armada Nowlit Energy Ltd. (Armada) with the predicted maximum concentrations of air contaminants that may occur in the vicinity of the proposed Clive Power Project (Project). These maximum concentrations were estimated based on, but not limited to, the following:

- Data provided by Armada, noting that in the absence of data for any emission source, estimated parameters were developed based on the professional experience of Calvin Consulting personnel
- Digital terrain data that are publicly available from the Government of Canada
- Historical meteorology data provided by the Alberta Government
- Estimates of land use percentages for land classes (e.g., vegetation cover, urban development, agricultural land, forest, etc.) within the selected modelling domain provided by the Alberta Government
- Ambient air quality data collected from continuous monitoring stations and provided by the Alberta Air data Warehouse
- A computer modelling systems required for use by the Alberta Air Quality Model Guideline (AQMG) and distributed by the United States Environmental Protection Agency (U.S. EPA) and the Alberta Energy Regulator (AER)

Information, data, facts and the computer models provided by others and used in preparation of this report are assumed to be accurate without any verification or confirmation by Calvin Consulting.

As a result of the uncertainty and inherent variability in the preceding data and/or estimates, Calvin Consulting makes no representation or warranty with respect to this report or the information contained herein other than that Calvin Consulting has exercised reasonable skill, care and diligence in accordance with accepted practice and usual standards of thoroughness and competence for the Environmental Profession with respect to the collection, assessment and evaluation of the information used in the preparation of this report. Liability for the acceptance and implementation of the information and/or recommendations made in this report is limited to the actual dollar value of professional fees charged by Calvin Consulting for the scope of work as indicated in this report.

GLOSSARY

AAAQO	Alberta Ambient Air Quality Objective
AEPA	Alberta Environment and Protected Areas
AER	Alberta Energy Regulator
AQMG	Air Quality Model Guideline
ASL	Above Sea-Level
COP	Code of Practice
BPIP	Building Profile Input Program
ISR	In-Stack Ratio
LSD	Legal Subdivision
NO_2	Nitrogen Dioxide
NO_x	Nitrogen Oxides
O_3	Ozone
PVMRM	Plume Volume Molar Ratio Method
U.S. EPA	United States Environmental Protection Agency
WRF	Weather Research and Forecasting

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1.0 INTRODUCTION

At the request of Armada Nowlit Energy Ltd. (Armada), Calvin Consulting Group Ltd. (Calvin Consulting) completed a revised Air Quality Dispersion Modelling Assessment (Assessment) for the proposed Clive Power Project (Project), which will be located in Alberta at Legal Subdivision (LSD) 08-16-040-24 W4M. The purpose of this revised Assessment is to determine if the maximum predicted ground-level Nitrogen Dioxide (NO_2) concentrations associated with stationary combustion sources at the Project comply with the applicable Alberta Ambient Air Quality Objectives (AAAQOs). This Assessment is a revision of the previous dispersion modelling assessment that was completed by Calvin Consulting on 12-Feb-2026 to incorporate a revised site layout.

2.0 APPROACH

The revised Assessment was performed as per the 2021 Alberta Air Quality Model Guideline (AQMG) using the United States Environmental Protection Agency (U.S. EPA) AERMOD v.24142 dispersion model, five years of meteorological data and elevated terrain as described in the following sections.

2.1 Meteorological Data

Meteorological data were obtained from the Alberta Environment and Protected Areas (AEPA) Weather Research and Forecasting (WRF) Meteorological Data Repository. The data cover the period from 01-Jan-2015 to 31-Dec-2019 and are centred on the geographical point at 52.440°N and 113.391°W. Five years of the data were processed in AERMET v.24142 to produce meteorological files suitable for use in AERMOD.

Figure 1 provides a wind direction and wind speed frequency diagram (i.e., windrose) for the area based on the hourly-average data. As indicated in the windrose, the hourly-average winds are predominantly from the northwest.

2.2 Terrain Data

Terrain data were obtained and processed using the Alberta Energy Regulator (AER) AERflare.v305.250828 (AERflare) spreadsheet. The domain used for this revised Assessment incorporates topographic data from map tiles identified as 083A05, 083A06, 083A11 and 083A12.

2.3 Modelling Receptors

The following receptor grids were used in the revised Assessment as per the 2021 Alberta AQMG:

- **Grid 1** Every 50 m out to 500 m
- **Grid 2** Every 250 m out to 2000 m
- **Grid 3** Every 500 m out to 5000 m
- **Grid 4** Every 1000 m out to 10000 m
- **Grid 5** Every 20 m along the Project perimeter
- **Grid 6** Every 20 m out to 200 m surrounding each maximum ground-level concentration predicted by the previous runs

Figure 2 presents the location of the Project, dispersion modelling receptors and terrain elevations Above Sea-Level (ASL) for the 10 km radius modelling domain surrounding the Project, as well as the neighbouring industrial facilities that were identified to be in operation within 5 km of the Project.

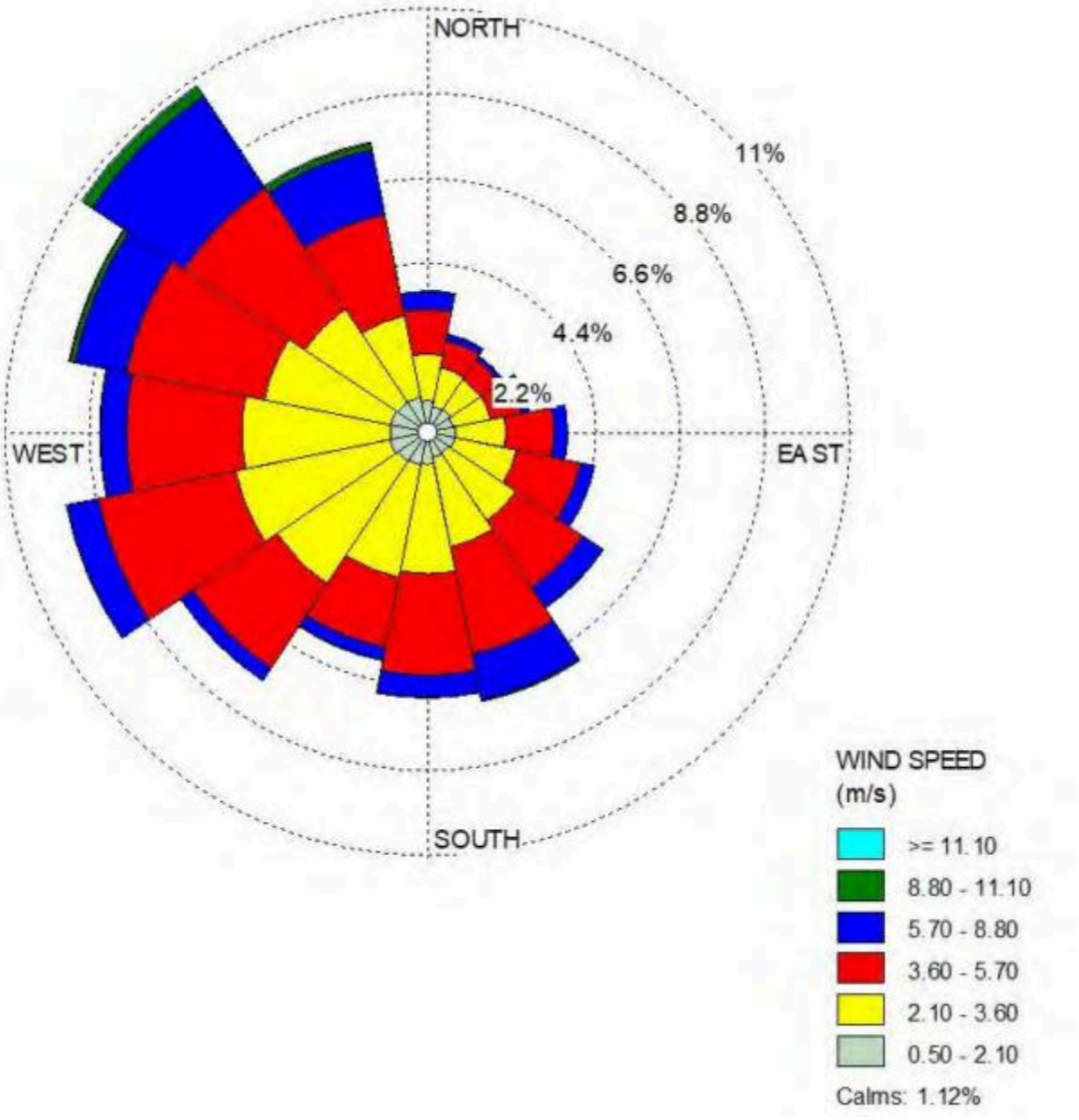

Figure 1 Windrose indicating the frequency of wind direction and wind speeds in the area.

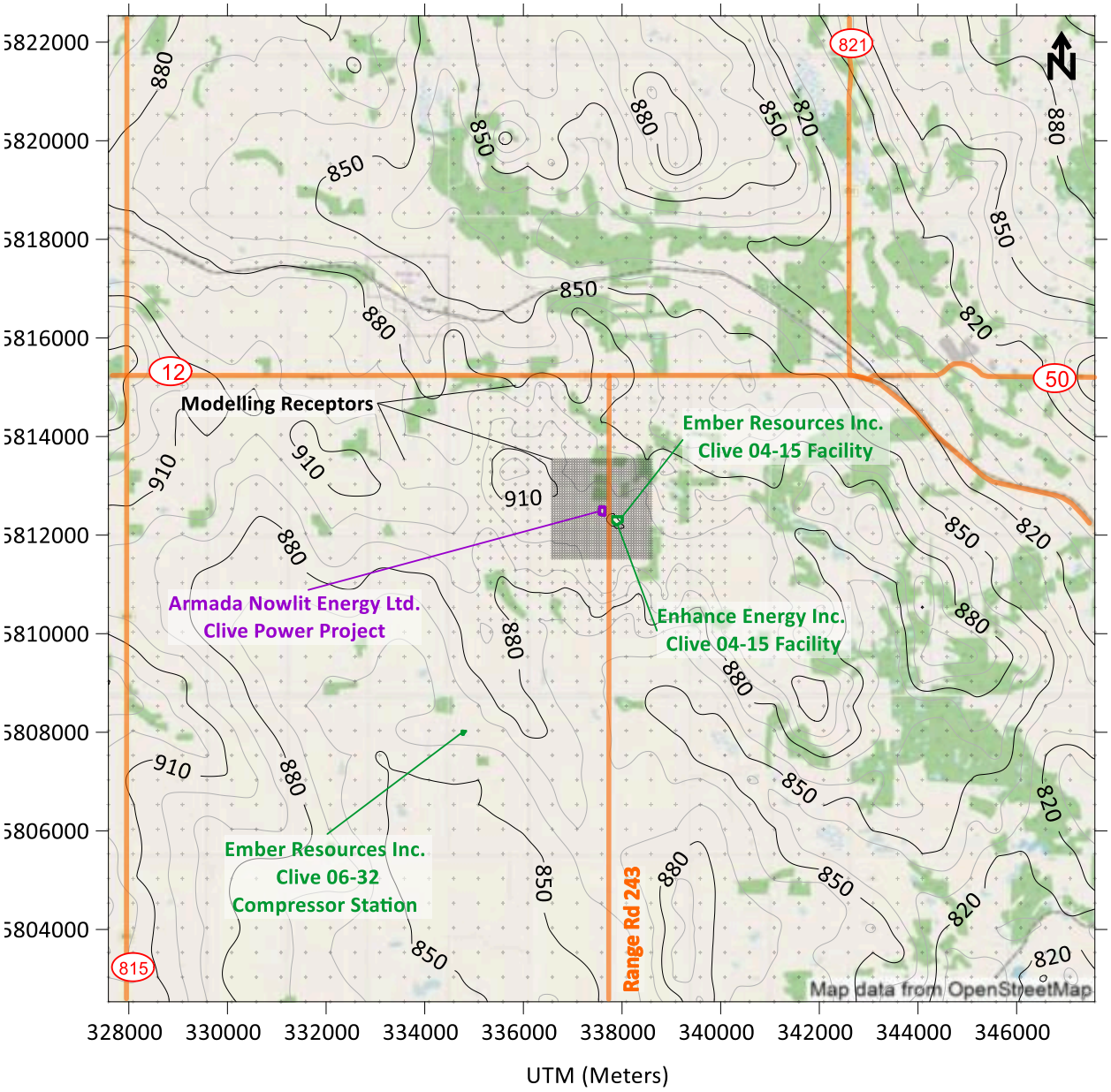

Figure 2 Location of dispersion modelling receptors, neighbouring sources and ground-level elevations (m) within 10 km of the Project.

2.4 Background Concentrations

As required by the 2021 Alberta AQMG, background concentrations must be added to the concentrations predicted by the air quality dispersion model. To obtain background concentrations, current and historical monitoring data available on the Alberta Ambient Air Data Management System (AEPA, Airdata Warehouse) website were assessed.

Data from the Caroline Monitoring Station were used to estimate the background NO_2 concentrations for this Assessment. This station is located ~105 km southwest of the Project. The data obtained from the station cover the period from 01-Dec-2022 to 30-Nov-2025.

The 90th percentile value of the measured hourly NO_2 data was used to estimate a one-hour background concentration using the available data for each of the three most recent years. The three values were then averaged to obtain a one-hour average background NO_2 concentration of 9.0 µg/m^3. Based on the reduced hourly data set for each year with the greater than 90th percentile data removed, the annual concentrations were calculated and then the maximum of the three years was used as the annual background NO_2 concentration of 3.7 µg/m^3.

2.5 Building Downwash

The U.S. EPA Building Profile Input Program (BPIP) was used to determine the effects of building downwash on dispersion of the exhaust from the stationary combustion equipment at the Project. The Project will include nine generator buildings (Tag Nos. MWM1 to MWM9) and nine miner containers (Tag Nos. MC1 to MC9), noting that all buildings will be identical in size with a peak roof height of 2.896 m. The BPIP input and output files are provided in Attachment A.

2.6 NO_x to NO_2 Conversion

The Nitrogen Oxides (NO_x) modelling results are converted to NO_2 using the Plume Volume Molar Ratio Method (PVMRM) as outlined in the 2021 Alberta AQMG. The following modelling options were selected in AERMOD for the PVMRM calculations, as required by the 2021 Alberta AQMG:

- The default equilibrium NO_2/NO_x ratio of 0.90 was used.
- NO_2/NO_x In-Stack Ratio (ISR) was not available for the emission sources and as such, a value of 0.2 was assigned.
- Onsite Ozone (O_3) concentrations were not available and as such, rural O_3 concentration background data were obtained from Appendix F of the 2021 Alberta AQMG and were used for the PVMRM conversions.

3.0 NO_2 MODELLING RESULTS

Stack and NO_x emission parameters for the various stationary combustion units at the Project and adjacent industrial facilities are provided in Tables 1 and 2, respectively. NO_2 dispersion modelling results, including background concentrations, are provided in Table 3, noting that for one-hour average ground-level concentrations, the ninth-highest predicted concentration is the value that is required to be reported for Air Quality Dispersion Modelling Assessments in Alberta. As indicated in Table 3, all predicted ground-level NO_2 concentrations comply with the applicable AAAQOs at and beyond the Project fenceline. The location of each maximum NO_2 concentration in relation to the MWM MGM-TCG3020 2.2 MW No. 5 (MWM5) exhaust stack is also provided in Table 3, along with the Isopleth Figure Nos. The modelling input and output files are provided in Attachment B.

Table 1 Stack and NO_x emission parameters associated with stationary combustion sources at the Project.

Emission Source	ID	Engine Rating (kW)	NO_x Emission Factor (g/kW-h)	Stack Height (m)	Stack Diameter (m)	Exit Velocity (m/s)	Exit Temp (°C)	Release Direction (H/V)	Rain Cap (Y/N)	NO_x Emission (g/s)	Total NO_x Emission (kg/h)
MWM MGM-TCG3020 2.2 MW No. 1	MWM1	2200	0.3000	8.3	0.6300	9.8	400	H	N	0.1833	0.6600
MWM MGM-TCG3020 2.2 MW No. 2	MWM2	2200	0.3000	8.3	0.6300	9.8	400	H	N	0.1833	0.6600
MWM MGM-TCG3020 2.2 MW No. 3	MWM3	2200	0.3000	8.3	0.6300	9.8	400	H	N	0.1833	0.6600
MWM MGM-TCG3020 2.2 MW No. 4	MWM4	2200	0.3000	8.3	0.6300	9.8	400	H	N	0.1833	0.6600
MWM MGM-TCG3020 2.2 MW No. 5	MWM5	2200	0.3000	8.3	0.6300	9.8	400	H	N	0.1833	0.6600
MWM MGM-TCG3020 2.2 MW No. 6	MWM6	2200	0.3000	8.3	0.6300	9.8	400	H	N	0.1833	0.6600
MWM MGM-TCG3020 2.2 MW No. 7	MWM7	2200	0.3000	8.3	0.6300	9.8	400	H	N	0.1833	0.6600
MWM MGM-TCG3020 2.2 MW No. 8	MWM8	2200	0.3000	8.3	0.6300	9.8	400	H	N	0.1833	0.6600
MWM MGM-TCG3020 2.2 MW No. 9	MWM9	2200	0.3000	8.3	0.6300	9.8	400	H	N	0.1833	0.6600
									TOTAL	**1.6**	**5.9**

Table 2 Stack and NO_x emission parameters associated with stationary combustion sources at the neighbouring industrial facilities.

Emission Source	Engine Rating (kW)	NOx Emission Factor (g/kW-h)	Stack Height (m)	Stack Diameter (m)	Exit Velocity (m/s)	Exit Temp (°C)	Rain Cap (Y/N)	NOx Emission (g/s)	NOx Emission (kg/h)
Enhance Energy Inc. Clive 04-15-040-24 W4M Facility[(a)]									
Compressor C-301 (C301)	611.0	2.1	10.1	0.2600	38.3	586.00	N	0.3564	1.2831
Compressor C-302 (C302)	611.0	2.1	10.1	0.2600	38.3	586.00	N	0.3564	1.2831
Compressor C-303 (C303)	918.0	2.1	10.1	0.2600	53.0	588.00	N	0.5355	1.9278
Compressor C-304 (C304)	918.0	2.1	10.1	0.3000	38.2	588.00	N	0.5355	1.9278
Compressor C-305 (C305)	918.0	2.1	10.1	0.3000	38.2	588.00	N	0.5355	1.9278
Compressor C-307 (C307)	298.0	2.8	6.1	0.1500	58.4	474.00	N	0.2318	0.8344
Compressor C-308 (C308)	733.0	5.3	10.1	0.2600	32.4	550.00	N	1.0791	3.8849
Compressor C-311 (C311)	123.0	4.5	7.1	0.2000	7.5	316.00	N	0.1538	0.5535
Compressor C-312 (C312)	123.0	4.5	7.1	0.2000	7.5	316.00	N	0.1538	0.5535
Salt Bath Heater Stack No.1 (Heat1)	2340.0	0.1550	6.6	0.6100	13.2	418.87	N	0.0504	0.1814
Salt Bath Heater Stack No.2 (Heat2)			6.6	0.6100	13.2	418.87	N	0.0504	0.1814
Glycol Water Heater Stack No.1 (GlyHeat1)	1620.0	0.1550	6.4	0.5100	11.1	398.71	N	0.0044	0.0628
Glycol Water Heater Stack No.2 (GlyHeat2)			6.4	0.5100	11.1	398.71	N	0.0174	0.0628
Glycol Water Heater Stack No.3 (GlyHeat3)			6.4	0.5100	11.1	398.71	N	0.0174	0.0628
Glycol Water Heater Stack No.4 (GlyHeat4)			6.4	0.5100	11.1	398.71	N	0.0174	0.0628
Treater Stack No.1 (Treat1)	586.0	0.1550	9.1	0.4500	6.9	365.80	N	0.0126	0.0454
Treater Stack No.2 (Treat2)			9.1	0.4500	6.9	365.80	N	0.0126	0.0454
Treater Stack No.3 (Treat3)	586.0	0.1550	9.1	0.4500	6.9	365.80	N	0.0126	0.0454
Treater Stack No.4 (Treat4)			9.1	0.4500	6.9	365.80	N	0.0126	0.0454
Inlet Heater (InlHeater)	1170.0	0.1550	12.2	0.6100	8.1	377.71	N	0.0504	0.1814

Continued…

Table 2 Concluded.

Emission Source	Engine Rating (kW)	NO_x Emission Factor (g/kW-h)	Stack Height (m)	Stack Diameter (m)	Exit Velocity (m/s)	Exit Temp (°C)	Rain Cap (Y/N)	NO_x Emission (g/s)	NO_x Emission (kg/h)
Enhance Energy Inc. Clive 04-15-040-24 W4M Facility con't…									
Free-Water Knockout Stack No.1 (Knockout1)	2930.0	0.1550	15.2	0.6100	14.1	464.8	N	0.0631	0.2271
Free-Water Knockout Stack No.2 (Knockout2)			15.2	0.6100	14.1	464.8	N	0.0631	0.2271
Compressor C-309 (C309)	604.0	2.7	7.1	0.2500	24.1	427.0	N	0.4496	1.6187
Ember Resources Inc. Clive 04-15-040-24 W4M Facility[(b)]									
Gas Compressor (GC1)	1104.0	1.3	10.5	0.3799	37.9	474.4	N	0.4109	1.4794
Recycle Compressor No. 1 (RC1)	809.0	2.7	10.9	0.3250	37.4	467.2	N	0.6023	2.1681
Recycle Compressor No. 2 (RC2)	641.0	2.7	10.8	0.2936	36.0	449.9	N	0.4772	1.7179
Ember Resources Inc. Clive 06-32-039-24 W4M Compressor Station[(c)]									
Compressor No. 1 (C1)	149.0	30.6	6.3	0.1530	26.4	531.9	N	1.2648	4.5534
Compressor No. 2 (C2)	447.0	2.7	10.0	0.2502	29.9	438.0	N	0.3328	1.1980
							TOTAL	**7.9**	**28.3**

[(a)] Data acquired from registration form for Code of Practice (COP) No. 11489
[(b)] Data from AER Licence No. F8154
[(c)] Data from AER Licence No. F31395

Concluded.

Table 3 Maximum predicted ground-level NO_2 concentrations associated with continuous operation of stationary combustion equipment at the Project.

Averaging Period	Predicted NO_x (µg/m³)	Predicted NO_2[(a)] (µg/m³)	Background NO_2 Concentrations (µg/m³)	Predicted NO_2 with Background (µg/m³)	AAAQO (µg/m³)	Isopleth Figure No.	Location of Maximum	
							Distance (m)	Direction
One-Hour[(b)]	284.7	174.7	9.0	183.7	**300**	3	509	ESE
Annual[(c)]	23.6	15.8	3.7	19.5	**45**	4	541	ESE

(a) NO_2 concentrations predicted using PVMRM as outlined in the 2021 Alberta AQMG
(b) Ninth-highest one-hour average predicted concentration as per the 2021 Alberta AQMG
(c) Maximum predicted annual concentration as per the 2021 Alberta AQMG

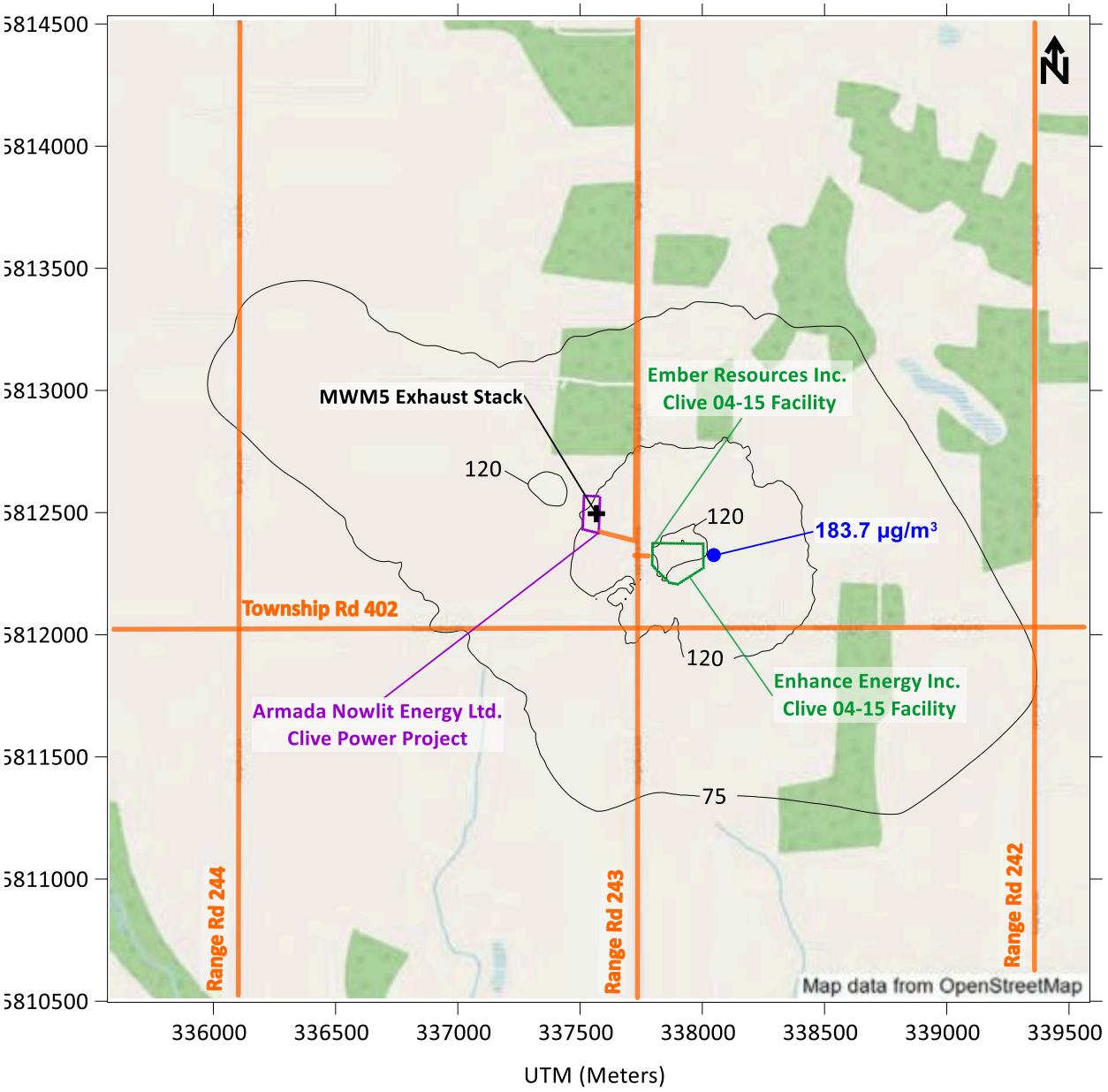

Figure 3 Ninth-highest predicted one-hour average ground-level NO_2 concentrations associated with continuous operation of stationary combustion sources at the Project, including neighbouring sources and ambient background concentrations. Isopleths shown include 75 and 120 µg/m^3.

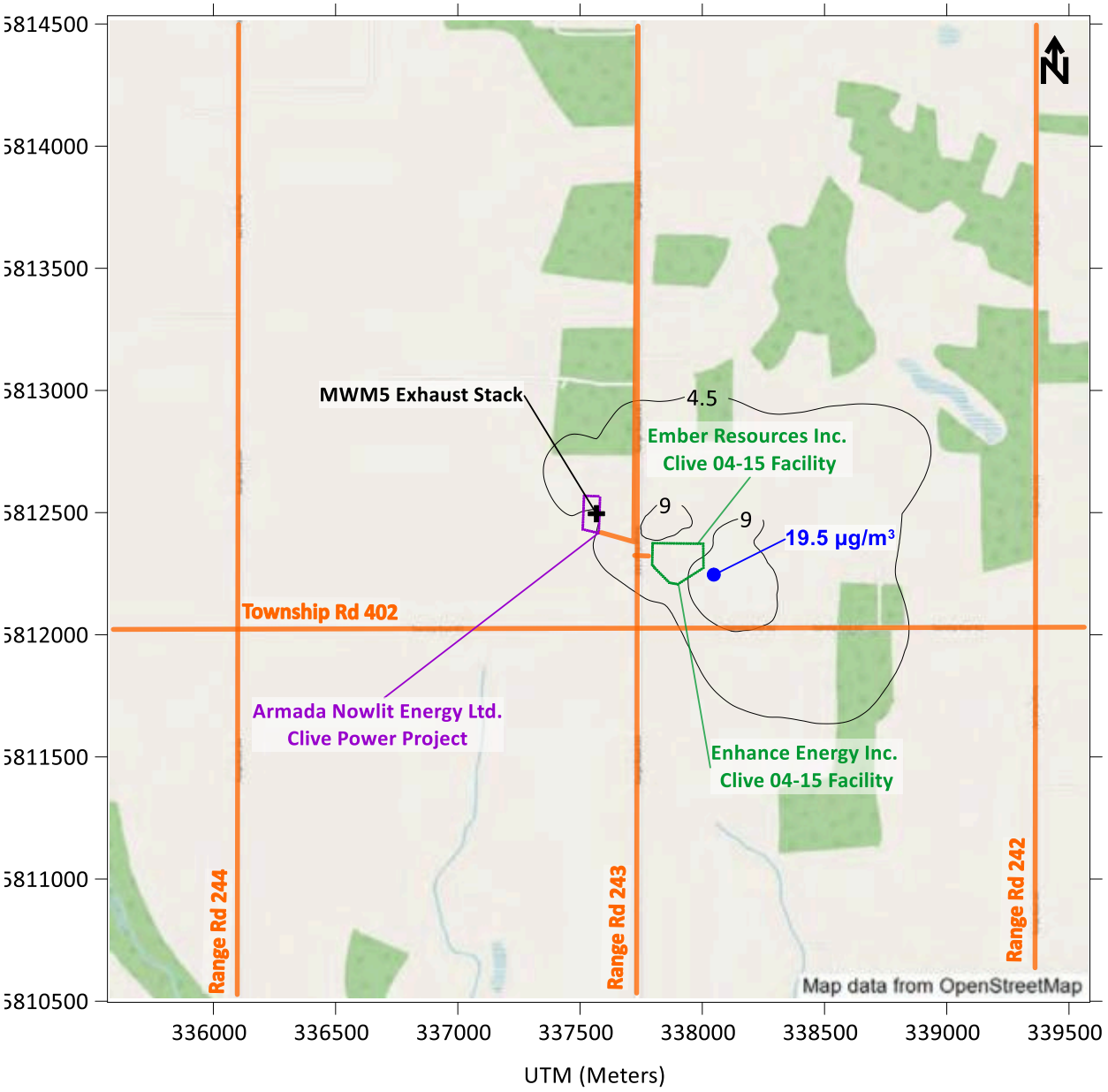

Figure 4 Maximum predicted annual ground-level NO_2 concentrations associated with continuous operation of stationary combustion sources at the Project, including neighbouring sources and ambient background concentrations. Isopleths shown include 4.5 and 9 µg/m³.

4.0 CONCLUSION

As indicated in this revised Assessment, maximum predicted ground-level NO_2 concentrations comply with the applicable AAAQOs. As such, no significant air quality impact is predicted to occur in association with the operations modelled in this revised Assessment.

ATTACHMENT A

BPIP INPUT AND OUTPUT FILES

BPIP INPUT FILE

```
VL Armada Clive'
'p'
'Meters'    1.0
'UTMY'      0.0
18
MC1                 1          0.0
       4         2.896
                337530.33     5812555.1
                337542.46     5812554.6
                337542.32     5812552.2
                337530.19     5812552.6
MC2                 1          0.0
       4         2.896
                337529.82     5812541.96
                337542.02     5812541.45
                337541.96     5812538.96
                337529.77     5812539.41
MC3                 1          0.0
       4         2.896
                337529.36     5812528.83
                337541.47     5812528.23
                337541.47     5812525.81
                337529.28     5812526.30
MC4                 1          0.0
       4         2.896
                337528.84     5812515.66
                337540.94     5812515.16
                337540.94     5812512.67
                337528.82     5812513.06
MC5                 1          0.0
       4         2.896
                337528.42     5812502.24
                337540.50     5812501.83
                337540.41     5812499.31
                337528.31     5812499.79
MC6                 1          0.0
       4         2.896
                337527.91     5812489.14
                337540.00     5812488.53
                337539.91     5812486.09
                337527.76     5812486.69
MC7                 1          0.0
       4         2.896
                337527.50     5812475.81
                337539.38     5812475.31
                337539.40     5812472.93
                337527.30     5812473.42
MC8                 1          0.0
       4         2.896
                337526.83     5812462.85
                337538.94     5812462.44
                337538.85     5812459.78
                337526.74     5812460.43
MC9                 1          0.0
       4         2.896
                337526.25     5812449.69
                337538.52     5812449.11
                337538.49     5812446.63
                337526.20     5812447.12
MWM1                1          0.0
```

```
      4        2.896
               337552.72       5812554.2
               337566.35       5812553.7
               337566.20       5812551.3
               337552.56       5812551.9
MWM2           1               0.0
      4        2.896
               337552.10       5812541.00
               337565.80       5812540.39
               337565.77       5812538.13
               337551.89       5812538.58
MWM3           1               0.0
      4        2.896
               337551.65       5812527.77
               337565.34       5812527.26
               337565.15       5812525.02
               337551.52       5812525.52
MWM4           1               0.0
      4        2.896
               337551.21       5812514.68
               337564.76       5812514.07
               337564.71       5812511.77
               337551.07       5812512.38
MWM5           1               0.0
      4        2.896
               337550.53       5812501.41
               337564.22       5812500.84
               337564.18       5812498.59
               337550.41       5812499.05
MWM6           1               0.0
      4        2.896
               337550.31       5812488.35
               337563.78       5812487.71
               337563.79       5812485.19
               337550.20       5812485.62
MWM7           1               0.0
      4        2.896
               337549.70       5812475.06
               337563.54       5812474.55
               337563.47       5812472.16
               337549.55       5812472.53
MWM8           1               0.0
      4        2.896
               337549.14       5812461.96
               337562.94       5812461.37
               337562.89       5812458.97
               337549.08       5812459.42
MWM9           1               0.0
      4        2.896
               337548.69       5812448.74
               337562.40       5812448.24
               337562.43       5812445.72
               337548.50       5812446.19
9
MWM1      0.0          8.300 337568.81  5812548.10
MWM2      0.0          8.300 337568.42  5812543.01
MWM3      0.0          8.300 337567.72  5812521.82
MWM4      0.0          8.300 337567.50  5812516.70
MWM5      0.0          8.300 337566.85  5812495.56
MWM6      0.0          8.300 337566.64  5812490.38
MWM7      0.0          8.300 337565.89  5812469.11
MWM8      0.0          8.300 337565.78  5812464.08
MWM9      0.0          8.300 337564.89  5812442.80
```

BPIP OUTPUT FILE

VL

BPIP (Dated: 04274)
DATE : 7/13/2026
TIME : 13:38: 5
VL

==========
BPIP PROCESSING INFORMATION:
==========

The p flag has been set for preparing downwash related data
for a model run utilizing the PRIME algorithm.

Inputs entered in Meters will be converted to meters using
a conversion factor of 1.0000. Output will be in meters.

The UTMP variable is set to UTMY. The input is assumed to be in
UTM coordinates. BPIP will move the UTM origin to the first pair of
UTM coordinates read. The UTM coordinates of the new origin will
be subtracted from all the other UTM coordinates entered to form
this new local coordinate system.

Plant north is set to 0.00 degrees with respect to True North.

VL

PRELIMINARY* GEP STACK HEIGHT RESULTS TABLE
(Output Units: meters)

Stack Name	Stack Height	Stack-Building Base Elevation Differences	Preliminary* GEP** EQN1	GEP Stack Height Value
MWM1	8.30	0.00	7.24	65.00
MWM2	8.30	0.00	7.24	65.00
MWM3	8.30	0.00	7.24	65.00
MWM4	8.30	0.00	7.24	65.00
MWM5	8.30	0.00	7.24	65.00
MWM6	8.30	0.00	7.24	65.00
MWM7	8.30	0.00	7.24	65.00
MWM8	8.30	0.00	7.24	65.00
MWM9	8.30	0.00	7.24	65.00

* Results are based on Determinants 1 & 2 on pages 1 & 2 of the GEP Technical Support Document. Determinant 3 may be investigated for additional stack height credit. Final values result after Determinant 3 has been taken into consideration.
** Results were derived from Equation 1 on page 6 of GEP Technical Support Document. Values have been adjusted for any stack-building base elevation differences.

Note: Criteria for determining stack heights for modeling emission limitations for a source can be found in Table 3.1 of the GEP Technical Support Document.

BPIP (Dated: 04274)
DATE : 7/13/2026
TIME : 13:38: 5

VL

BPIP output is in meters

SO BUILDHGT	MWM1	2.90	2.90	2.90	2.90	2.90	2.90
SO BUILDHGT	MWM1	2.90	0.00	0.00	2.90	2.90	2.90
SO BUILDHGT	MWM1	2.90	2.90	2.90	2.90	0.00	0.00
SO BUILDHGT	MWM1	0.00	0.00	0.00	0.00	0.00	0.00
SO BUILDHGT	MWM1	2.90	0.00	0.00	2.90	2.90	2.90
SO BUILDHGT	MWM1	2.90	2.90	2.90	2.90	0.00	0.00
SO BUILDWID	MWM1	13.96	13.83	13.27	12.32	10.99	9.32
SO BUILDWID	MWM1	7.37	0.00	0.00	4.17	6.41	8.45
SO BUILDWID	MWM1	10.24	11.72	12.84	13.57	0.00	0.00
SO BUILDWID	MWM1	0.00	0.00	0.00	0.00	0.00	0.00
SO BUILDWID	MWM1	7.37	0.00	0.00	4.17	6.41	8.45
SO BUILDWID	MWM1	10.24	11.72	12.84	13.57	0.00	0.00
SO BUILDLEN	MWM1	4.20	6.46	8.52	10.33	11.82	12.95
SO BUILDLEN	MWM1	13.69	0.00	0.00	13.78	13.66	13.12
SO BUILDLEN	MWM1	12.19	10.89	9.25	7.34	0.00	0.00
SO BUILDLEN	MWM1	0.00	0.00	0.00	0.00	0.00	0.00
SO BUILDLEN	MWM1	13.69	0.00	0.00	13.78	13.66	13.12
SO BUILDLEN	MWM1	12.19	10.89	9.25	7.34	0.00	0.00
SO XBADJ	MWM1	-12.31	-14.73	-16.70	-18.17	-19.08	-19.41
SO XBADJ	MWM1	-19.16	0.00	0.00	-16.90	-17.21	-16.98
SO XBADJ	MWM1	-16.25	-15.02	-13.33	-11.24	0.00	0.00
SO XBADJ	MWM1	0.00	0.00	0.00	0.00	0.00	0.00
SO XBADJ	MWM1	5.47	0.00	0.00	3.13	3.55	3.86
SO XBADJ	MWM1	4.06	4.13	4.08	3.90	0.00	0.00
SO YBADJ	MWM1	8.24	6.36	4.28	2.08	-0.19	-2.45
SO YBADJ	MWM1	-4.64	0.00	0.00	3.00	1.22	-0.61
SO YBADJ	MWM1	-2.41	-4.15	-5.75	-7.18	0.00	0.00
SO YBADJ	MWM1	0.00	0.00	0.00	0.00	0.00	0.00
SO YBADJ	MWM1	4.64	0.00	0.00	-3.00	-1.22	0.61
SO YBADJ	MWM1	2.41	4.15	5.75	7.18	0.00	0.00

SO BUILDHGT	MWM2	0.00	2.90	2.90	2.90	2.90	2.90
SO BUILDHGT	MWM2	2.90	2.90	0.00	0.00	0.00	2.90
SO BUILDHGT	MWM2	2.90	2.90	2.90	2.90	2.90	0.00
SO BUILDHGT	MWM2	0.00	2.90	2.90	2.90	2.90	2.90
SO BUILDHGT	MWM2	2.90	2.90	0.00	0.00	0.00	0.00
SO BUILDHGT	MWM2	0.00	0.00	0.00	0.00	0.00	0.00
SO BUILDWID	MWM2	0.00	13.83	13.27	12.32	10.99	9.32
SO BUILDWID	MWM2	7.37	5.20	0.00	0.00	0.00	8.45
SO BUILDWID	MWM2	10.24	11.72	12.84	13.57	13.89	0.00
SO BUILDWID	MWM2	0.00	13.83	13.27	12.32	10.99	9.32
SO BUILDWID	MWM2	7.37	5.20	0.00	0.00	0.00	0.00
SO BUILDWID	MWM2	0.00	0.00	0.00	0.00	0.00	0.00
SO BUILDLEN	MWM2	0.00	6.46	8.52	10.33	11.82	12.95
SO BUILDLEN	MWM2	13.69	14.01	0.00	0.00	0.00	13.12
SO BUILDLEN	MWM2	12.19	10.89	9.25	7.34	5.20	0.00
SO BUILDLEN	MWM2	0.00	6.46	8.52	10.33	11.82	12.95
SO BUILDLEN	MWM2	13.69	14.01	0.00	0.00	0.00	0.00

SO BUILDLEN	MWM2	0.00	0.00	0.00	0.00	0.00	0.00
SO XBADJ	MWM2	0.00	-9.82	-12.10	-14.02	-15.51	-16.53
SO XBADJ	MWM2	-17.05	-17.05	0.00	0.00	0.00	-19.19
SO XBADJ	MWM2	-19.22	-18.66	-17.54	-15.88	-13.75	0.00
SO XBADJ	MWM2	0.00	3.36	3.58	3.69	3.69	3.58
SO XBADJ	MWM2	3.36	3.04	0.00	0.00	0.00	0.00
SO XBADJ	MWM2	0.00	0.00	0.00	0.00	0.00	0.00
SO YBADJ	MWM2	0.00	7.73	6.49	5.05	3.46	1.76
SO YBADJ	MWM2	0.01	-1.75	0.00	0.00	0.00	4.00
SO YBADJ	MWM2	1.74	-0.57	-2.87	-5.08	-7.13	0.00
SO YBADJ	MWM2	0.00	-7.73	-6.49	-5.05	-3.46	-1.76
SO YBADJ	MWM2	-0.01	1.75	0.00	0.00	0.00	0.00
SO YBADJ	MWM2	0.00	0.00	0.00	0.00	0.00	0.00

SO BUILDHGT	MWM3	2.90	2.90	2.90	2.90	2.90	2.90
SO BUILDHGT	MWM3	2.90	0.00	0.00	2.90	2.90	2.90
SO BUILDHGT	MWM3	2.90	2.90	2.90	2.90	2.90	0.00
SO BUILDHGT	MWM3	0.00	0.00	0.00	0.00	0.00	0.00
SO BUILDHGT	MWM3	2.90	0.00	0.00	2.90	2.90	2.90
SO BUILDHGT	MWM3	2.90	2.90	2.90	2.90	2.90	0.00
SO BUILDWID	MWM3	13.80	13.68	13.15	12.21	10.91	9.27
SO BUILDWID	MWM3	7.35	0.00	0.00	4.11	6.36	8.42
SO BUILDWID	MWM3	10.22	11.71	12.84	13.58	13.91	0.00
SO BUILDWID	MWM3	0.00	0.00	0.00	0.00	0.00	0.00
SO BUILDWID	MWM3	7.35	0.00	0.00	4.11	6.36	8.42
SO BUILDWID	MWM3	10.22	11.71	12.84	13.58	13.91	0.00
SO BUILDLEN	MWM3	4.04	6.27	8.31	10.09	11.57	12.70
SO BUILDLEN	MWM3	13.44	0.00	0.00	13.77	13.63	13.07
SO BUILDLEN	MWM3	12.11	10.78	9.13	7.20	5.05	0.00
SO BUILDLEN	MWM3	0.00	0.00	0.00	0.00	0.00	0.00
SO BUILDLEN	MWM3	13.44	0.00	0.00	13.77	13.63	13.07
SO BUILDLEN	MWM3	12.11	10.78	9.13	7.20	5.05	0.00
SO XBADJ	MWM3	-12.19	-14.57	-16.50	-17.93	-18.82	-19.14
SO XBADJ	MWM3	-18.87	0.00	0.00	-16.86	-17.14	-16.89
SO XBADJ	MWM3	-16.13	-14.89	-13.19	-11.09	-8.65	0.00
SO XBADJ	MWM3	0.00	0.00	0.00	0.00	0.00	0.00
SO XBADJ	MWM3	5.43	0.00	0.00	3.09	3.51	3.83
SO XBADJ	MWM3	4.03	4.10	4.06	3.89	3.60	0.00
SO YBADJ	MWM3	8.12	6.23	4.15	1.95	-0.31	-2.56
SO YBADJ	MWM3	-4.74	0.00	0.00	2.89	1.12	-0.69
SO YBADJ	MWM3	-2.47	-4.18	-5.76	-7.17	-8.36	0.00
SO YBADJ	MWM3	0.00	0.00	0.00	0.00	0.00	0.00
SO YBADJ	MWM3	4.74	0.00	0.00	-2.89	-1.12	0.69
SO YBADJ	MWM3	2.47	4.18	5.76	7.17	8.36	0.00

SO BUILDHGT	MWM4	0.00	2.90	2.90	2.90	2.90	2.90
SO BUILDHGT	MWM4	2.90	2.90	0.00	0.00	0.00	2.90
SO BUILDHGT	MWM4	2.90	2.90	2.90	2.90	2.90	0.00
SO BUILDHGT	MWM4	0.00	2.90	2.90	2.90	2.90	2.90
SO BUILDHGT	MWM4	2.90	2.90	0.00	0.00	0.00	0.00
SO BUILDHGT	MWM4	0.00	0.00	0.00	0.00	0.00	0.00
SO BUILDWID	MWM4	0.00	13.68	13.15	12.21	10.91	9.27
SO BUILDWID	MWM4	7.35	5.21	0.00	0.00	0.00	8.42
SO BUILDWID	MWM4	10.22	11.71	12.84	13.58	13.91	0.00
SO BUILDWID	MWM4	0.00	13.68	13.15	12.21	10.91	9.27
SO BUILDWID	MWM4	7.35	5.21	0.00	0.00	0.00	0.00
SO BUILDWID	MWM4	0.00	0.00	0.00	0.00	0.00	0.00
SO BUILDLEN	MWM4	0.00	6.27	8.31	10.09	11.57	12.70
SO BUILDLEN	MWM4	13.44	13.78	0.00	0.00	0.00	13.07
SO BUILDLEN	MWM4	12.11	10.78	9.13	7.20	5.05	0.00
SO BUILDLEN	MWM4	0.00	6.27	8.31	10.09	11.57	12.70

SO BUILDLEN	MWM4	13.44	13.78	0.00	0.00	0.00	0.00
SO BUILDLEN	MWM4	0.00	0.00	0.00	0.00	0.00	0.00
SO XBADJ	MWM4	0.00	-9.68	-11.96	-13.87	-15.36	-16.39
SO XBADJ	MWM4	-16.92	-16.93	0.00	0.00	0.00	-19.26
SO XBADJ	MWM4	-19.26	-18.67	-17.51	-15.82	-13.65	0.00
SO XBADJ	MWM4	0.00	3.41	3.65	3.78	3.79	3.69
SO XBADJ	MWM4	3.47	3.16	0.00	0.00	0.00	0.00
SO XBADJ	MWM4	0.00	0.00	0.00	0.00	0.00	0.00
SO YBADJ	MWM4	0.00	7.78	6.52	5.07	3.47	1.76
SO YBADJ	MWM4	0.00	-1.77	0.00	0.00	0.00	3.86
SO YBADJ	MWM4	1.59	-0.72	-3.01	-5.21	-7.25	0.00
SO YBADJ	MWM4	0.00	-7.78	-6.52	-5.07	-3.47	-1.76
SO YBADJ	MWM4	0.00	1.77	0.00	0.00	0.00	0.00
SO YBADJ	MWM4	0.00	0.00	0.00	0.00	0.00	0.00

SO BUILDHGT	MWM5	2.90	2.90	2.90	2.90	2.90	2.90
SO BUILDHGT	MWM5	2.90	0.00	0.00	2.90	2.90	2.90
SO BUILDHGT	MWM5	2.90	2.90	2.90	2.90	0.00	0.00
SO BUILDHGT	MWM5	0.00	0.00	0.00	0.00	0.00	0.00
SO BUILDHGT	MWM5	2.90	0.00	0.00	2.90	2.90	2.90
SO BUILDHGT	MWM5	2.90	2.90	2.90	2.90	0.00	0.00
SO BUILDWID	MWM5	13.82	13.75	13.25	12.36	11.09	9.48
SO BUILDWID	MWM5	7.58	0.00	0.00	4.16	6.41	8.46
SO BUILDWID	MWM5	10.25	11.73	12.85	13.59	0.00	0.00
SO BUILDWID	MWM5	0.00	0.00	0.00	0.00	0.00	0.00
SO BUILDWID	MWM5	7.58	0.00	0.00	4.16	6.41	8.46
SO BUILDWID	MWM5	10.25	11.73	12.85	13.59	0.00	0.00
SO BUILDLEN	MWM5	4.42	6.61	8.60	10.33	11.75	12.81
SO BUILDLEN	MWM5	13.48	0.00	0.00	13.93	13.79	13.23
SO BUILDLEN	MWM5	12.27	10.93	9.27	7.32	0.00	0.00
SO BUILDLEN	MWM5	0.00	0.00	0.00	0.00	0.00	0.00
SO BUILDLEN	MWM5	13.48	0.00	0.00	13.93	13.79	13.23
SO BUILDLEN	MWM5	12.27	10.93	9.27	7.32	0.00	0.00
SO XBADJ	MWM5	-12.68	-15.04	-16.93	-18.32	-19.14	-19.39
SO XBADJ	MWM5	-19.05	0.00	0.00	-17.09	-17.34	-17.06
SO XBADJ	MWM5	-16.26	-14.97	-13.23	-11.08	0.00	0.00
SO XBADJ	MWM5	0.00	0.00	0.00	0.00	0.00	0.00
SO XBADJ	MWM5	5.57	0.00	0.00	3.16	3.55	3.83
SO XBADJ	MWM5	3.99	4.04	3.96	3.76	0.00	0.00
SO YBADJ	MWM5	8.12	6.20	4.09	1.86	-0.43	-2.71
SO YBADJ	MWM5	-4.91	0.00	0.00	2.66	0.86	-0.97
SO YBADJ	MWM5	-2.77	-4.49	-6.07	-7.46	0.00	0.00
SO YBADJ	MWM5	0.00	0.00	0.00	0.00	0.00	0.00
SO YBADJ	MWM5	4.91	0.00	0.00	-2.66	-0.86	0.97
SO YBADJ	MWM5	2.77	4.49	6.07	7.46	0.00	0.00

SO BUILDHGT	MWM6	0.00	2.90	2.90	2.90	2.90	2.90
SO BUILDHGT	MWM6	2.90	2.90	0.00	0.00	0.00	2.90
SO BUILDHGT	MWM6	2.90	2.90	2.90	2.90	2.90	0.00
SO BUILDHGT	MWM6	0.00	2.90	2.90	2.90	2.90	2.90
SO BUILDHGT	MWM6	2.90	2.90	0.00	0.00	0.00	0.00
SO BUILDHGT	MWM6	0.00	0.00	0.00	0.00	0.00	0.00
SO BUILDWID	MWM6	0.00	13.75	13.25	12.36	11.09	9.48
SO BUILDWID	MWM6	7.58	5.45	0.00	0.00	0.00	8.46
SO BUILDWID	MWM6	10.25	11.73	12.85	13.59	13.91	0.00
SO BUILDWID	MWM6	0.00	13.75	13.25	12.36	11.09	9.48
SO BUILDWID	MWM6	7.58	5.45	0.00	0.00	0.00	0.00
SO BUILDWID	MWM6	0.00	0.00	0.00	0.00	0.00	0.00
SO BUILDLEN	MWM6	0.00	6.61	8.60	10.33	11.75	12.81
SO BUILDLEN	MWM6	13.48	13.74	0.00	0.00	0.00	13.23
SO BUILDLEN	MWM6	12.27	10.93	9.27	7.32	5.15	0.00

SO BUILDLEN	MWM6	0.00	6.61	8.60	10.33	11.75	12.81
SO BUILDLEN	MWM6	13.48	13.74	0.00	0.00	0.00	0.00
SO BUILDLEN	MWM6	0.00	0.00	0.00	0.00	0.00	0.00
SO XBADJ	MWM6	0.00	-10.10	-12.34	-14.21	-15.65	-16.62
SO XBADJ	MWM6	-17.08	-17.02	0.00	0.00	0.00	-19.47
SO XBADJ	MWM6	-19.43	-18.80	-17.61	-15.87	-13.66	0.00
SO XBADJ	MWM6	0.00	3.49	3.74	3.88	3.91	3.81
SO XBADJ	MWM6	3.60	3.28	0.00	0.00	0.00	0.00
SO XBADJ	MWM6	0.00	0.00	0.00	0.00	0.00	0.00
SO YBADJ	MWM6	0.00	7.78	6.50	5.03	3.40	1.67
SO YBADJ	MWM6	-0.11	-1.89	0.00	0.00	0.00	3.62
SO YBADJ	MWM6	1.33	-1.00	-3.29	-5.49	-7.52	0.00
SO YBADJ	MWM6	0.00	-7.78	-6.50	-5.03	-3.40	-1.67
SO YBADJ	MWM6	0.11	1.89	0.00	0.00	0.00	0.00
SO YBADJ	MWM6	0.00	0.00	0.00	0.00	0.00	0.00

SO BUILDHGT	MWM7	2.90	2.90	2.90	2.90	2.90	2.90
SO BUILDHGT	MWM7	2.90	0.00	0.00	2.90	2.90	2.90
SO BUILDHGT	MWM7	2.90	2.90	2.90	2.90	2.90	0.00
SO BUILDHGT	MWM7	0.00	0.00	0.00	0.00	0.00	0.00
SO BUILDHGT	MWM7	2.90	0.00	0.00	2.90	2.90	2.90
SO BUILDHGT	MWM7	2.90	2.90	2.90	2.90	2.90	0.00
SO BUILDWID	MWM7	14.06	13.94	13.40	12.46	11.13	9.46
SO BUILDWID	MWM7	7.51	0.00	0.00	4.42	6.68	8.74
SO BUILDWID	MWM7	10.54	12.02	13.13	13.84	14.13	0.00
SO BUILDWID	MWM7	0.00	0.00	0.00	0.00	0.00	0.00
SO BUILDWID	MWM7	7.51	0.00	0.00	4.42	6.68	8.74
SO BUILDWID	MWM7	10.54	12.02	13.13	13.84	14.13	0.00
SO BUILDLEN	MWM7	4.33	6.57	8.62	10.40	11.87	12.98
SO BUILDLEN	MWM7	13.69	0.00	0.00	14.06	13.93	13.38
SO BUILDLEN	MWM7	12.41	11.07	9.40	7.43	5.25	0.00
SO BUILDLEN	MWM7	0.00	0.00	0.00	0.00	0.00	0.00
SO BUILDLEN	MWM7	13.69	0.00	0.00	14.06	13.93	13.38
SO BUILDLEN	MWM7	12.41	11.07	9.40	7.43	5.25	0.00
SO XBADJ	MWM7	-12.46	-14.85	-16.80	-18.23	-19.11	-19.40
SO XBADJ	MWM7	-19.11	0.00	0.00	-16.98	-17.25	-17.00
SO XBADJ	MWM7	-16.23	-14.96	-13.25	-11.13	-8.67	0.00
SO XBADJ	MWM7	0.00	0.00	0.00	0.00	0.00	0.00
SO XBADJ	MWM7	5.42	0.00	0.00	2.91	3.32	3.62
SO XBADJ	MWM7	3.81	3.89	3.85	3.69	3.42	0.00
SO YBADJ	MWM7	8.22	6.32	4.23	2.01	-0.27	-2.55
SO YBADJ	MWM7	-4.75	0.00	0.00	2.74	0.97	-0.84
SO YBADJ	MWM7	-2.61	-4.31	-5.88	-7.27	-8.43	0.00
SO YBADJ	MWM7	0.00	0.00	0.00	0.00	0.00	0.00
SO YBADJ	MWM7	4.75	0.00	0.00	-2.74	-0.97	0.84
SO YBADJ	MWM7	2.61	4.31	5.88	7.27	8.43	0.00

SO BUILDHGT	MWM8	0.00	2.90	2.90	2.90	2.90	2.90
SO BUILDHGT	MWM8	2.90	2.90	0.00	0.00	0.00	2.90
SO BUILDHGT	MWM8	2.90	2.90	2.90	2.90	2.90	0.00
SO BUILDHGT	MWM8	0.00	2.90	2.90	2.90	2.90	2.90
SO BUILDHGT	MWM8	2.90	2.90	0.00	0.00	0.00	0.00
SO BUILDHGT	MWM8	0.00	0.00	0.00	0.00	0.00	0.00
SO BUILDWID	MWM8	0.00	13.94	13.40	12.46	11.13	9.46
SO BUILDWID	MWM8	7.51	5.33	0.00	0.00	0.00	8.74
SO BUILDWID	MWM8	10.54	12.02	13.13	13.84	14.13	0.00
SO BUILDWID	MWM8	0.00	13.94	13.40	12.46	11.13	9.46
SO BUILDWID	MWM8	7.51	5.33	0.00	0.00	0.00	0.00
SO BUILDWID	MWM8	0.00	0.00	0.00	0.00	0.00	0.00
SO BUILDLEN	MWM8	0.00	6.57	8.62	10.40	11.87	12.98
SO BUILDLEN	MWM8	13.69	13.99	0.00	0.00	0.00	13.38

SO BUILDLEN	MWM8	12.41	11.07	9.40	7.43	5.25	0.00
SO BUILDLEN	MWM8	0.00	6.57	8.62	10.40	11.87	12.98
SO BUILDLEN	MWM8	13.69	13.99	0.00	0.00	0.00	0.00
SO BUILDLEN	MWM8	0.00	0.00	0.00	0.00	0.00	0.00
SO XBADJ	MWM8	0.00	-10.09	-12.39	-14.30	-15.79	-16.79
SO XBADJ	MWM8	-17.29	-17.26	0.00	0.00	0.00	-19.42
SO XBADJ	MWM8	-19.38	-18.75	-17.55	-15.82	-13.61	0.00
SO XBADJ	MWM8	0.00	3.52	3.77	3.90	3.92	3.81
SO XBADJ	MWM8	3.60	3.27	0.00	0.00	0.00	0.00
SO XBADJ	MWM8	0.00	0.00	0.00	0.00	0.00	0.00
SO YBADJ	MWM8	0.00	7.94	6.65	5.16	3.51	1.75
SO YBADJ	MWM8	-0.06	-1.86	0.00	0.00	0.00	3.58
SO YBADJ	MWM8	1.31	-0.99	-3.27	-5.44	-7.45	0.00
SO YBADJ	MWM8	0.00	-7.94	-6.65	-5.16	-3.51	-1.75
SO YBADJ	MWM8	0.06	1.86	0.00	0.00	0.00	0.00
SO YBADJ	MWM8	0.00	0.00	0.00	0.00	0.00	0.00

SO BUILDHGT	MWM9	0.00	0.00	0.00	0.00	0.00	0.00
SO BUILDHGT	MWM9	0.00	0.00	0.00	2.90	2.90	2.90
SO BUILDHGT	MWM9	2.90	2.90	2.90	2.90	0.00	0.00
SO BUILDHGT	MWM9	0.00	0.00	0.00	0.00	0.00	0.00
SO BUILDHGT	MWM9	0.00	0.00	0.00	2.90	2.90	2.90
SO BUILDHGT	MWM9	2.90	2.90	2.90	2.90	0.00	0.00
SO BUILDWID	MWM9	0.00	0.00	0.00	0.00	0.00	0.00
SO BUILDWID	MWM9	0.00	0.00	0.00	4.43	6.68	8.73
SO BUILDWID	MWM9	10.51	11.97	13.06	13.76	0.00	0.00
SO BUILDWID	MWM9	0.00	0.00	0.00	0.00	0.00	0.00
SO BUILDWID	MWM9	0.00	0.00	0.00	4.43	6.68	8.73
SO BUILDWID	MWM9	10.51	11.97	13.06	13.76	0.00	0.00
SO BUILDLEN	MWM9	0.00	0.00	0.00	0.00	0.00	0.00
SO BUILDLEN	MWM9	0.00	0.00	0.00	14.06	13.94	13.41
SO BUILDLEN	MWM9	12.47	11.15	9.49	7.54	0.00	0.00
SO BUILDLEN	MWM9	0.00	0.00	0.00	0.00	0.00	0.00
SO BUILDLEN	MWM9	0.00	0.00	0.00	14.06	13.94	13.41
SO BUILDLEN	MWM9	12.47	11.15	9.49	7.54	0.00	0.00
SO XBADJ	MWM9	0.00	0.00	0.00	0.00	0.00	0.00
SO XBADJ	MWM9	0.00	0.00	0.00	-16.99	-17.25	-17.00
SO XBADJ	MWM9	-16.23	-14.96	-13.24	-11.12	0.00	0.00
SO XBADJ	MWM9	0.00	0.00	0.00	0.00	0.00	0.00
SO XBADJ	MWM9	0.00	0.00	0.00	2.93	3.31	3.59
SO XBADJ	MWM9	3.76	3.82	3.76	3.59	0.00	0.00
SO YBADJ	MWM9	0.00	0.00	0.00	0.00	0.00	0.00
SO YBADJ	MWM9	0.00	0.00	0.00	2.71	0.92	-0.90
SO YBADJ	MWM9	-2.69	-4.39	-5.97	-7.36	0.00	0.00
SO YBADJ	MWM9	0.00	0.00	0.00	0.00	0.00	0.00
SO YBADJ	MWM9	0.00	0.00	0.00	-2.71	-0.92	0.90
SO YBADJ	MWM9	2.69	4.39	5.97	7.36	0.00	0.00

ATTACHMENT B

NO_2 DISPERSION MODELLING INPUT AND OUTPUT FILES

ONE-HOUR AVERAGE NO_2 INPUT FILE

```
CO STARTING
   TITLEONE  Armada Clive 08-16 Power Project
   MODELOPT  CONC   ELEV   PVMRM   BETA
   AVERTIME  1
   POLLUTID  NO2  H1H
   OZONEFIL  "C:\Modelling\O3rur.txt" ppm
   NO2EQUIL  0.90
   NO2STACK  0.20
   RUNORNOT  RUN
   ERRORFIL  ERRORS.OUT
CO FINISHED

SO STARTING
   LOCATION   MWM1      POINTHOR   337568.81  5812548.10  909.00
   LOCATION   MWM2      POINTHOR   337568.42  5812543.01  909.00
   LOCATION   MWM3      POINTHOR   337567.72  5812521.82  909.00
   LOCATION   MWM4      POINTHOR   337567.50  5812516.70  909.00
   LOCATION   MWM5      POINTHOR   337566.85  5812495.56  909.00
   LOCATION   MWM6      POINTHOR   337566.64  5812490.38  909.00
   LOCATION   MWM7      POINTHOR   337565.89  5812469.11  909.00
   LOCATION   MWM8      POINTHOR   337565.78  5812464.08  909.00
   LOCATION   MWM9      POINTHOR   337564.89  5812442.80  909.00

   LOCATION   GC1       POINT      337887.00  5812275.00  913.00
   LOCATION   RC1       POINT      337901.00  5812271.00  913.00
   LOCATION   RC2       POINT      337901.00  5812260.00  913.00

   LOCATION   C1        POINT      334779.00  5807997.00  869.00
   LOCATION   C2        POINT      334774.00  5808000.00  869.00

   LOCATION   C301      POINT      337913.00  5812361.00  913.00
   LOCATION   C302      POINT      337913.00  5812355.00  913.00
   LOCATION   C303      POINT      337913.00  5812349.00  913.00
   LOCATION   C304      POINT      337914.00  5812342.00  913.00
   LOCATION   C305      POINT      337914.00  5812337.00  913.00
   LOCATION   C307      POINT      337914.00  5812329.00  913.00
   LOCATION   C308      POINT      337914.00  5812325.00  913.00
   LOCATION   C311      POINT      337995.42  5812352.17  913.00
   LOCATION   C312      POINT      337995.27  5812337.38  913.00
   LOCATION   Heat1     POINT      337913.00  5812288.00  913.00
   LOCATION   Heat2     POINT      337913.00  5812284.00  913.00
   LOCATION   GlyHeat1  POINT      337878.02  5812370.66  913.00
   LOCATION   GlyHeat2  POINT      337879.77  5812370.54  913.00
   LOCATION   GlyHeat3  POINT      337881.43  5812370.46  913.00
   LOCATION   GlyHeat4  POINT      337883.18  5812370.35  913.00
   LOCATION   Treat1    POINT      337882.00  5812342.00  913.00
   LOCATION   Treat2    POINT      337884.23  5812341.81  913.00
   LOCATION   Treat3    POINT      337888.03  5812341.42  913.00
   LOCATION   Treat4    POINT      337890.28  5812341.11  913.00
   LOCATION   InlHeat   POINT      337962.00  5812359.00  913.00
   LOCATION   Knockout1 POINT      337866.00  5812304.00  913.00
   LOCATION   Knockout2 POINT      337869.00  5812298.00  913.00
   LOCATION   C309      POINT      337972.00  5812379.00  913.00

**Point Source      Qs        Hs        Ts         Vs      Ds
**Parameters:       ---       ---       ---        ---     ---

   SRCPARAM   MWM1        0.1833     8.30     673.15    9.79  0.6300
   SRCPARAM   MWM2        0.1833     8.30     673.15    9.79  0.6300
   SRCPARAM   MWM3        0.1833     8.30     673.15    9.79  0.6300
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SRCPARAM  MWM4       0.1833     8.30     673.15    9.79  0.6300
SRCPARAM  MWM5       0.1833     8.30     673.15    9.79  0.6300
SRCPARAM  MWM6       0.1833     8.30     673.15    9.79  0.6300
SRCPARAM  MWM7       0.1833     8.30     673.15    9.79  0.6300
SRCPARAM  MWM8       0.1833     8.30     673.15    9.79  0.6300
SRCPARAM  MWM9       0.1833     8.30     673.15    9.79  0.6300

SRCPARAM  GC1        0.4109    10.47     747.51   37.90  0.3799
SRCPARAM  RC1        0.6023    10.85     740.35   37.36  0.3250
SRCPARAM  RC2        0.4772    10.84     723.09   36.03  0.2936

SRCPARAM  C1         1.2648     6.33     805.03   26.40  0.1530
SRCPARAM  C2         0.3328    10.03     711.12   29.88  0.2502

SRCPARAM  C301       0.3564    10.10     859.15   38.30  0.2600
SRCPARAM  C302       0.3564    10.10     859.15   38.30  0.2600
SRCPARAM  C303       0.5355    10.10     861.15   53.00  0.2600
SRCPARAM  C304       0.5355    10.10     861.15   38.20  0.3000
SRCPARAM  C305       0.5355    10.10     861.15   38.20  0.3000
SRCPARAM  C307       0.2318     6.10     747.15   58.40  0.1500
SRCPARAM  C308       1.0791    10.10     823.15   32.40  0.2600
SRCPARAM  C311       0.1538     7.10     589.15    7.50  0.2000
SRCPARAM  C312       0.1538     7.10     589.15    7.50  0.2000
SRCPARAM  Heat1      0.0504     6.60     692.02   13.21  0.6100
SRCPARAM  Heat2      0.0504     6.60     692.02   13.21  0.6100
SRCPARAM  GlyHeat1   0.0044     6.40     671.86   11.13  0.5100
SRCPARAM  GlyHeat2   0.0174     6.40     671.86   11.13  0.5100
SRCPARAM  GlyHeat3   0.0174     6.40     671.86   11.13  0.5100
SRCPARAM  GlyHeat4   0.0174     6.40     671.86   11.13  0.5100
SRCPARAM  Treat1     0.0126     9.10     638.95    6.87  0.4500
SRCPARAM  Treat2     0.0126     9.10     638.95    6.87  0.4500
SRCPARAM  Treat3     0.0126     9.10     638.95    6.87  0.4500
SRCPARAM  Treat4     0.0126     9.10     638.95    6.87  0.4500
SRCPARAM  InlHeat    0.0504    12.20     650.86    8.14  0.6100
SRCPARAM  Knockout1  0.0631    15.20     737.95   14.07  0.6100
SRCPARAM  Knockout2  0.0631    15.20     737.95   14.07  0.6100
SRCPARAM  C309       0.4496     7.10     700.15   24.10  0.2500


SO BUILDHGT MWM1      2.9    2.9    2.9    2.9    2.9    2.9
SO BUILDHGT MWM1      2.9      0      0    2.9    2.9    2.9
SO BUILDHGT MWM1      2.9    2.9    2.9    2.9      0      0
SO BUILDHGT MWM1        0      0      0      0      0      0
SO BUILDHGT MWM1      2.9      0      0    2.9    2.9    2.9
SO BUILDHGT MWM1      2.9    2.9    2.9    2.9      0      0
SO BUILDWID MWM1    13.96  13.83  13.27  12.32  10.99   9.32
SO BUILDWID MWM1     7.37      0      0   4.17   6.41   8.45
SO BUILDWID MWM1    10.24  11.72  12.84  13.57      0      0
SO BUILDWID MWM1        0      0      0      0      0      0
SO BUILDWID MWM1     7.37      0      0   4.17   6.41   8.45
SO BUILDWID MWM1    10.24  11.72  12.84  13.57      0      0
SO BUILDLEN MWM1     4.2   6.46   8.52  10.33  11.82  12.95
SO BUILDLEN MWM1    13.69      0      0  13.78  13.66  13.12
SO BUILDLEN MWM1    12.19  10.89   9.25   7.34      0      0
SO BUILDLEN MWM1        0      0      0      0      0      0
SO BUILDLEN MWM1    13.69      0      0  13.78  13.66  13.12
SO BUILDLEN MWM1    12.19  10.89   9.25   7.34      0      0
SO XBADJ    MWM1   -12.31 -14.73  -16.7 -18.17 -19.08 -19.41
SO XBADJ    MWM1   -19.16      0      0  -16.9 -17.21 -16.98
SO XBADJ    MWM1   -16.25 -15.02 -13.33 -11.24      0      0
SO XBADJ    MWM1        0      0      0      0      0      0
SO XBADJ    MWM1     5.47      0      0   3.13   3.55   3.86
SO XBADJ    MWM1     4.06   4.13   4.08    3.9      0      0
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SO YBADJ    MWM1      8.24    6.36    4.28    2.08   -0.19   -2.45
SO YBADJ    MWM1     -4.64       0       0       3    1.22   -0.61
SO YBADJ    MWM1     -2.41   -4.15   -5.75   -7.18       0       0
SO YBADJ    MWM1         0       0       0       0       0       0
SO YBADJ    MWM1      4.64       0       0      -3   -1.22    0.61
SO YBADJ    MWM1      2.41    4.15    5.75    7.18       0       0


SO BUILDHGT MWM2         0     2.9     2.9     2.9     2.9     2.9
SO BUILDHGT MWM2       2.9     2.9       0       0       0     2.9
SO BUILDHGT MWM2       2.9     2.9     2.9     2.9     2.9       0
SO BUILDHGT MWM2         0     2.9     2.9     2.9     2.9     2.9
SO BUILDHGT MWM2       2.9     2.9       0       0       0       0
SO BUILDHGT MWM2         0       0       0       0       0       0
SO BUILDWID MWM2         0   13.83   13.27   12.32   10.99    9.32
SO BUILDWID MWM2      7.37     5.2       0       0       0    8.45
SO BUILDWID MWM2     10.24   11.72   12.84   13.57   13.89       0
SO BUILDWID MWM2         0   13.83   13.27   12.32   10.99    9.32
SO BUILDWID MWM2      7.37     5.2       0       0       0       0
SO BUILDWID MWM2         0       0       0       0       0       0
SO BUILDLEN MWM2         0    6.46    8.52   10.33   11.82   12.95
SO BUILDLEN MWM2     13.69   14.01       0       0       0   13.12
SO BUILDLEN MWM2     12.19   10.89    9.25    7.34     5.2       0
SO BUILDLEN MWM2         0    6.46    8.52   10.33   11.82   12.95
SO BUILDLEN MWM2     13.69   14.01       0       0       0       0
SO BUILDLEN MWM2         0       0       0       0       0       0
SO XBADJ    MWM2         0   -9.82   -12.1  -14.02  -15.51  -16.53
SO XBADJ    MWM2    -17.05  -17.05       0       0       0  -19.19
SO XBADJ    MWM2    -19.22  -18.66  -17.54  -15.88  -13.75       0
SO XBADJ    MWM2         0    3.36    3.58    3.69    3.69    3.58
SO XBADJ    MWM2      3.36    3.04       0       0       0       0
SO XBADJ    MWM2         0       0       0       0       0       0
SO YBADJ    MWM2         0    7.73    6.49    5.05    3.46    1.76
SO YBADJ    MWM2      0.01   -1.75       0       0       0       4
SO YBADJ    MWM2      1.74   -0.57   -2.87   -5.08   -7.13       0
SO YBADJ    MWM2         0   -7.73   -6.49   -5.05   -3.46   -1.76
SO YBADJ    MWM2     -0.01    1.75       0       0       0       0
SO YBADJ    MWM2         0       0       0       0       0       0


SO BUILDHGT MWM3       2.9     2.9     2.9     2.9     2.9     2.9
SO BUILDHGT MWM3       2.9       0       0     2.9     2.9     2.9
SO BUILDHGT MWM3       2.9     2.9     2.9     2.9     2.9       0
SO BUILDHGT MWM3         0       0       0       0       0       0
SO BUILDHGT MWM3       2.9       0       0     2.9     2.9     2.9
SO BUILDHGT MWM3       2.9     2.9     2.9     2.9     2.9       0
SO BUILDWID MWM3      13.8   13.68   13.15   12.21   10.91    9.27
SO BUILDWID MWM3      7.35       0       0    4.11    6.36    8.42
SO BUILDWID MWM3     10.22   11.71   12.84   13.58   13.91       0
SO BUILDWID MWM3         0       0       0       0       0       0
SO BUILDWID MWM3      7.35       0       0    4.11    6.36    8.42
SO BUILDWID MWM3     10.22   11.71   12.84   13.58   13.91       0
SO BUILDLEN MWM3      4.04    6.27    8.31   10.09   11.57    12.7
SO BUILDLEN MWM3     13.44       0       0   13.77   13.63   13.07
SO BUILDLEN MWM3     12.11   10.78    9.13     7.2    5.05       0
SO BUILDLEN MWM3         0       0       0       0       0       0
SO BUILDLEN MWM3     13.44       0       0   13.77   13.63   13.07
SO BUILDLEN MWM3     12.11   10.78    9.13     7.2    5.05       0
SO XBADJ    MWM3    -12.19  -14.57   -16.5  -17.93  -18.82  -19.14
SO XBADJ    MWM3    -18.87       0       0  -16.86  -17.14  -16.89
SO XBADJ    MWM3    -16.13  -14.89  -13.19  -11.09   -8.65       0
SO XBADJ    MWM3         0       0       0       0       0       0
SO XBADJ    MWM3      5.43       0       0    3.09    3.51    3.83
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SO XBADJ    MWM3      4.03    4.1    4.06    3.89     3.6       0
SO YBADJ    MWM3      8.12   6.23    4.15    1.95   -0.31   -2.56
SO YBADJ    MWM3     -4.74      0       0    2.89    1.12   -0.69
SO YBADJ    MWM3     -2.47   -4.18   -5.76   -7.17   -8.36       0
SO YBADJ    MWM3         0       0       0       0       0       0
SO YBADJ    MWM3      4.74       0       0   -2.89   -1.12    0.69
SO YBADJ    MWM3      2.47    4.18    5.76    7.17    8.36       0


SO BUILDHGT MWM4         0     2.9     2.9     2.9     2.9     2.9
SO BUILDHGT MWM4       2.9     2.9       0       0       0     2.9
SO BUILDHGT MWM4       2.9     2.9     2.9     2.9     2.9       0
SO BUILDHGT MWM4         0     2.9     2.9     2.9     2.9     2.9
SO BUILDHGT MWM4       2.9     2.9       0       0       0       0
SO BUILDHGT MWM4         0       0       0       0       0       0
SO BUILDWID MWM4         0   13.68   13.15   12.21   10.91    9.27
SO BUILDWID MWM4      7.35    5.21       0       0       0    8.42
SO BUILDWID MWM4     10.22   11.71   12.84   13.58   13.91       0
SO BUILDWID MWM4         0   13.68   13.15   12.21   10.91    9.27
SO BUILDWID MWM4      7.35    5.21       0       0       0       0
SO BUILDWID MWM4         0       0       0       0       0       0
SO BUILDLEN MWM4         0    6.27    8.31   10.09   11.57    12.7
SO BUILDLEN MWM4     13.44   13.78       0       0       0   13.07
SO BUILDLEN MWM4     12.11   10.78    9.13     7.2    5.05       0
SO BUILDLEN MWM4         0    6.27    8.31   10.09   11.57    12.7
SO BUILDLEN MWM4     13.44   13.78       0       0       0       0
SO BUILDLEN MWM4         0       0       0       0       0       0
SO XBADJ    MWM4         0   -9.68  -11.96  -13.87  -15.36  -16.39
SO XBADJ    MWM4    -16.92  -16.93       0       0       0  -19.26
SO XBADJ    MWM4    -19.26  -18.67  -17.51  -15.82  -13.65       0
SO XBADJ    MWM4         0    3.41    3.65    3.78    3.79    3.69
SO XBADJ    MWM4      3.47    3.16       0       0       0       0
SO XBADJ    MWM4         0       0       0       0       0       0
SO YBADJ    MWM4         0    7.78    6.52    5.07    3.47    1.76
SO YBADJ    MWM4         0   -1.77       0       0       0    3.86
SO YBADJ    MWM4      1.59   -0.72   -3.01   -5.21   -7.25       0
SO YBADJ    MWM4         0   -7.78   -6.52   -5.07   -3.47   -1.76
SO YBADJ    MWM4         0    1.77       0       0       0       0
SO YBADJ    MWM4         0       0       0       0       0       0


SO BUILDHGT MWM5       2.9     2.9     2.9     2.9     2.9     2.9
SO BUILDHGT MWM5       2.9       0       0     2.9     2.9     2.9
SO BUILDHGT MWM5       2.9     2.9     2.9     2.9       0       0
SO BUILDHGT MWM5         0       0       0       0       0       0
SO BUILDHGT MWM5       2.9       0       0     2.9     2.9     2.9
SO BUILDHGT MWM5       2.9     2.9     2.9     2.9       0       0
SO BUILDWID MWM5     13.82   13.75   13.25   12.36   11.09    9.48
SO BUILDWID MWM5      7.58       0       0    4.16    6.41    8.46
SO BUILDWID MWM5     10.25   11.73   12.85   13.59       0       0
SO BUILDWID MWM5         0       0       0       0       0       0
SO BUILDWID MWM5      7.58       0       0    4.16    6.41    8.46
SO BUILDWID MWM5     10.25   11.73   12.85   13.59       0       0
SO BUILDLEN MWM5      4.42    6.61     8.6   10.33   11.75   12.81
SO BUILDLEN MWM5     13.48       0       0   13.93   13.79   13.23
SO BUILDLEN MWM5     12.27   10.93    9.27    7.32       0       0
SO BUILDLEN MWM5         0       0       0       0       0       0
SO BUILDLEN MWM5     13.48       0       0   13.93   13.79   13.23
SO BUILDLEN MWM5     12.27   10.93    9.27    7.32       0       0
SO XBADJ    MWM5    -12.68  -15.04  -16.93  -18.32  -19.14  -19.39
SO XBADJ    MWM5    -19.05       0       0  -17.09  -17.34  -17.06
SO XBADJ    MWM5    -16.26  -14.97  -13.23  -11.08       0       0
SO XBADJ    MWM5         0       0       0       0       0       0
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SO XBADJ    MWM5      5.57      0      0    3.16    3.55    3.83
SO XBADJ    MWM5      3.99    4.04    3.96    3.76       0       0
SO YBADJ    MWM5      8.12     6.2    4.09    1.86   -0.43   -2.71
SO YBADJ    MWM5     -4.91       0      0    2.66    0.86   -0.97
SO YBADJ    MWM5     -2.77   -4.49   -6.07   -7.46       0       0
SO YBADJ    MWM5         0       0       0       0       0       0
SO YBADJ    MWM5      4.91       0       0   -2.66   -0.86    0.97
SO YBADJ    MWM5      2.77    4.49    6.07    7.46       0       0


SO BUILDHGT MWM6         0     2.9     2.9     2.9     2.9     2.9
SO BUILDHGT MWM6       2.9     2.9       0       0       0     2.9
SO BUILDHGT MWM6       2.9     2.9     2.9     2.9     2.9       0
SO BUILDHGT MWM6         0     2.9     2.9     2.9     2.9     2.9
SO BUILDHGT MWM6       2.9     2.9       0       0       0       0
SO BUILDHGT MWM6         0       0       0       0       0       0
SO BUILDWID MWM6         0   13.75   13.25   12.36   11.09    9.48
SO BUILDWID MWM6      7.58    5.45       0       0       0    8.46
SO BUILDWID MWM6     10.25   11.73   12.85   13.59   13.91       0
SO BUILDWID MWM6         0   13.75   13.25   12.36   11.09    9.48
SO BUILDWID MWM6      7.58    5.45       0       0       0       0
SO BUILDWID MWM6         0       0       0       0       0       0
SO BUILDLEN MWM6         0    6.61     8.6   10.33   11.75   12.81
SO BUILDLEN MWM6     13.48   13.74       0       0       0   13.23
SO BUILDLEN MWM6     12.27   10.93    9.27    7.32    5.15       0
SO BUILDLEN MWM6         0    6.61     8.6   10.33   11.75   12.81
SO BUILDLEN MWM6     13.48   13.74       0       0       0       0
SO BUILDLEN MWM6         0       0       0       0       0       0
SO XBADJ    MWM6         0   -10.1  -12.34  -14.21  -15.65  -16.62
SO XBADJ    MWM6    -17.08  -17.02       0       0       0  -19.47
SO XBADJ    MWM6    -19.43   -18.8  -17.61  -15.87  -13.66       0
SO XBADJ    MWM6         0    3.49    3.74    3.88    3.91    3.81
SO XBADJ    MWM6       3.6    3.28       0       0       0       0
SO XBADJ    MWM6         0       0       0       0       0       0
SO YBADJ    MWM6         0    7.78     6.5    5.03     3.4    1.67
SO YBADJ    MWM6     -0.11   -1.89       0       0       0    3.62
SO YBADJ    MWM6      1.33      -1   -3.29   -5.49   -7.52       0
SO YBADJ    MWM6         0   -7.78    -6.5   -5.03    -3.4   -1.67
SO YBADJ    MWM6      0.11    1.89       0       0       0       0
SO YBADJ    MWM6         0       0       0       0       0       0


SO BUILDHGT MWM7       2.9     2.9     2.9     2.9     2.9     2.9
SO BUILDHGT MWM7       2.9       0       0     2.9     2.9     2.9
SO BUILDHGT MWM7       2.9     2.9     2.9     2.9     2.9       0
SO BUILDHGT MWM7         0       0       0       0       0       0
SO BUILDHGT MWM7       2.9       0       0     2.9     2.9     2.9
SO BUILDHGT MWM7       2.9     2.9     2.9     2.9     2.9       0
SO BUILDWID MWM7     14.06   13.94    13.4   12.46   11.13    9.46
SO BUILDWID MWM7      7.51       0       0    4.42    6.68    8.74
SO BUILDWID MWM7     10.54   12.02   13.13   13.84   14.13       0
SO BUILDWID MWM7         0       0       0       0       0       0
SO BUILDWID MWM7      7.51       0       0    4.42    6.68    8.74
SO BUILDWID MWM7     10.54   12.02   13.13   13.84   14.13       0
SO BUILDLEN MWM7      4.33    6.57    8.62    10.4   11.87   12.98
SO BUILDLEN MWM7     13.69       0       0   14.06   13.93   13.38
SO BUILDLEN MWM7     12.41   11.07     9.4    7.43    5.25       0
SO BUILDLEN MWM7         0       0       0       0       0       0
SO BUILDLEN MWM7     13.69       0       0   14.06   13.93   13.38
SO BUILDLEN MWM7     12.41   11.07     9.4    7.43    5.25       0
SO XBADJ    MWM7    -12.46  -14.85   -16.8  -18.23  -19.11   -19.4
SO XBADJ    MWM7    -19.11       0       0  -16.98  -17.25     -17
SO XBADJ    MWM7    -16.23  -14.96  -13.25  -11.13   -8.67       0
```

```
SO XBADJ    MWM7        0      0      0      0      0      0
SO XBADJ    MWM7      5.42     0      0    2.91   3.32   3.62
SO XBADJ    MWM7      3.81   3.89   3.85   3.69   3.42     0
SO YBADJ    MWM7      8.22   6.32   4.23   2.01  -0.27  -2.55
SO YBADJ    MWM7     -4.75     0      0    2.74   0.97  -0.84
SO YBADJ    MWM7     -2.61  -4.31  -5.88  -7.27  -8.43     0
SO YBADJ    MWM7        0      0      0      0      0      0
SO YBADJ    MWM7      4.75     0      0   -2.74  -0.97   0.84
SO YBADJ    MWM7      2.61   4.31   5.88   7.27   8.43     0


SO BUILDHGT MWM8        0    2.9    2.9    2.9    2.9    2.9
SO BUILDHGT MWM8      2.9    2.9      0      0      0    2.9
SO BUILDHGT MWM8      2.9    2.9    2.9    2.9    2.9      0
SO BUILDHGT MWM8        0    2.9    2.9    2.9    2.9    2.9
SO BUILDHGT MWM8      2.9    2.9      0      0      0      0
SO BUILDHGT MWM8        0      0      0      0      0      0
SO BUILDWID MWM8        0  13.94   13.4  12.46  11.13   9.46
SO BUILDWID MWM8     7.51   5.33      0      0      0   8.74
SO BUILDWID MWM8    10.54  12.02  13.13  13.84  14.13      0
SO BUILDWID MWM8        0  13.94   13.4  12.46  11.13   9.46
SO BUILDWID MWM8     7.51   5.33      0      0      0      0
SO BUILDWID MWM8        0      0      0      0      0      0
SO BUILDLEN MWM8        0   6.57   8.62   10.4  11.87  12.98
SO BUILDLEN MWM8    13.69  13.99      0      0      0  13.38
SO BUILDLEN MWM8    12.41  11.07    9.4   7.43   5.25      0
SO BUILDLEN MWM8        0   6.57   8.62   10.4  11.87  12.98
SO BUILDLEN MWM8    13.69  13.99      0      0      0      0
SO BUILDLEN MWM8        0      0      0      0      0      0
SO XBADJ    MWM8        0 -10.09 -12.39  -14.3 -15.79 -16.79
SO XBADJ    MWM8   -17.29 -17.26      0      0      0 -19.42
SO XBADJ    MWM8   -19.38 -18.75 -17.55 -15.82 -13.61      0
SO XBADJ    MWM8        0   3.52   3.77    3.9   3.92   3.81
SO XBADJ    MWM8      3.6   3.27      0      0      0      0
SO XBADJ    MWM8        0      0      0      0      0      0
SO YBADJ    MWM8        0   7.94   6.65   5.16   3.51   1.75
SO YBADJ    MWM8    -0.06  -1.86      0      0      0   3.58
SO YBADJ    MWM8     1.31  -0.99  -3.27  -5.44  -7.45      0
SO YBADJ    MWM8        0  -7.94  -6.65  -5.16  -3.51  -1.75
SO YBADJ    MWM8     0.06   1.86      0      0      0      0
SO YBADJ    MWM8        0      0      0      0      0      0


SO BUILDHGT MWM9        0      0      0      0      0      0
SO BUILDHGT MWM9        0      0      0    2.9    2.9    2.9
SO BUILDHGT MWM9      2.9    2.9    2.9    2.9      0      0
SO BUILDHGT MWM9        0      0      0      0      0      0
SO BUILDHGT MWM9        0      0      0    2.9    2.9    2.9
SO BUILDHGT MWM9      2.9    2.9    2.9    2.9      0      0
SO BUILDWID MWM9        0      0      0      0      0      0
SO BUILDWID MWM9        0      0      0   4.43   6.68   8.73
SO BUILDWID MWM9    10.51  11.97  13.06  13.76      0      0
SO BUILDWID MWM9        0      0      0      0      0      0
SO BUILDWID MWM9        0      0      0   4.43   6.68   8.73
SO BUILDWID MWM9    10.51  11.97  13.06  13.76      0      0
SO BUILDLEN MWM9        0      0      0      0      0      0
SO BUILDLEN MWM9        0      0      0  14.06  13.94  13.41
SO BUILDLEN MWM9    12.47  11.15   9.49   7.54      0      0
SO BUILDLEN MWM9        0      0      0      0      0      0
SO BUILDLEN MWM9        0      0      0  14.06  13.94  13.41
SO BUILDLEN MWM9    12.47  11.15   9.49   7.54      0      0
SO XBADJ    MWM9        0      0      0      0      0      0
SO XBADJ    MWM9        0      0      0 -16.99 -17.25    -17
```

```
SO XBADJ    MWM9      -16.23  -14.96  -13.24  -11.12       0       0
SO XBADJ    MWM9          0       0       0       0       0       0
SO XBADJ    MWM9          0       0       0    2.93    3.31    3.59
SO XBADJ    MWM9       3.76    3.82    3.76    3.59       0       0
SO YBADJ    MWM9          0       0       0       0       0       0
SO YBADJ    MWM9          0       0       0    2.71    0.92    -0.9
SO YBADJ    MWM9       -2.69   -4.39   -5.97   -7.36       0       0
SO YBADJ    MWM9          0       0       0       0       0       0
SO YBADJ    MWM9          0       0       0   -2.71   -0.92     0.9
SO YBADJ    MWM9       2.69    4.39    5.97    7.36       0       0

  SRCGROUP  ALL
SO FINISHED

RE STARTING
  INCLUDED  "C:\Modelling\J2026059\1hNO2Loc.ROU"
RE FINISHED

ME STARTING
  SURFFILE  "C:\Modelling\J2026059\aermet.SFC"
  PROFFILE  "C:\Modelling\J2026059\aermet.PFL"
  SURFDATA  12345  2015
  UAIRDATA  12345678  2015
  PROFBASE  880. METERS
  STARTEND  17 01 01  17 12 31
ME FINISHED

OU STARTING
  RECTABLE  ALLAVE  ninth
  MAXTABLE  ALLAVE  100
  PLOTFILE  1 ALL ninth 1h17.plt
  SUMMFILE  max.SUM
OU FINISHED
```

ONE-HOUR AVERAGE NO_2 OUTPUT FILE

*** AERMOD - VERSION 24142 *** *** Armada Clive 08-16 Power Project *** 07/14/26
*** AERMET - VERSION 24142 *** *** *** 12:02:28
PAGE 74
*** MODELOPTs: NonDFAULT CONC ELEV PVMRM BETA RURAL ADJ_U*

*** THE SUMMARY OF HIGHEST 1-HR RESULTS ***

** CONC OF NO2 IN MICROGRAMS/M**3 **

GROUP ID	AVERAGE CONC	DATE (YYMMDDHH)	NETWORK RECEPTOR (XR, YR, ZELEV, ZHILL, ZFLAG)	OF TYPE GRID-ID
ALL	HIGH 9TH HIGH VALUE IS	**174.66722**	ON 17061701: AT (338047.00, 5812326.00, 909.00, 909.00, 0.00)	DC

*** RECEPTOR TYPES: GC = GRIDCART
GP = GRIDPOLR
DC = DISCCART
DP = DISCPOLR

ANNUAL NO_2 INPUT FILE

```
CO STARTING
   TITLEONE  Armada Clive 08-16 Power Project
   MODELOPT  CONC   ELEV   PVMRM   BETA
   AVERTIME  Annual
   POLLUTID  NO2
   OZONEFIL  "C:\Modelling\O3rur.txt" ppm
   NO2EQUIL  0.90
   NO2STACK  0.20
   RUNORNOT  RUN
   ERRORFIL  ERRORS.OUT
CO FINISHED

SO STARTING
   LOCATION   MWM1      POINTHOR   337568.81  5812548.10  909.00
   LOCATION   MWM2      POINTHOR   337568.42  5812543.01  909.00
   LOCATION   MWM3      POINTHOR   337567.72  5812521.82  909.00
   LOCATION   MWM4      POINTHOR   337567.50  5812516.70  909.00
   LOCATION   MWM5      POINTHOR   337566.85  5812495.56  909.00
   LOCATION   MWM6      POINTHOR   337566.64  5812490.38  909.00
   LOCATION   MWM7      POINTHOR   337565.89  5812469.11  909.00
   LOCATION   MWM8      POINTHOR   337565.78  5812464.08  909.00
   LOCATION   MWM9      POINTHOR   337564.89  5812442.80  909.00

   LOCATION   GC1       POINT      337887.00  5812275.00  913.00
   LOCATION   RC1       POINT      337901.00  5812271.00  913.00
   LOCATION   RC2       POINT      337901.00  5812260.00  913.00

   LOCATION   C1        POINT      334779.00  5807997.00  869.00
   LOCATION   C2        POINT      334774.00  5808000.00  869.00

   LOCATION   C301      POINT      337913.00  5812361.00  913.00
   LOCATION   C302      POINT      337913.00  5812355.00  913.00
   LOCATION   C303      POINT      337913.00  5812349.00  913.00
   LOCATION   C304      POINT      337914.00  5812342.00  913.00
   LOCATION   C305      POINT      337914.00  5812337.00  913.00
   LOCATION   C307      POINT      337914.00  5812329.00  913.00
   LOCATION   C308      POINT      337914.00  5812325.00  913.00
   LOCATION   C311      POINT      337995.42  5812352.17  913.00
   LOCATION   C312      POINT      337995.27  5812337.38  913.00
   LOCATION   Heat1     POINT      337913.00  5812288.00  913.00
   LOCATION   Heat2     POINT      337913.00  5812284.00  913.00
   LOCATION   GlyHeat1  POINT      337878.02  5812370.66  913.00
   LOCATION   GlyHeat2  POINT      337879.77  5812370.54  913.00
   LOCATION   GlyHeat3  POINT      337881.43  5812370.46  913.00
   LOCATION   GlyHeat4  POINT      337883.18  5812370.35  913.00
   LOCATION   Treat1    POINT      337882.00  5812342.00  913.00
   LOCATION   Treat2    POINT      337884.23  5812341.81  913.00
   LOCATION   Treat3    POINT      337888.03  5812341.42  913.00
   LOCATION   Treat4    POINT      337890.28  5812341.11  913.00
   LOCATION   InlHeat   POINT      337962.00  5812359.00  913.00
   LOCATION   Knockout1 POINT      337866.00  5812304.00  913.00
   LOCATION   Knockout2 POINT      337869.00  5812298.00  913.00
   LOCATION   C309      POINT      337972.00  5812379.00  913.00

**Point Source     Qs        Hs        Ts        Vs      Ds
**Parameters:      ---       ---       ---       ---     ---

   SRCPARAM   MWM1        0.1833     8.30     673.15    9.79  0.6300
   SRCPARAM   MWM2        0.1833     8.30     673.15    9.79  0.6300
   SRCPARAM   MWM3        0.1833     8.30     673.15    9.79  0.6300
```

```
SRCPARAM  MWM4       0.1833     8.30     673.15    9.79  0.6300
SRCPARAM  MWM5       0.1833     8.30     673.15    9.79  0.6300
SRCPARAM  MWM6       0.1833     8.30     673.15    9.79  0.6300
SRCPARAM  MWM7       0.1833     8.30     673.15    9.79  0.6300
SRCPARAM  MWM8       0.1833     8.30     673.15    9.79  0.6300
SRCPARAM  MWM9       0.1833     8.30     673.15    9.79  0.6300

SRCPARAM  GC1        0.4109    10.47     747.51   37.90  0.3799
SRCPARAM  RC1        0.6023    10.85     740.35   37.36  0.3250
SRCPARAM  RC2        0.4772    10.84     723.09   36.03  0.2936

SRCPARAM  C1         1.2648     6.33     805.03   26.40  0.1530
SRCPARAM  C2         0.3328    10.03     711.12   29.88  0.2502

SRCPARAM  C301       0.3564    10.10     859.15   38.30  0.2600
SRCPARAM  C302       0.3564    10.10     859.15   38.30  0.2600
SRCPARAM  C303       0.5355    10.10     861.15   53.00  0.2600
SRCPARAM  C304       0.5355    10.10     861.15   38.20  0.3000
SRCPARAM  C305       0.5355    10.10     861.15   38.20  0.3000
SRCPARAM  C307       0.2318     6.10     747.15   58.40  0.1500
SRCPARAM  C308       1.0791    10.10     823.15   32.40  0.2600
SRCPARAM  C311       0.1538     7.10     589.15    7.50  0.2000
SRCPARAM  C312       0.1538     7.10     589.15    7.50  0.2000
SRCPARAM  Heat1      0.0504     6.60     692.02   13.21  0.6100
SRCPARAM  Heat2      0.0504     6.60     692.02   13.21  0.6100
SRCPARAM  GlyHeat1   0.0044     6.40     671.86   11.13  0.5100
SRCPARAM  GlyHeat2   0.0174     6.40     671.86   11.13  0.5100
SRCPARAM  GlyHeat3   0.0174     6.40     671.86   11.13  0.5100
SRCPARAM  GlyHeat4   0.0174     6.40     671.86   11.13  0.5100
SRCPARAM  Treat1     0.0126     9.10     638.95    6.87  0.4500
SRCPARAM  Treat2     0.0126     9.10     638.95    6.87  0.4500
SRCPARAM  Treat3     0.0126     9.10     638.95    6.87  0.4500
SRCPARAM  Treat4     0.0126     9.10     638.95    6.87  0.4500
SRCPARAM  InlHeat    0.0504    12.20     650.86    8.14  0.6100
SRCPARAM  Knockout1  0.0631    15.20     737.95   14.07  0.6100
SRCPARAM  Knockout2  0.0631    15.20     737.95   14.07  0.6100
SRCPARAM  C309       0.4496     7.10     700.15   24.10  0.2500


SO BUILDHGT MWM1      2.9    2.9    2.9    2.9    2.9    2.9
SO BUILDHGT MWM1      2.9      0      0    2.9    2.9    2.9
SO BUILDHGT MWM1      2.9    2.9    2.9    2.9      0      0
SO BUILDHGT MWM1        0      0      0      0      0      0
SO BUILDHGT MWM1      2.9      0      0    2.9    2.9    2.9
SO BUILDHGT MWM1      2.9    2.9    2.9    2.9      0      0
SO BUILDWID MWM1    13.96  13.83  13.27  12.32  10.99   9.32
SO BUILDWID MWM1     7.37      0      0   4.17   6.41   8.45
SO BUILDWID MWM1    10.24  11.72  12.84  13.57      0      0
SO BUILDWID MWM1        0      0      0      0      0      0
SO BUILDWID MWM1     7.37      0      0   4.17   6.41   8.45
SO BUILDWID MWM1    10.24  11.72  12.84  13.57      0      0
SO BUILDLEN MWM1     4.2   6.46   8.52  10.33  11.82  12.95
SO BUILDLEN MWM1    13.69      0      0  13.78  13.66  13.12
SO BUILDLEN MWM1    12.19  10.89   9.25   7.34      0      0
SO BUILDLEN MWM1        0      0      0      0      0      0
SO BUILDLEN MWM1    13.69      0      0  13.78  13.66  13.12
SO BUILDLEN MWM1    12.19  10.89   9.25   7.34      0      0
SO XBADJ    MWM1   -12.31 -14.73  -16.7 -18.17 -19.08 -19.41
SO XBADJ    MWM1   -19.16      0      0  -16.9 -17.21 -16.98
SO XBADJ    MWM1   -16.25 -15.02 -13.33 -11.24      0      0
SO XBADJ    MWM1        0      0      0      0      0      0
SO XBADJ    MWM1     5.47      0      0   3.13   3.55   3.86
SO XBADJ    MWM1     4.06   4.13   4.08    3.9      0      0
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SO YBADJ    MWM1      8.24    6.36    4.28    2.08   -0.19   -2.45
SO YBADJ    MWM1     -4.64       0       0       3    1.22   -0.61
SO YBADJ    MWM1     -2.41   -4.15   -5.75   -7.18       0       0
SO YBADJ    MWM1         0       0       0       0       0       0
SO YBADJ    MWM1      4.64       0       0      -3   -1.22    0.61
SO YBADJ    MWM1      2.41    4.15    5.75    7.18       0       0


SO BUILDHGT MWM2         0     2.9     2.9     2.9     2.9     2.9
SO BUILDHGT MWM2       2.9     2.9       0       0       0     2.9
SO BUILDHGT MWM2       2.9     2.9     2.9     2.9     2.9       0
SO BUILDHGT MWM2         0     2.9     2.9     2.9     2.9     2.9
SO BUILDHGT MWM2       2.9     2.9       0       0       0       0
SO BUILDHGT MWM2         0       0       0       0       0       0
SO BUILDWID MWM2         0   13.83   13.27   12.32   10.99    9.32
SO BUILDWID MWM2      7.37     5.2       0       0       0    8.45
SO BUILDWID MWM2     10.24   11.72   12.84   13.57   13.89       0
SO BUILDWID MWM2         0   13.83   13.27   12.32   10.99    9.32
SO BUILDWID MWM2      7.37     5.2       0       0       0       0
SO BUILDWID MWM2         0       0       0       0       0       0
SO BUILDLEN MWM2         0    6.46    8.52   10.33   11.82   12.95
SO BUILDLEN MWM2     13.69   14.01       0       0       0   13.12
SO BUILDLEN MWM2     12.19   10.89    9.25    7.34     5.2       0
SO BUILDLEN MWM2         0    6.46    8.52   10.33   11.82   12.95
SO BUILDLEN MWM2     13.69   14.01       0       0       0       0
SO BUILDLEN MWM2         0       0       0       0       0       0
SO XBADJ    MWM2         0   -9.82   -12.1  -14.02  -15.51  -16.53
SO XBADJ    MWM2    -17.05  -17.05       0       0       0  -19.19
SO XBADJ    MWM2    -19.22  -18.66  -17.54  -15.88  -13.75       0
SO XBADJ    MWM2         0    3.36    3.58    3.69    3.69    3.58
SO XBADJ    MWM2      3.36    3.04       0       0       0       0
SO XBADJ    MWM2         0       0       0       0       0       0
SO YBADJ    MWM2         0    7.73    6.49    5.05    3.46    1.76
SO YBADJ    MWM2      0.01   -1.75       0       0       0       4
SO YBADJ    MWM2      1.74   -0.57   -2.87   -5.08   -7.13       0
SO YBADJ    MWM2         0   -7.73   -6.49   -5.05   -3.46   -1.76
SO YBADJ    MWM2     -0.01    1.75       0       0       0       0
SO YBADJ    MWM2         0       0       0       0       0       0


SO BUILDHGT MWM3       2.9     2.9     2.9     2.9     2.9     2.9
SO BUILDHGT MWM3       2.9       0       0     2.9     2.9     2.9
SO BUILDHGT MWM3       2.9     2.9     2.9     2.9     2.9       0
SO BUILDHGT MWM3         0       0       0       0       0       0
SO BUILDHGT MWM3       2.9       0       0     2.9     2.9     2.9
SO BUILDHGT MWM3       2.9     2.9     2.9     2.9     2.9       0
SO BUILDWID MWM3      13.8   13.68   13.15   12.21   10.91    9.27
SO BUILDWID MWM3      7.35       0       0    4.11    6.36    8.42
SO BUILDWID MWM3     10.22   11.71   12.84   13.58   13.91       0
SO BUILDWID MWM3         0       0       0       0       0       0
SO BUILDWID MWM3      7.35       0       0    4.11    6.36    8.42
SO BUILDWID MWM3     10.22   11.71   12.84   13.58   13.91       0
SO BUILDLEN MWM3      4.04    6.27    8.31   10.09   11.57    12.7
SO BUILDLEN MWM3     13.44       0       0   13.77   13.63   13.07
SO BUILDLEN MWM3     12.11   10.78    9.13     7.2    5.05       0
SO BUILDLEN MWM3         0       0       0       0       0       0
SO BUILDLEN MWM3     13.44       0       0   13.77   13.63   13.07
SO BUILDLEN MWM3     12.11   10.78    9.13     7.2    5.05       0
SO XBADJ    MWM3    -12.19  -14.57   -16.5  -17.93  -18.82  -19.14
SO XBADJ    MWM3    -18.87       0       0  -16.86  -17.14  -16.89
SO XBADJ    MWM3    -16.13  -14.89  -13.19  -11.09   -8.65       0
SO XBADJ    MWM3         0       0       0       0       0       0
SO XBADJ    MWM3      5.43       0       0    3.09    3.51    3.83
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SO XBADJ    MWM3      4.03    4.1    4.06    3.89     3.6       0
SO YBADJ    MWM3      8.12   6.23    4.15    1.95   -0.31   -2.56
SO YBADJ    MWM3     -4.74      0       0    2.89    1.12   -0.69
SO YBADJ    MWM3     -2.47   -4.18   -5.76   -7.17   -8.36       0
SO YBADJ    MWM3         0       0       0       0       0       0
SO YBADJ    MWM3      4.74      0       0   -2.89   -1.12    0.69
SO YBADJ    MWM3      2.47    4.18    5.76    7.17    8.36       0


SO BUILDHGT MWM4         0     2.9     2.9     2.9     2.9     2.9
SO BUILDHGT MWM4       2.9     2.9       0       0       0     2.9
SO BUILDHGT MWM4       2.9     2.9     2.9     2.9     2.9       0
SO BUILDHGT MWM4         0     2.9     2.9     2.9     2.9     2.9
SO BUILDHGT MWM4       2.9     2.9       0       0       0       0
SO BUILDHGT MWM4         0       0       0       0       0       0
SO BUILDWID MWM4         0   13.68   13.15   12.21   10.91    9.27
SO BUILDWID MWM4      7.35    5.21       0       0       0    8.42
SO BUILDWID MWM4     10.22   11.71   12.84   13.58   13.91       0
SO BUILDWID MWM4         0   13.68   13.15   12.21   10.91    9.27
SO BUILDWID MWM4      7.35    5.21       0       0       0       0
SO BUILDWID MWM4         0       0       0       0       0       0
SO BUILDLEN MWM4         0    6.27    8.31   10.09   11.57    12.7
SO BUILDLEN MWM4     13.44   13.78       0       0       0   13.07
SO BUILDLEN MWM4     12.11   10.78    9.13     7.2    5.05       0
SO BUILDLEN MWM4         0    6.27    8.31   10.09   11.57    12.7
SO BUILDLEN MWM4     13.44   13.78       0       0       0       0
SO BUILDLEN MWM4         0       0       0       0       0       0
SO XBADJ    MWM4         0   -9.68  -11.96  -13.87  -15.36  -16.39
SO XBADJ    MWM4    -16.92  -16.93       0       0       0  -19.26
SO XBADJ    MWM4    -19.26  -18.67  -17.51  -15.82  -13.65       0
SO XBADJ    MWM4         0    3.41    3.65    3.78    3.79    3.69
SO XBADJ    MWM4      3.47    3.16       0       0       0       0
SO XBADJ    MWM4         0       0       0       0       0       0
SO YBADJ    MWM4         0    7.78    6.52    5.07    3.47    1.76
SO YBADJ    MWM4         0   -1.77       0       0       0    3.86
SO YBADJ    MWM4      1.59   -0.72   -3.01   -5.21   -7.25       0
SO YBADJ    MWM4         0   -7.78   -6.52   -5.07   -3.47   -1.76
SO YBADJ    MWM4         0    1.77       0       0       0       0
SO YBADJ    MWM4         0       0       0       0       0       0


SO BUILDHGT MWM5       2.9     2.9     2.9     2.9     2.9     2.9
SO BUILDHGT MWM5       2.9       0       0     2.9     2.9     2.9
SO BUILDHGT MWM5       2.9     2.9     2.9     2.9       0       0
SO BUILDHGT MWM5         0       0       0       0       0       0
SO BUILDHGT MWM5       2.9       0       0     2.9     2.9     2.9
SO BUILDHGT MWM5       2.9     2.9     2.9     2.9       0       0
SO BUILDWID MWM5     13.82   13.75   13.25   12.36   11.09    9.48
SO BUILDWID MWM5      7.58       0       0    4.16    6.41    8.46
SO BUILDWID MWM5     10.25   11.73   12.85   13.59       0       0
SO BUILDWID MWM5         0       0       0       0       0       0
SO BUILDWID MWM5      7.58       0       0    4.16    6.41    8.46
SO BUILDWID MWM5     10.25   11.73   12.85   13.59       0       0
SO BUILDLEN MWM5      4.42    6.61     8.6   10.33   11.75   12.81
SO BUILDLEN MWM5     13.48       0       0   13.93   13.79   13.23
SO BUILDLEN MWM5     12.27   10.93    9.27    7.32       0       0
SO BUILDLEN MWM5         0       0       0       0       0       0
SO BUILDLEN MWM5     13.48       0       0   13.93   13.79   13.23
SO BUILDLEN MWM5     12.27   10.93    9.27    7.32       0       0
SO XBADJ    MWM5    -12.68  -15.04  -16.93  -18.32  -19.14  -19.39
SO XBADJ    MWM5    -19.05       0       0  -17.09  -17.34  -17.06
SO XBADJ    MWM5    -16.26  -14.97  -13.23  -11.08       0       0
SO XBADJ    MWM5         0       0       0       0       0       0
```

SO XBADJ	MWM5	5.57	0	0	3.16	3.55	3.83
SO XBADJ	MWM5	3.99	4.04	3.96	3.76	0	0
SO YBADJ	MWM5	8.12	6.2	4.09	1.86	-0.43	-2.71
SO YBADJ	MWM5	-4.91	0	0	2.66	0.86	-0.97
SO YBADJ	MWM5	-2.77	-4.49	-6.07	-7.46	0	0
SO YBADJ	MWM5	0	0	0	0	0	0
SO YBADJ	MWM5	4.91	0	0	-2.66	-0.86	0.97
SO YBADJ	MWM5	2.77	4.49	6.07	7.46	0	0

SO BUILDHGT	MWM6	0	2.9	2.9	2.9	2.9	2.9
SO BUILDHGT	MWM6	2.9	2.9	0	0	0	2.9
SO BUILDHGT	MWM6	2.9	2.9	2.9	2.9	2.9	0
SO BUILDHGT	MWM6	0	2.9	2.9	2.9	2.9	2.9
SO BUILDHGT	MWM6	2.9	2.9	0	0	0	0
SO BUILDHGT	MWM6	0	0	0	0	0	0
SO BUILDWID	MWM6	0	13.75	13.25	12.36	11.09	9.48
SO BUILDWID	MWM6	7.58	5.45	0	0	0	8.46
SO BUILDWID	MWM6	10.25	11.73	12.85	13.59	13.91	0
SO BUILDWID	MWM6	0	13.75	13.25	12.36	11.09	9.48
SO BUILDWID	MWM6	7.58	5.45	0	0	0	0
SO BUILDWID	MWM6	0	0	0	0	0	0
SO BUILDLEN	MWM6	0	6.61	8.6	10.33	11.75	12.81
SO BUILDLEN	MWM6	13.48	13.74	0	0	0	13.23
SO BUILDLEN	MWM6	12.27	10.93	9.27	7.32	5.15	0
SO BUILDLEN	MWM6	0	6.61	8.6	10.33	11.75	12.81
SO BUILDLEN	MWM6	13.48	13.74	0	0	0	0
SO BUILDLEN	MWM6	0	0	0	0	0	0
SO XBADJ	MWM6	0	-10.1	-12.34	-14.21	-15.65	-16.62
SO XBADJ	MWM6	-17.08	-17.02	0	0	0	-19.47
SO XBADJ	MWM6	-19.43	-18.8	-17.61	-15.87	-13.66	0
SO XBADJ	MWM6	0	3.49	3.74	3.88	3.91	3.81
SO XBADJ	MWM6	3.6	3.28	0	0	0	0
SO XBADJ	MWM6	0	0	0	0	0	0
SO YBADJ	MWM6	0	7.78	6.5	5.03	3.4	1.67
SO YBADJ	MWM6	-0.11	-1.89	0	0	0	3.62
SO YBADJ	MWM6	1.33	-1	-3.29	-5.49	-7.52	0
SO YBADJ	MWM6	0	-7.78	-6.5	-5.03	-3.4	-1.67
SO YBADJ	MWM6	0.11	1.89	0	0	0	0
SO YBADJ	MWM6	0	0	0	0	0	0

SO BUILDHGT	MWM7	2.9	2.9	2.9	2.9	2.9	2.9
SO BUILDHGT	MWM7	2.9	0	0	2.9	2.9	2.9
SO BUILDHGT	MWM7	2.9	2.9	2.9	2.9	2.9	0
SO BUILDHGT	MWM7	0	0	0	0	0	0
SO BUILDHGT	MWM7	2.9	0	0	2.9	2.9	2.9
SO BUILDHGT	MWM7	2.9	2.9	2.9	2.9	2.9	0
SO BUILDWID	MWM7	14.06	13.94	13.4	12.46	11.13	9.46
SO BUILDWID	MWM7	7.51	0	0	4.42	6.68	8.74
SO BUILDWID	MWM7	10.54	12.02	13.13	13.84	14.13	0
SO BUILDWID	MWM7	0	0	0	0	0	0
SO BUILDWID	MWM7	7.51	0	0	4.42	6.68	8.74
SO BUILDWID	MWM7	10.54	12.02	13.13	13.84	14.13	0
SO BUILDLEN	MWM7	4.33	6.57	8.62	10.4	11.87	12.98
SO BUILDLEN	MWM7	13.69	0	0	14.06	13.93	13.38
SO BUILDLEN	MWM7	12.41	11.07	9.4	7.43	5.25	0
SO BUILDLEN	MWM7	0	0	0	0	0	0
SO BUILDLEN	MWM7	13.69	0	0	14.06	13.93	13.38
SO BUILDLEN	MWM7	12.41	11.07	9.4	7.43	5.25	0
SO XBADJ	MWM7	-12.46	-14.85	-16.8	-18.23	-19.11	-19.4
SO XBADJ	MWM7	-19.11	0	0	-16.98	-17.25	-17
SO XBADJ	MWM7	-16.23	-14.96	-13.25	-11.13	-8.67	0

```
SO XBADJ    MWM7        0      0      0      0      0      0
SO XBADJ    MWM7      5.42     0      0    2.91   3.32   3.62
SO XBADJ    MWM7      3.81   3.89   3.85   3.69   3.42     0
SO YBADJ    MWM7      8.22   6.32   4.23   2.01  -0.27  -2.55
SO YBADJ    MWM7     -4.75     0      0    2.74   0.97  -0.84
SO YBADJ    MWM7     -2.61  -4.31  -5.88  -7.27  -8.43     0
SO YBADJ    MWM7        0      0      0      0      0      0
SO YBADJ    MWM7      4.75     0      0   -2.74  -0.97   0.84
SO YBADJ    MWM7      2.61   4.31   5.88   7.27   8.43     0


SO BUILDHGT MWM8        0    2.9    2.9    2.9    2.9    2.9
SO BUILDHGT MWM8      2.9    2.9      0      0      0    2.9
SO BUILDHGT MWM8      2.9    2.9    2.9    2.9    2.9      0
SO BUILDHGT MWM8        0    2.9    2.9    2.9    2.9    2.9
SO BUILDHGT MWM8      2.9    2.9      0      0      0      0
SO BUILDHGT MWM8        0      0      0      0      0      0
SO BUILDWID MWM8        0  13.94   13.4  12.46  11.13   9.46
SO BUILDWID MWM8     7.51   5.33      0      0      0   8.74
SO BUILDWID MWM8    10.54  12.02  13.13  13.84  14.13      0
SO BUILDWID MWM8        0  13.94   13.4  12.46  11.13   9.46
SO BUILDWID MWM8     7.51   5.33      0      0      0      0
SO BUILDWID MWM8        0      0      0      0      0      0
SO BUILDLEN MWM8        0   6.57   8.62   10.4  11.87  12.98
SO BUILDLEN MWM8    13.69  13.99      0      0      0  13.38
SO BUILDLEN MWM8    12.41  11.07    9.4   7.43   5.25      0
SO BUILDLEN MWM8        0   6.57   8.62   10.4  11.87  12.98
SO BUILDLEN MWM8    13.69  13.99      0      0      0      0
SO BUILDLEN MWM8        0      0      0      0      0      0
SO XBADJ    MWM8        0 -10.09 -12.39  -14.3 -15.79 -16.79
SO XBADJ    MWM8   -17.29 -17.26      0      0      0 -19.42
SO XBADJ    MWM8   -19.38 -18.75 -17.55 -15.82 -13.61      0
SO XBADJ    MWM8        0   3.52   3.77    3.9   3.92   3.81
SO XBADJ    MWM8      3.6   3.27      0      0      0      0
SO XBADJ    MWM8        0      0      0      0      0      0
SO YBADJ    MWM8        0   7.94   6.65   5.16   3.51   1.75
SO YBADJ    MWM8    -0.06  -1.86      0      0      0   3.58
SO YBADJ    MWM8     1.31  -0.99  -3.27  -5.44  -7.45      0
SO YBADJ    MWM8        0  -7.94  -6.65  -5.16  -3.51  -1.75
SO YBADJ    MWM8     0.06   1.86      0      0      0      0
SO YBADJ    MWM8        0      0      0      0      0      0


SO BUILDHGT MWM9        0      0      0      0      0      0
SO BUILDHGT MWM9        0      0      0    2.9    2.9    2.9
SO BUILDHGT MWM9      2.9    2.9    2.9    2.9      0      0
SO BUILDHGT MWM9        0      0      0      0      0      0
SO BUILDHGT MWM9        0      0      0    2.9    2.9    2.9
SO BUILDHGT MWM9      2.9    2.9    2.9    2.9      0      0
SO BUILDWID MWM9        0      0      0      0      0      0
SO BUILDWID MWM9        0      0      0   4.43   6.68   8.73
SO BUILDWID MWM9    10.51  11.97  13.06  13.76      0      0
SO BUILDWID MWM9        0      0      0      0      0      0
SO BUILDWID MWM9        0      0      0   4.43   6.68   8.73
SO BUILDWID MWM9    10.51  11.97  13.06  13.76      0      0
SO BUILDLEN MWM9        0      0      0      0      0      0
SO BUILDLEN MWM9        0      0      0  14.06  13.94  13.41
SO BUILDLEN MWM9    12.47  11.15   9.49   7.54      0      0
SO BUILDLEN MWM9        0      0      0      0      0      0
SO BUILDLEN MWM9        0      0      0  14.06  13.94  13.41
SO BUILDLEN MWM9    12.47  11.15   9.49   7.54      0      0
SO XBADJ    MWM9        0      0      0      0      0      0
SO XBADJ    MWM9        0      0      0 -16.99 -17.25    -17
```

```
SO XBADJ    MWM9      -16.23  -14.96  -13.24  -11.12       0       0
SO XBADJ    MWM9          0       0       0       0       0       0
SO XBADJ    MWM9          0       0       0    2.93    3.31    3.59
SO XBADJ    MWM9       3.76    3.82    3.76    3.59       0       0
SO YBADJ    MWM9          0       0       0       0       0       0
SO YBADJ    MWM9          0       0       0    2.71    0.92    -0.9
SO YBADJ    MWM9       -2.69   -4.39   -5.97   -7.36       0       0
SO YBADJ    MWM9          0       0       0       0       0       0
SO YBADJ    MWM9          0       0       0   -2.71   -0.92     0.9
SO YBADJ    MWM9       2.69    4.39    5.97    7.36       0       0

  SRCGROUP  ALL
SO FINISHED

RE STARTING
  INCLUDED  "C:\Modelling\J2026059\1hNO2Loc.ROU"
RE FINISHED

ME STARTING
  SURFFILE  "C:\Modelling\J2026059\aermet.SFC"
  PROFFILE  "C:\Modelling\J2026059\aermet.PFL"
  SURFDATA  12345  2015
  UAIRDATA  12345678  2015
  PROFBASE  880. METERS
  STARTEND  17 01 01  17 12 31
ME FINISHED

OU STARTING
  RECTABLE  ALLAVE  First
  MAXTABLE  ALLAVE  100
  PLOTFILE  Annual All Ann17.plt
OU FINISHED
```

ANNUAL NO_2 OUTPUT FILE

*** AERMOD - VERSION 24142 *** *** ARMADA CLIVE 08-16 POWER PROJECT *** 07/14/26
*** AERMET - VERSION 24142 *** *** *** 11:20:46
PAGE 72
*** MODELOPTS: NONDFAULT CONC ELEV PVMRM BETA RURAL ADJ_U*

*** THE SUMMARY OF MAXIMUM ANNUAL RESULTS AVERAGED OVER 1 YEARS ***

** CONC OF NO2 IN MICROGRAMS/M**3 **

GROUP ID		AVERAGE CONC	RECEPTOR (XR, YR, ZELEV, ZHILL, ZFLAG)	NETWORK OF TYPE	GRID-ID
ALL	1ST HIGHEST VALUE IS	**15.75305**	AT (338047.00, 5812246.00, 910.00, 910.00, 0.00)	DC	
	2ND HIGHEST VALUE IS	15.60632	AT (338047.00, 5812266.00, 909.50, 909.50, 0.00)	DC	
	3RD HIGHEST VALUE IS	15.39972	AT (338047.00, 5812226.00, 910.00, 910.00, 0.00)	DC	
	4TH HIGHEST VALUE IS	15.39562	AT (338067.00, 5812286.00, 909.00, 909.00, 0.00)	DC	
	5TH HIGHEST VALUE IS	15.38544	AT (338067.00, 5812266.00, 909.00, 909.00, 0.00)	DC	
	6TH HIGHEST VALUE IS	15.36861	AT (338067.00, 5812246.00, 909.30, 909.30, 0.00)	DC	
	7TH HIGHEST VALUE IS	15.33796	AT (338047.00, 5812286.00, 909.00, 909.00, 0.00)	DC	
	8TH HIGHEST VALUE IS	15.32199	AT (338027.00, 5812266.00, 909.80, 909.80, 0.00)	DC	
	9TH HIGHEST VALUE IS	15.20527	AT (338027.00, 5812246.00, 910.00, 910.00, 0.00)	DC	
	10TH HIGHEST VALUE IS	15.08245	AT (338067.00, 5812226.00, 909.30, 909.30, 0.00)	DC	

*** RECEPTOR TYPES: GC = GRIDCART
GP = GRIDPOLR
DC = DISCCART
DP = DISCPOLR

Appendix III: Generator Specifications Sheets

MGM-TCGL-T-30

PAUWAY-MWM

Natural Gas Genset

TCG3020 Series——Adopt German MWM brand engine

Voltage：10500V/0.4kV or special voltage can be customized　Frequency：50Hz

Multiple gensets can be parallel operation & grid-connected

Product Highlights

☞ Highest efficiency of products of the same grade

Up to 44% electrical efficiency
Low operating cost to maximize economic benefits
Numerical simulation optimizes low loss fluid design to achieve higher efficiency

☞ Optimized lubricating oil management system

Lubricating oil consumption of the same grade products is the lowest: 0.15g/kwh
Longer oil change cycle

☞ Convenient installation of genset

Vibration isolation base can reduce installation cost and is conducive to stable operation
Larger lubricating oil capacity
Integrated lubricating oil management system

☞ Higher availability and longer service life

Uniform intake cylinder optimizes the combustion process
Optimized combustion process reduces peak pressure
Genset runs smoothly and has little vibration

☞ Upgraded turbocharger has a wider range of applications

Longer maintenance cycle
wider intake temperature range

☞ TPEM-Brand new control system

Simple man-machine interaction interface
Fully integrated remote access

☞ High reliability

Excellent island operation capability

Standard Configuration

- Engine：MWM-TCG3020 V20（Natural gas）。
- Alternator：Protection class：IP23，Insulation class：H。
- Cooling water system：Air cooled radiator，Centrifugal cooling water pump，Expansion tank。
- Oil system：985L oil tank。
- HAS cabinet：Auxiliary equipment power control cabinet (including grid-connected function)。
- Starting system： 9kW electric starting motor (engine comes with it)，
  24V starting battery and battery connecting cable，battery switch。
- Rubber isolator。
- Exhaust system：exhaust bellows，Silencer，smoke bend，flange，gasket，
  connecting bolts and other standard parts。
- Random information。

MGM-TCGL-T-30

PAUWAY-MWM

Natural Gas Genset

TCG3020 Series——Adopt German MWM brand engine

Voltage：10500V/0.4kV or special voltage can be customized Frequency：50Hz

Multiple gensets can be parallel operation & grid-connected

Design Environmental Conditions

Ambient temperature	℃	25
Relative humidity	℃	60
Altitude	m	100
Exhaust temp. after heat exchanger	℃	120
NOx Emission (tolerance - 8%)	mg/Nm³@5%O_2	500
Lower calorific value	kwh/Nm³	10.17

Main Technical Parameters

Genset model		MGM-TCGL-T-N
Rated power	KW	2200
Speed	rpm	1500
Exhaust temperature	℃	404
Exhaust back pressure	kPa	5
Electrical efficiency	%	43.6
Thermal efficiency	%	44
Total efficiency	%	87.6
Online rate	h/year	8000
Cooling water system		
Jacket water heat	kw	1224
Jacket water coolant temperature in	℃	78
Jacket water coolant temperature out	℃	93
Water flow rate engine jacket water	m³/h	75
Intercooler LT heat	kw	180
Intercooler coolant temperature in	℃	45
Intercooler coolant temperature out	℃	49
Water flow rate engine intercooler	m³/h	40
Exhaust gas system		
Exhaust heat after heat exchanger	kw	1056
Exhaust temperature	℃	404
Exhaust mass flow (wet)	kg/h	12234

MGM-TCGL-T-30

PAUWAY-MWM

Natural Gas Genset

TCG3020 Series——Adopt German MWM brand engine

Voltage：10500V/0.4kV or special voltage can be customized Frequency：50Hz

Multiple gensets can be parallel operation & grid-connected

Engine Technical Parameter

Engine model		TCG3020V20
Brand/Manufacturer		MWM
Engine rated power	KW	2371
Number of cylinders	个	20
Configuration		V
Bore	mm	170
Stroke	mm	195
Compression ratio		13：1
Displacement	L	89
Speed	rpm	1500
Rotation direction	From the flywheel end	Anticlockwise
Exhaust temperature	℃	404
Mean lube oil consumption at full load	g/kwh	0.15
Lube oil content engine	L	980
Starter motor	Kwel/VDC	18/24
Water volume engine jacket	L	210
Water volume engine intercooler	L	22

Alternator Technical Parameter

Ambient temperature	℃	40
Altitude	m	1000
Power	KVA	2875
Voltage	V	10500or400
Frequency	Hz	50
Power factor		0.8-1
Efficiency	%	96.5
Protection class		IP23
Exciting type		Brushless/self-exciting
Insulation class		H

Size and Weight

Length* Width* Height	mm	6983×1815×2385
Net Weight	kg	19620

Appendix IV: Noise Impact Assessment

aci Acoustical Consultants Inc.
5031-210 Street
Edmonton, Alberta, Canada T6M 0A8
Phone: (780) 499-1591
www.aciacoustical.com

Noise Impact Assessment

For The

Clive - 19.8 MW Data Centre
at
08-16-040-24 W4M

Prepared for:
Armada Nowlit Energy Ltd.

PERMIT TO PRACTICE
ACI ACOUSTICAL CONSULTANTS INC.
Signature
Date 02/10/2026
PERMIT NUMBER: P 7735
The Association of Professional Engineers, Geologists and Geophysicists of Alberta

PROFESSIONAL LICENSEE (ENGINEERING) ALBERTA
PATRICK FROMENT
Member ID :196923

02/10/2026

Prepared by:
P. Froment, B.Sc., B.Ed., P.L.(Eng.)
aci Acoustical Consultants Inc.
Edmonton, Alberta
APEGA Permit to Practice #P7735

aci Project #: 26-005
February 4, 2026

Disclaimer

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Executive Summary

aci Acoustical Consultants Inc., of Edmonton AB, was retained by Armada Nowlit Energy Ltd. (Armada) to conduct a noise impact assessment for the proposed Clive power generation and data centre (the Project) within Lacombe County, AB. The purpose of the work was to generate a computer noise model under Baseline, Application & Cumulative Case conditions and to compare the noise levels to the applicable noise criteria as specified by the Alberta Utilities Commission (AUC) Rule 012 on Noise Control. A site visit was conducted for aci on January 26, 2026, by P. Froment, B.Sc., B.Ed., P.L.(Eng.).

The results of the Baseline, Application, and Cumulative Case noise modeling indicated that the existing and Project related noise levels (with the average ambient sound level of 35 dBA included) will be below the AUC Rule 012 PSLs of 40 dBA L_{eq}Night for all residential receptors. In addition, the dBC sound levels are projected to be 20 dB greater than the dBA sound levels, however, since the overall dBA noise levels (without the ASL's) are below 30 dBA for all locations, it is not anticipated that there will be issues with any tonal noise for the nearby residents.

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1.0 Introduction

aci Acoustical Consultants Inc., of Edmonton AB, was retained by Armada Nowlit Energy Ltd. (Armada) to conduct a noise impact assessment for the proposed Clive power generation and data centre (the Project) within Lacombe County, AB. The purpose of the work was to generate a computer noise model under Baseline, Application & Cumulative Case conditions and to compare the noise levels to the applicable noise criteria as specified by the Alberta Utilities Commission (AUC) Rule 012 on Noise Control. A site visit was conducted for aci on January 26, 2026, by P. Froment, B.Sc., B.Ed., P.L.(Eng.).

2.0 Description

2.1. Location Description

The Project is within Lacombe County, AB at 08-16-040-24 W4M as indicated in Figure 1. The south eastern boundary of the site is approximately 5 km southeast of Clive, AB. Based on the site visit conducted on January 26, 2026, the only noise producing energy regulated industrial facility within 1.5 km of the Project was the enhance Compressor Station (the Station), which will be directly east of the Project.

As indicated in Figure 1, the nearest most impacted residential receptor is located approximately 970 m north of the proposed Project's fence line. Additionally, there were 3 other residential locations within 1.5 km of the extended Project Boundary.

Topographically the land throughout the study area is relatively flat with minimal changes in elevation. Digital elevation contours for the entire study area were included in the noise model. The vegetation surrounding the Project is primarily farmland with small patches of deciduous and coniferous trees and shrubs. As such, the vegetative sound absorption is considered minimal to moderate.

2.1. Existing Facility Description

Currently, the Station has 5 large compressors. In the south-central side of the site there are two large compressors that are fully enclosed within significant acoustical mitigation. One of the two compressors was operational during the site visit. There are two large compressors in the northeast corner of the site. The aerial cooling fan of these compressors do not have noise mitigation. Neither compressor was operational during the site visit. The fifth compressor is along the north border of the site and was operational. The aerial cooling fan of this compressor does not have noise mitigation. This compressor was operational during the site visit. Sound level measurements along the fenceline were conducted for all operational equipment on-site.

2.2. Project Description

As part of the project, and as illustrated in Figure 2, Armada proposes to add:

- Nine (9) MWM MGM TCG 3020 V20 2.2 MW Enclosed Gen-sets
- Nine (9) Enclosed Data Centres. Each with:
  - Large Cooling Fans
  - Transformers

It should be noted that specifications on the mufflers for this system were not available. As such, hospital grade mufflers were specified and **will be required**.

Once completed, the Project will operate 24 hours/day, 365 days/year.

3.0 Modeling Methods

3.1. General Modeling Parameters

The computer noise modeling was conducted using the CADNA/A (Version 2025 MR1, build: 211.5558) software package. CADNA/A allows for the modeling of various noise sources such as road, rail, and various stationary sources. In addition, topographical features such as land contours, vegetation, and bodies of water can be included. Finally, meteorological conditions such as temperature, relative humidity, wind-speed and wind-direction can be included in the calculations. Note that all modeling methods used exceed the requirements of the AUC Rule 012 on Noise Control.

The calculation method used for noise propagation follows the ISO standard 9613-2. All receiver locations were assumed as being downwind from the source(s). In particular, as stated in Section 5 of the ISO document:

> *"Downwind propagation conditions for the method specified in this part of IS0 9613 are as specified in 5.4.3.3 of IS0 1996-2:1987, namely*
> - *wind direction within an angle of ± 45^0 of the direction connecting the centre of the dominant sound source and the centre of the specified receiver region, with the wind blowing from source to receiver, and*
> - *wind speed between approximately 1 m/s and 5 m/s, measured at a height of 3 m to 11 m above the ground.*
>
> *The equations for calculating the average downwind sound pressure level LAT(DW) in this part of IS0 9613, including the equations for attenuation given in clause 7, are the average for meteorological conditions within these limits. The term average here means the average over a short time interval, as defined in 3.1.*

These equations also hold, equivalently, for average propagation under a well-developed moderate ground-based temperature inversion, such as commonly occurs on clear, calm nights".

3.2. Noise Modeling Scenarios

As part of the study, three (3) modeling scenarios were conducted, including:

1) Baseline Case - This included existing buildings and noise sources associated with the enhance Compressor Station in addition to the Ambient Sound Level (ASL, discussed in Section 4.1).

2) Application Case - This included all noise sources associated with the Project alone. This included the Project noise levels contributions calculated at all theoretical receptor locations 1,500 m from the proposed Project site.

3) Cumulative Case - This included all components associated with the Baseline & Application Cases in addition to the ASL.

3.3. Noise Modeling Parameters

Due to the minimal amount of vegetation, and thus relative ineffectiveness to mitigate the noise climate, vegetation was not included in the model. Similarly, snow cover was not included since there can be variations in absorption/reflection caused by different snow conditions. A ground absorption coefficient of 0.7 was used along with a temperature of 10^0C and a relative humidity of 70%[1]. As a result, all sound level propagation calculations are considered conservatively representative of summertime conditions for all surrounding residents.

As previously mentioned, digital topographical information obtained from AltaLis was implemented in the model.

The computer noise modeling results were calculated in two ways. First, sound levels were calculated at the specific receiver locations (i.e. adjacent residents and theoretical 1,500 m receptors) at a height of 1.5 m. Next, the sound levels were calculated using a 2 m x 2 m grid over the entire study area. This provided color noise contours for easier visualization of the results.

[1] Consistent with previously completed projects submitted to the AUC.

AUC Rule 012 requires the assessment to include background ambient noise levels in the model. As specified in AUC Rule 012, where there is an absence of industrial noise sources the average night-time ambient noise level is approximately 5 dBA less than the basic sound level (BSL) (further discussed in Section 4.1). This is known as the average ambient sound level (ASL). This value was used as the ambient condition in the modeling in addition to the sound power levels associated with the existing and project noise sources.

Refer to Appendix I for a description of the acoustical terminology, Appendix II for a list of common noise sources and Appendix III for a list of the computer noise modeling parameters.

3.4. Noise Sources

The broadband noise data for the Station was obtained from fence line measurements conducted on January 26, 2026. The proposed sound power levels for the Project equipment were provided by the manufacturer. The octave band centre frequencies were then calculated and included the noise model utilizing aci in-house information and calculations using methods presented in various texts. The noise data for the cooling fans and transformers for each of the data mining centres were based on previously completed projects with similar generator KW ratings. Refer to Appendix III for a list of the sound power levels and building sound level attenuation values.

3.5. Modeling Confidence

As previously mentioned, the algorithms used for the noise modeling follow the ISO 9613 standard. The published accuracy for this standard is ±3 dBA between 100 m – 1,000 m. Accuracy levels beyond 1,000 m are not published. Experience based on similar noise models conducted over large distances shows that, as expected, as the distance increases, the associated accuracy in prediction decreases. Experience has shown that environmental factors such as wind, temperature inversions, topography and ground cover all have increasing effects over distances larger than approximately 1,500 m.

4.0 Permissible Sound Levels

Environmental noise levels from various sources (industrial, roads, railways, etc.) are commonly described in terms of equivalent sound levels or L_{eq}. This is the level of a steady sound having the same acoustic energy, over a given time period, as the fluctuating sound. In addition, this energy averaged level is A–weighted to account for the reduced sensitivity of average human hearing to low frequency sounds. These L_{eq} in dBA, which are the most common environmental noise measure, are often given for daytime (07:00

to 22:00) L_{eq}Day and night-time (22:00 to 07:00) L_{eq}Night while other criteria use the entire 24-hour period as L_{eq}24. The criteria used to evaluate the noise in the study area include the AUC Rule 012.

4.1. Alberta Utilities Commission Rule 012

The AUC Rule 012 (2024) on Noise Control sets the PSL at the receiver location based on population density and relative distances to heavily traveled road and rail as shown in Table 1. Firstly, the various residential receptors within the study area are classified in either Category 1, 2 or 3 as indicated in Table 1. Receptors in Category 1 are more than 500 m from heavily travelled roads or rail lines while those in Category 2 are more than 30 m but less than 500 m from heavily travelled roads or rail lines. Category 3 receptors are less than 30 m from heavily travelled roads or rail lines. Secondly, the residential receptors are categorized by the population density per quarter section. This refers to a quarter Section with the affected dwelling at the centre (i.e. a 451 radius).

Table 1. Basic Night-Time Sound Levels (as per the AUC Rule 012)

Proximity to Transportation	Dwelling Density per Quarter Section of Land				
	1-8 Dwellings	9-160 Dwellings	161 to 400 Dwellings	400 to 1,000 Dwellings	>1,000 Dwellings
Category 1	40 dBA	43 dBA	46 dBA	48 dBA	53 dBA
Category 2	45 dBA	48 dBA	51 dBA	51 dBA	53 dBA
Category 3	50 dBA	53 dBA	56 dBA	56 dBA	56 dBA
Category 1	Dwelling units more than 500m from heavily travelled roads and/or rail lines and not subject to frequent aircraft flyovers				
Category 2	Dwelling units more than 30m but less than 500m from heavily travelled roads and/or rail lines and not subject to frequent aircraft flyovers				
Category 3	Dwelling units less than 30m from heavily travelled roads and/or rail lines and not subject to frequent aircraft flyovers				

All residential receptor locations within 1.5 km of the industrial sites have a population density less than 9 dwellings per quarter section and are greater than 500 m from a heavily traveled road. As such the PSLs for all residential locations are an **L_{eq}Night of 40 dBA and an L_{eq}Day of 50 dBA.**

The AUC Rule 012 also specifies that new or modified facilities must meet a PSL-Night of 40 dBA at 1,500 m from the facility fenceline if there are no closer dwellings. As such, the PSLs at a distance of 1,500 m are an **L_{eq}Night of 40 dBA and an L_{eq}Day of 50 dBA.**

Refer to Appendix IV for the table used to determine of the PSL's.

5.0 Results and Discussion

5.1. Short-Term Sound Level Measurements

As previously mentioned, fenceline short-term sound level measurements were performed on January 26, 2026, at the Project site. Measurements were conducted along the fenceline to determine the contribution of the various noise sources. The results of each measurement can be found in Table 2.

Table 2. Short-Term Sound Level Measurement Results

Measurement Number	Description	Distance (m)	Sound Pressure Level (dBA)
1	North Compressor	16.0	72.0
2	North Compressor	16.0	72.0
3	South Compressor	25.0	65.2

5.2. Baseline Case Results

The results of the Baseline Case noise modeling are presented in Table 3 and illustrated in Figure 3. The Baseline Case noise sources will operate 24/7, therefore only the night-time results will be presented and discussed. Additionally, the enhance Compressor station was modeled as having 3 operational compressors[1].

Table 3. Baseline Case Noise Modeling Results

Receptor (Distance from Centre of Site)	ASL-Night (dBA)	Baseline Case L_{eq}Night (dBA)	ASL + Baseline Case L_{eq}Night (dBA)	PSL-Night (dBA)	Compliant		Baseline Case L_{eq}Night (dBC)	dBC - dBA	Tonal
R-01 (970 m)	35.0	24.3	35.4	40.0	YES		38.8	14.5	NO
R-02 (1,375 m)	35.0	25.5	35.5	40.0	YES		46.0	20.5	POSSIBLE
R-03 (1,400 m)	35.0	16.2	35.1	40.0	YES		33.5	17.3	NO
R-04 (1,500 m)	35.0	15.7	35.1	40.0	YES		33.2	17.5	NO
Theoretical 1,500 m Receptors									
North (1,500 m)	35.0	21.0	35.2	40.0	YES		36.1	15.1	NO
Northeast (1,500 m)	35.0	20.9	35.2	40.0	YES		45.5	24.6	POSSIBLE
East (1,500 m)	35.0	24.8	35.4	40.0	YES		36.0	11.2	NO
Southeast (1,500 m)	35.0	20.8	35.2	40.0	YES		36.1	15.3	NO
South (1,500 m)	35.0	20.9	35.2	40.0	YES		32.5	11.6	NO
Southwest (1,500 m)	35.0	15.9	35.1	40.0	YES		32.6	16.7	NO
West (1,500 m)	35.0	16.1	35.1	40.0	YES		34.0	17.9	NO
Northwest (1,500 m)	35.0	17.5	35.1	40.0	YES		0.0	-17.5	NO

The modeled Baseline Case L_{eq}Night noise levels at the residential receptors range from 15.7 dBA – 25.5 dBA. The modeled ASL + Baseline Case LeqNight noise levels range from 35.1 – 35.5 dBA. As indicated in Table 3, the projected noise levels at all theoretical 1,500 m receptors are all below the AUC's PSLs.

As shown in Table 3, in addition to the broadband dBA sound levels, the modeling results at the residential receptor locations indicate that the dBC sound levels will be lower than 20 dB above the dBA sound levels for all locations, apart from Receptor R-02. Though, the dBC – dBA values are relatively high for all locations. This can be attributed to the current noise mitigation on the compressors which is more effective at attenuating the mid-high frequency bands. As specified in AUC Rule 012, if the dBC – dBA sound levels are greater than 20 dB (without the ASL's), there is the potential that the noise will have a low frequency tonal component. However, since the overall dBA noise levels are below 30 dBA for all locations, it is not anticipated that there will be issues with any tonal noise for the nearby residents.

[1] Only two compressor were operational during the site visit.

5.3. Application Case Results

The results of the Application Case noise modeling are presented in Table 4 and illustrated in Figure 4. The Application Case noise sources will operate 24/7, therefore only the night-time results will be presented and discussed.

Table 4. Application Case Noise Modeling Results

Receptor (Distance from Drill Entry Point)	ASL-Night (dBA)	Application Case L_{eq}Night (dBA)	ASL + Application Case L_{eq}Night (dBA)	PSL-Night (dBA)	Compliant		Application Case L_{eq}Night (dBC)	dBC - dBA	Tonal
R-01 (970 m)	35.0	28.6	35.9	40.0	YES		50.1	21.5	POSSIBLE
R-02 (1,375 m)	35.0	22.8	35.3	40.0	YES		45.3	22.5	POSSIBLE
R-03 (1,400 m)	35.0	25.0	35.4	40.0	YES		47.1	22.1	POSSIBLE
R-04 (1,500 m)	35.0	24.5	35.4	40.0	YES		46.7	22.2	POSSIBLE
Theoretical 1,500 m Receptors									
North (1,500 m)	35.0	24.7	35.4	40.0	YES		46.9	22.2	POSSIBLE
Northeast (1,500 m)	35.0	24.6	35.4	40.0	YES		46.8	22.2	POSSIBLE
East (1,500 m)	35.0	24.5	35.4	40.0	YES		46.7	22.2	POSSIBLE
Southeast (1,500 m)	35.0	24.4	35.4	40.0	YES		46.6	22.2	POSSIBLE
South (1,500 m)	35.0	24.3	35.4	40.0	YES		46.6	22.3	POSSIBLE
Southwest (1,500 m)	35.0	24.4	35.4	40.0	YES		46.6	22.2	POSSIBLE
West (1,500 m)	35.0	24.5	35.4	40.0	YES		46.7	22.2	POSSIBLE
Northwest (1,500 m)	35.0	25.0	35.4	40.0	YES		46.9	21.9	POSSIBLE

The modeled Application Case L_{eq}Night noise levels at the residential receptors range from 22.8 dBA – 28.6 dBA. The modeled ASL + Application Case LeqNight noise levels range from 35.3 – 35.9 dBA. As indicated in Table 4, the projected noise levels for all residential and theoretical 1,500 m receptors are below the AUC's PSLs.

As shown in Table 4, the dBC – dBA values are relatively high for all locations. This can be attributed to the noise mitigation on the generator exhausts (i.e. mufflers) which are more effective at attenuating the mid-high frequency bands. As specified in AUC Rule 012, if the dBC – dBA sound levels are greater than 20 dB, there is the potential that the noise will have a low frequency tonal component. However, since the overall dBA noise levels (without the ASL's) are below 30 dBA for all locations, it is not anticipated that there will be issues with any tonal noise for the nearby residents.

5.4. Cumulative Case Results

The results of the Cumulative Case noise modeling are presented in Table 5 and illustrated in Figure 5. The Cumulative Case noise sources will operate 24/7, therefore only the night-time results will be presented and discussed.

Table 5. Cumulative Case Noise Modeling Results

Receptor (Distance from Centre of Site)	ASL-Night (dBA)	Cumulative Case L_{eq}Night (dBA)	Relative Difference to Baseline Case L_{eq}Night (dBA)	ASL + Cumulative Case L_{eq}Night (dBA)	PSL-Night (dBA)	Compliant		Baseline Case L_{eq}Night (dBC)	dBC - dBA	Tonal
R-01 (970 m)	35.0	29.9	5.7	36.2	40.0	YES		50.4	20.5	POSSIBLE
R-02 (1,045 m)	35.0	27.4	1.9	35.7	40.0	YES		48.6	21.2	POSSIBLE
R-03 (1,500 m)	35.0	25.5	9.3	35.5	40.0	YES		47.3	21.8	POSSIBLE
R-04 (1,015 m)	35.0	25.1	9.4	35.4	40.0	YES		46.9	21.8	POSSIBLE
Theoretical 1,500 m Receptors										
North (1,500 m)	35.0	25.0	N/A	35.4	40.0	YES		45.9	20.9	POSSIBLE
Northeast (1,500 m)	35.0	26.5	N/A	35.6	40.0	YES		48.0	21.5	POSSIBLE
East (1,500 m)	35.0	24.0	N/A	35.3	40.0	YES		44.6	20.6	POSSIBLE
Southeast (1,500 m)	35.0	23.3	N/A	35.3	40.0	YES		45.3	22.0	POSSIBLE
South (1,500 m)	35.0	26.7	N/A	35.6	40.0	YES		48.1	21.4	POSSIBLE
Southwest (1,500 m)	35.0	24.7	N/A	35.4	40.0	YES		46.5	21.8	POSSIBLE
West (1,500 m)	35.0	25.1	N/A	35.4	40.0	YES		46.9	21.8	POSSIBLE
Northwest (1,500 m)	35.0	28.0	N/A	35.8	40.0	YES		52.0	24.0	POSSIBLE

As indicated in Table 5, the relative difference between the Cumulative Case and the Baseline Case ranges from 1.9 – 9.4 dBA for all receptor locations. The modeled Cumulative Case LeqNight noise levels at the residential receptors (without the ASL) range from 25.1 dBA – 30.0 dBA. The modeled ASL + Cumulative Case LeqNight noise levels range from 35.4 – 36.2 dBA. As a result, the Cumulative Case noise levels are compliant with the AUC's Rule 012.

Again, the dBC – dBA values are relatively high for all locations. This can be attributed to the noise mitigation on the generator exhausts (i.e. mufflers) which are more effective at attenuating the mid-high frequency bands. As specified in AUC Rule 012, if the dBC – dBA sound levels are greater than 20 dB, there is the potential that the noise will have a low frequency tonal component. However, since the overall dBA noise levels (without the ASL's) are below 30 dBA for all locations, it is not anticipated that there will be issues with any tonal noise for the nearby residents.

5.5. Construction Noise

Although there are no specific construction noise level limits detailed by AUC Rule 012, there are general recommendations for construction noise mitigation. This includes all activities associated with construction of the station. The document states:

> "*Licensees must take the following mitigating measures to reduce the impact of construction noise on nearby dwellings:*
>
> - *Conduct construction activity between the hours of 07:00 and 22:00 to reduce the potential impact of construction noise;*
> - *Advise nearby residents of significant noise-causing activities and schedule these events to reduce disruption to them;*
> - *Ensure all internal combustion engines are fitted with appropriate muffler systems; and*
>
> *Should a noise complaint be filed during construction, the licensee must respond expeditiously and take action to ensure that the compliant has been addressed.*"

6.0 Conclusion

The results of the Baseline, Application, and Cumulative Case noise modeling indicated that the existing and Project related noise levels (with the average ambient sound level of 35 dBA included) will be below the AUC Rule 012 PSLs of 40 dBA L_{eq}Night for all residential receptors. In addition, the dBC sound levels are projected to be 20 dB greater than the dBA sound levels, however, since the overall dBA noise levels (without the ASL's) are below 30 dBA for all locations, it is not anticipated that there will be issues with any tonal noise for the nearby residents.

A short form (AUC Rule 012 form) noise impact assessment is presented in Appendix V.

7.0 References

- Alberta Utilities Commission (AUC), *Rule 012 on Noise Control, 2024* Calgary, Alberta.
- International Organization for Standardization (ISO), *Standard 1996-1, Acoustics – Description, measurement and assessment of environmental noise – Part 1: Basic quantities and assessment procedures, 2003*, Geneva Switzerland.
- International Organization for Standardization (ISO), *Standard 9613-1, Acoustics – Attenuation of sound during propagation outdoors – Part 1: Calculation of absorption of sound by the atmosphere, 1993*, Geneva Switzerland.
- International Organization for Standardization (ISO), *Standard 9613-2, Acoustics – Attenuation of sound during propagation outdoors – Part 2: General method of calculation, 1996*, Geneva Switzerland.

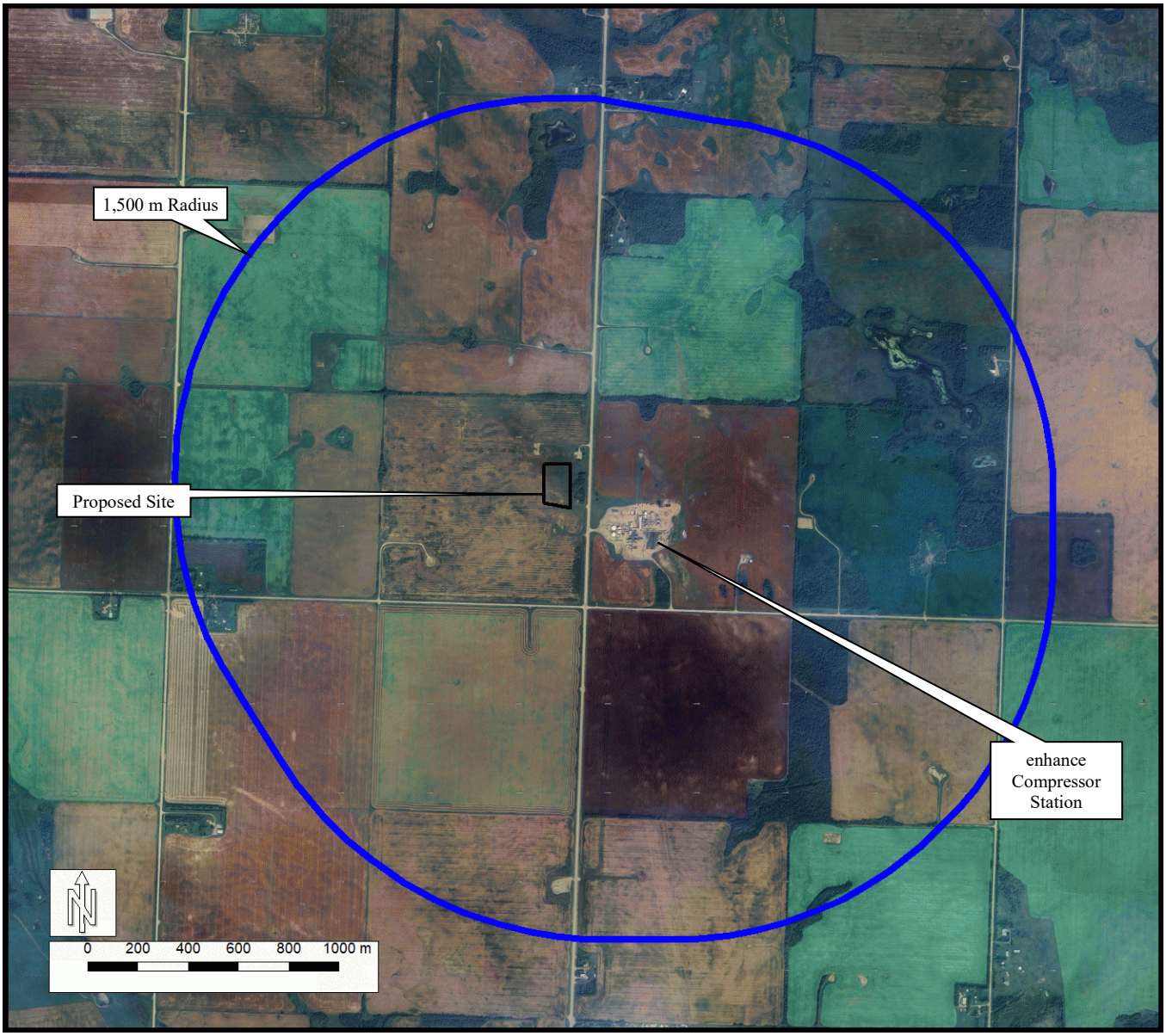

Figure 1. Study Area

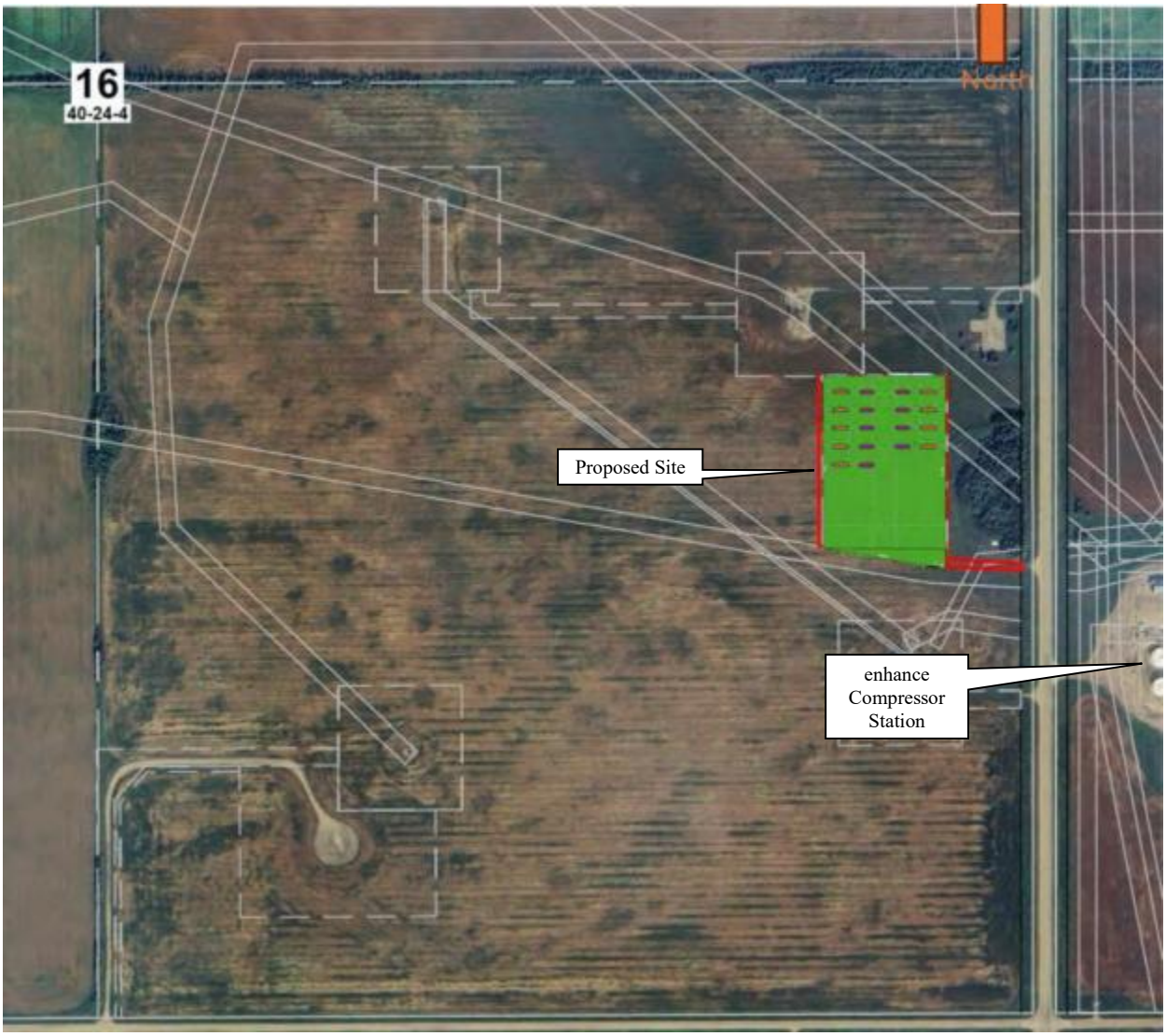

Figure 2. Site Plan

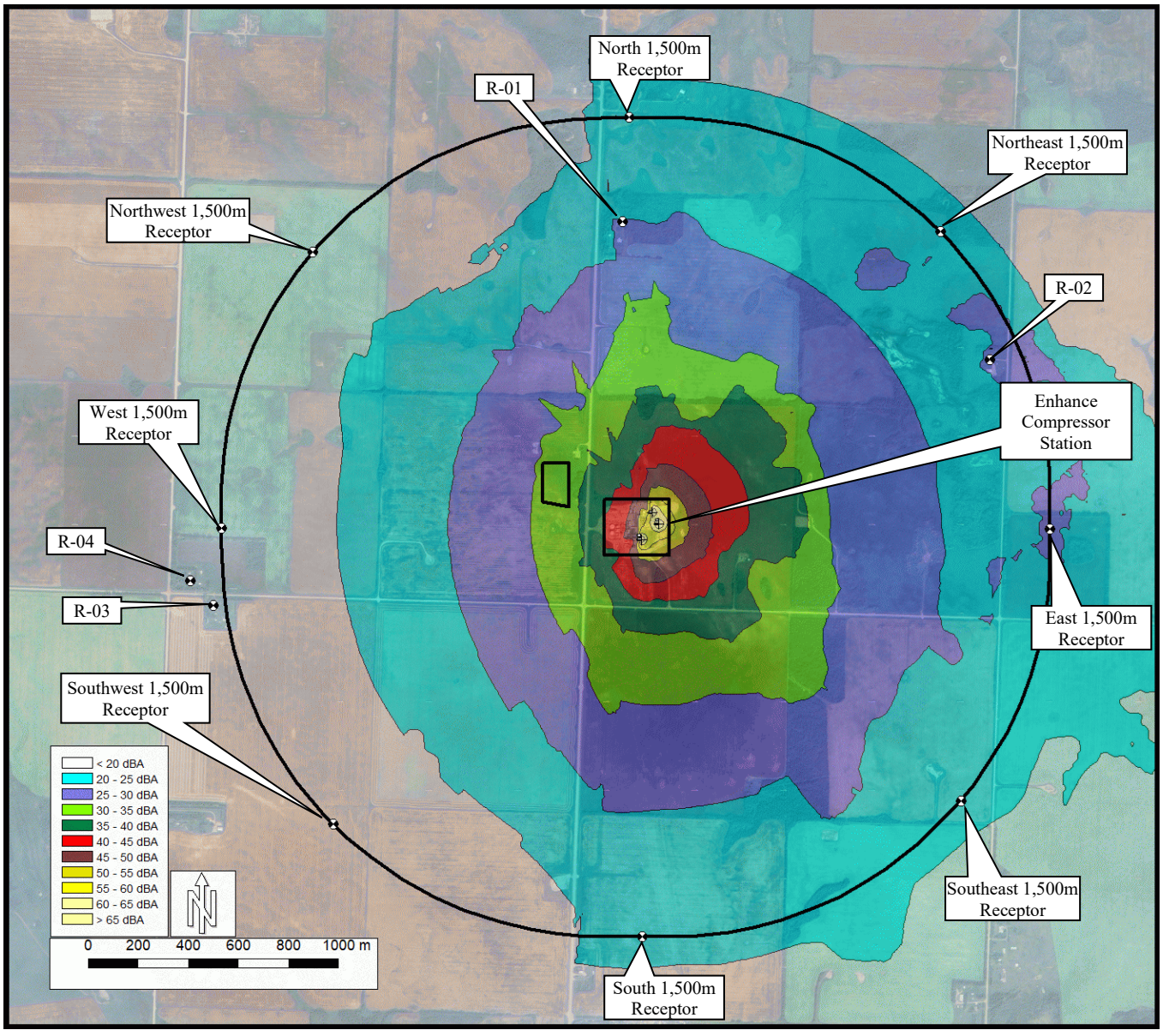

Figure 3. Baseline Case Noise Modeling L_{eq}Night (Without ASL)

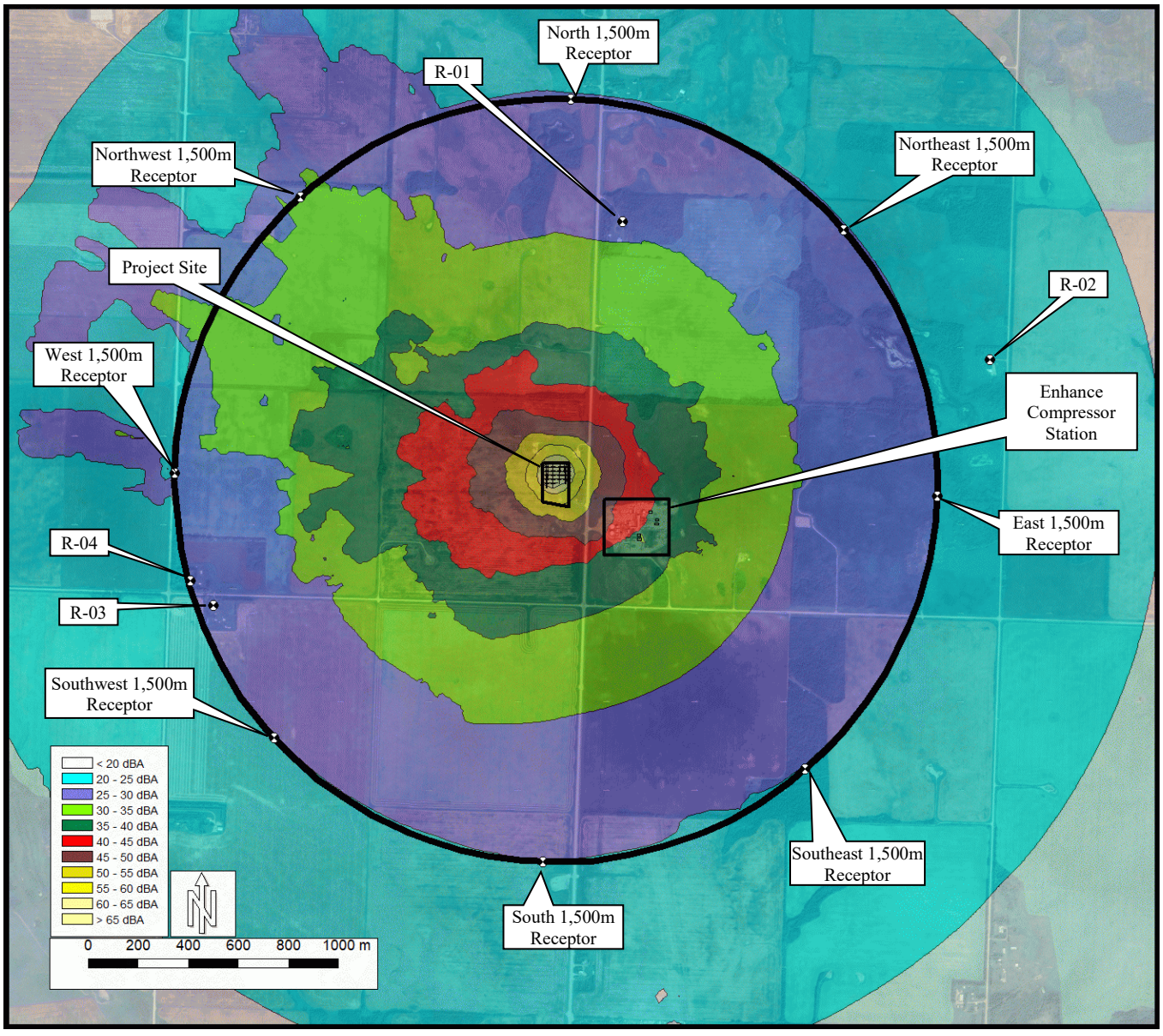

Figure 4. Application Case Noise Modeling L_{eq}Night (Without ASL)

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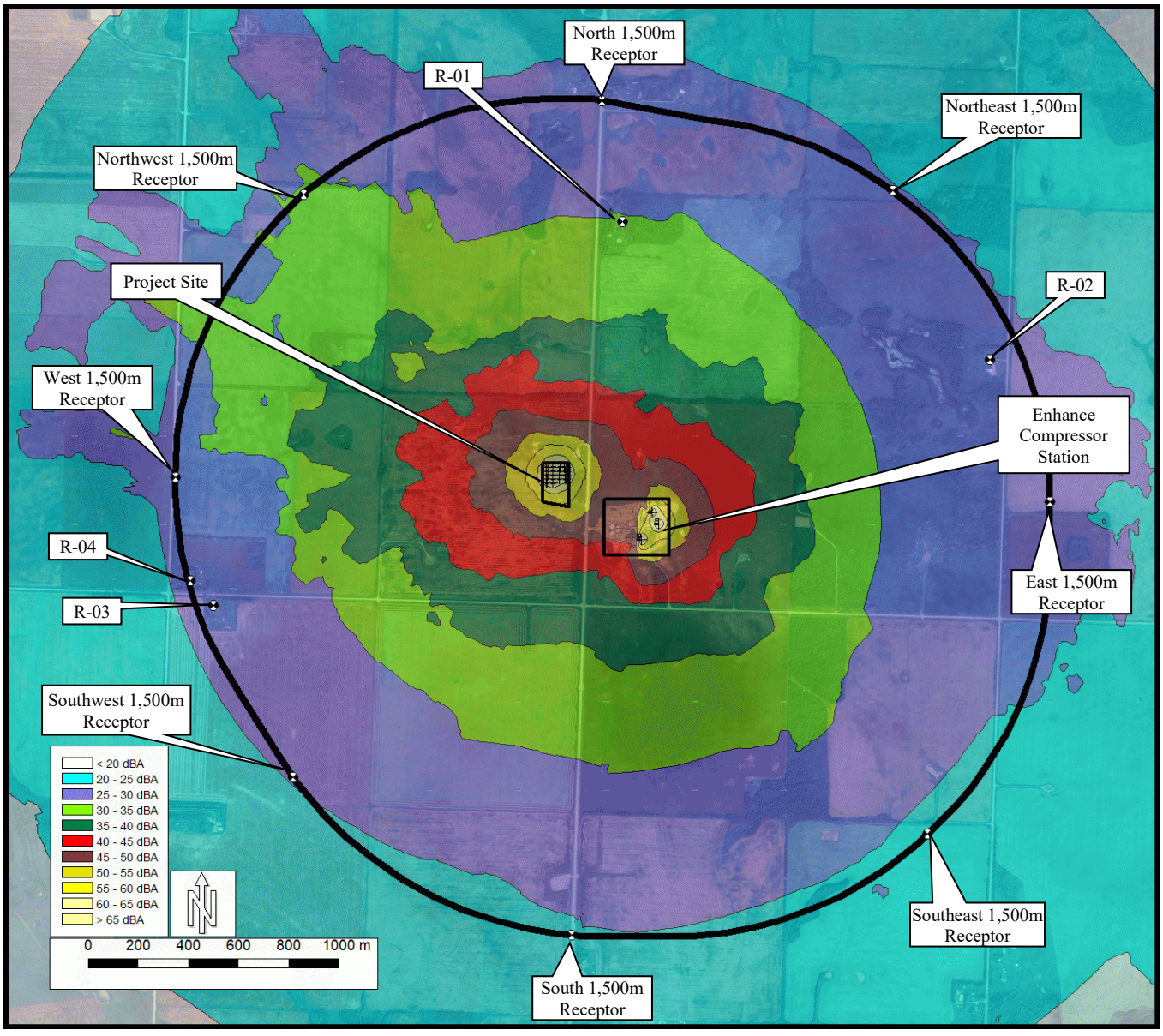


Figure 5. Cumulative Case Noise Modeling L_{eq}Night (Without ASL)

Appendix I. THE ASSESSMENT OF ENVIRONMENTAL NOISE (GENERAL)

Sound Pressure Level

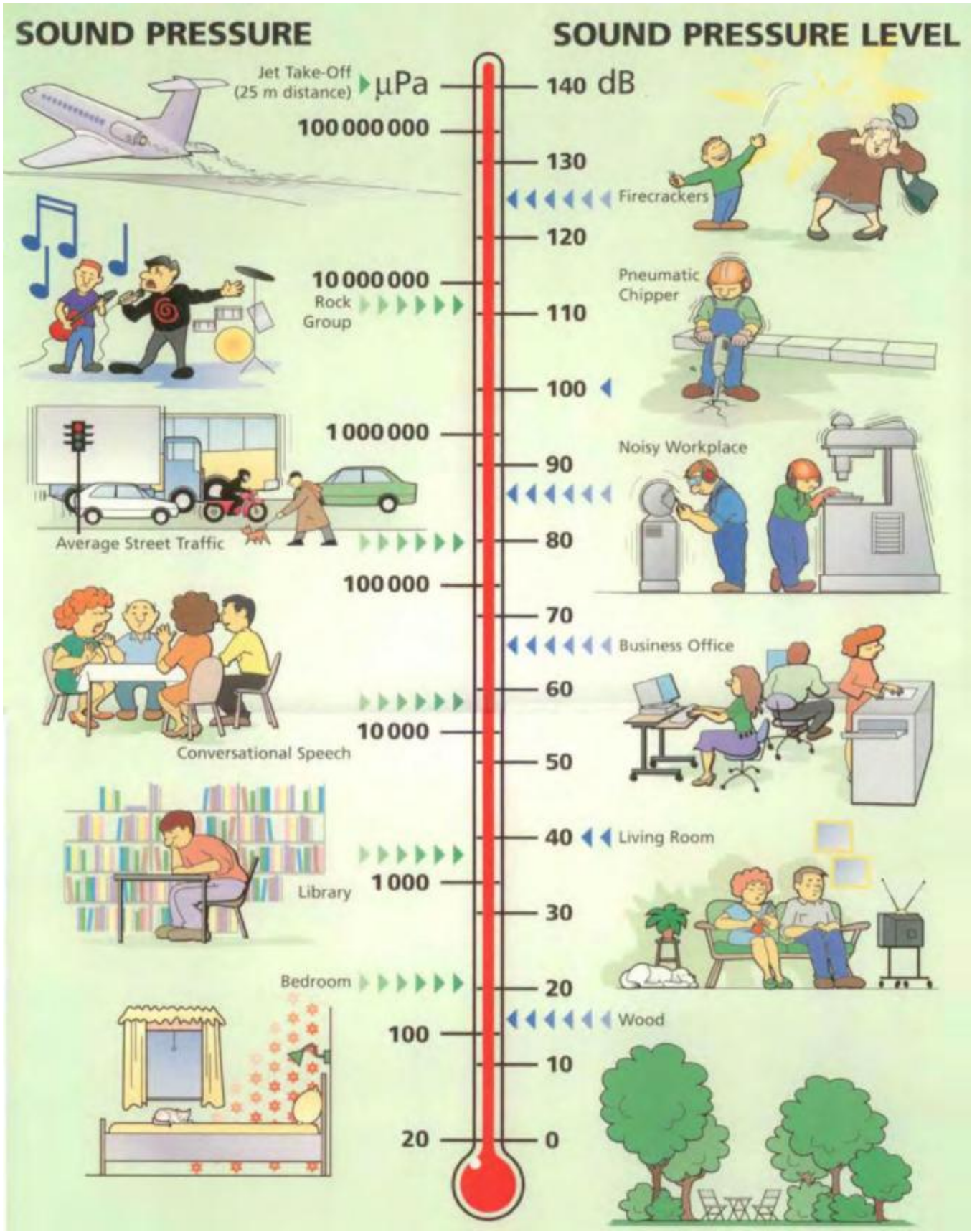
Sound pressure is initially measured in Pascal's (Pa). Humans can hear several orders of magnitude in sound pressure levels, so a more convenient scale is used. This scale is known as the decibel (dB) scale, named after Alexander Graham Bell (telephone guy). It is a base 10 logarithmic scale. When we measure pressure we typically measure the RMS sound pressure.

$$SPL = 10\log_{10}\left[\frac{P_{RMS}^{2}}{P_{ref}^{2}}\right] = 20\log_{10}\left[\frac{P_{RMS}}{P_{ref}}\right]$$

Where: SPL = Sound Pressure Level in dB
P_{RMS} = Root Mean Square measured pressure (Pa)
P_{ref} = Reference sound pressure level (P_{ref} = 2x10^{-5} Pa = 20 μPa)

This reference sound pressure level is an internationally agreed upon value. It represents the threshold of human hearing for "typical" people based on numerous testing. It is possible to have a threshold which is lower than 20 μPa which will result in negative dB levels. As such, zero dB does not mean there is no sound!

In general, a difference of 1 – 2 dB is the threshold for humans to notice that there has been a change in sound level. A difference of 3 dB (factor of 2 in acoustical energy) is perceptible and a change of 5 dB is strongly perceptible. A change of 10 dB is typically considered a factor of 2. This is quite remarkable when considering that 10 dB is 10-times the acoustical energy!



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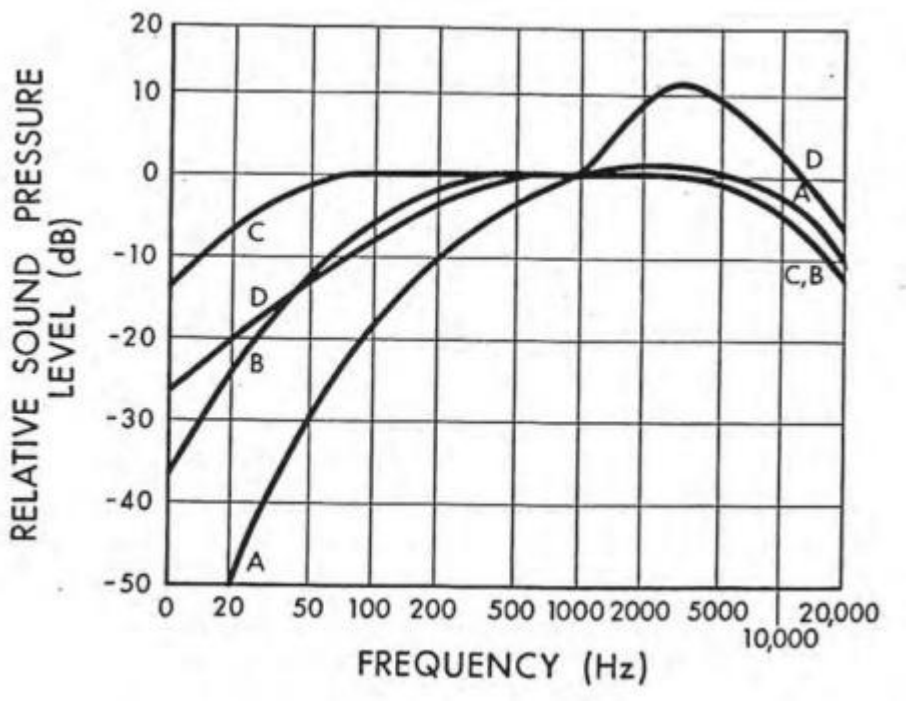
Frequency

The range of frequencies audible to the human ear ranges from approximately 20 Hz to 20 kHz. Within this range, the human ear does not hear equally at all frequencies. It is not very sensitive to low frequency sounds, is very sensitive to mid frequency sounds and is slightly less sensitive to high frequency sounds. Due to the large frequency range of human hearing, the entire spectrum is often divided into 31 bands, each known as a 1/3 octave band.

The internationally agreed upon center frequencies and upper and lower band limits for the 1/1 (whole octave) and 1/3 octave bands are as follows:

Whole Octave			1/3 Octave		
Lower Band Limit	Center Frequency	Upper Band Limit	Lower Band Limit	Center Frequency	Upper Band Limit
11	**16**	22	14.1	**16**	17.8
			17.8	**20**	22.4
22	**31.5**	44	22.4	**25**	28.2
			28.2	**31.5**	35.5
			35.5	**40**	44.7
44	**63**	88	44.7	**50**	56.2
			56.2	**63**	70.8
			70.8	**80**	89.1
88	**125**	177	89.1	**100**	112
			112	**125**	141
			141	**160**	178
177	**250**	355	178	**200**	224
			224	**250**	282
			282	**315**	355
355	**500**	710	355	**400**	447
			447	**500**	562
			562	**630**	708
710	**1000**	1420	708	**800**	891
			891	**1000**	1122
			1122	**1250**	1413
1420	**2000**	2840	1413	**1600**	1778
			1778	**2000**	2239
			2239	**2500**	2818
2840	**4000**	5680	2818	**3150**	3548
			3548	**4000**	4467
			4467	**5000**	5623
5680	**8000**	11360	5623	**6300**	7079
			7079	**8000**	8913
			8913	**10000**	11220
11360	**16000**	22720	11220	**12500**	14130
			14130	**16000**	17780
			17780	**20000**	22390

Human hearing is most sensitive at approximately 3500 Hz which corresponds to the ¼ wavelength of the ear canal (approximately 2.5 cm). Because of this range of sensitivity to various frequencies, we typically apply various weighting networks to the broadband measured sound to more appropriately account for the way humans hear. By default, the most common weighting network used is the so-called "A-weighting". It can be seen in the figure that the low frequency sounds are reduced significantly with the A-weighting.



Combination of Sounds

When combining multiple sound sources the general equation is:

$$\Sigma SPL_n = 10\log_{10}\left[\sum_{i=1}^{n} 10^{\frac{SPL_i}{10}}\right]$$

Examples:

- Two sources of 50 dB each add together to result in 53 dB.
- Three sources of 50 dB each add together to result in 55 dB.
- Ten sources of 50 dB each add together to result in 60 dB.
- One source of 50 dB added to another source of 40 dB results in 50.4 dB

It can be seen that, if multiple similar sources exist, removing or reducing only one source will have little effect.

Sound Level Measurements

Over the years a number of methods for measuring and describing environmental noise have been developed. The most widely used and accepted is the concept of the Energy Equivalent Sound Level (L_{eq}) which was developed in the US (1970's) to characterize noise levels near US Air-force bases. This is the level of a steady state sound which, for a given period of time, would contain the same energy as the time varying sound. The concept is that the same amount of annoyance occurs from a sound having a high level for a short period of time as from a sound at a lower level for a longer period of time.
The L_{eq} is defined as:

$$L_{eq} = 10\log_{10}\left[\frac{1}{T}\int_0^T 10^{\frac{dB}{10}}\,dT\right] = 10\log_{10}\left[\frac{1}{T}\int_0^T \frac{P^2}{P_{ref}^2}dT\right]$$

We must specify the time period over which to measure the sound. i.e. 1-second, 10-seconds, 15-seconds, 1-minute, 1-day, etc**. An L_{eq} is meaningless if there is no time period associated**.

In general there a few very common L_{eq} sample durations which are used in describing environmental noise measurements. These include:

- $L_{eq}24$ - Measured over a 24-hour period
- L_{eq}Night - Measured over the night-time (typically 22:00 – 07:00)
- L_{eq}Day - Measured over the day-time (typically 07:00 – 22:00)
- L_{DN} - Same as $L_{eq}24$ with a 10 dB penalty added to the night-time

Statistical Descriptor

Another method of conveying long term noise levels utilizes statistical descriptors. These are calculated from a cumulative distribution of the sound levels over the entire measurement duration and then determining the sound level at xx % of the time.

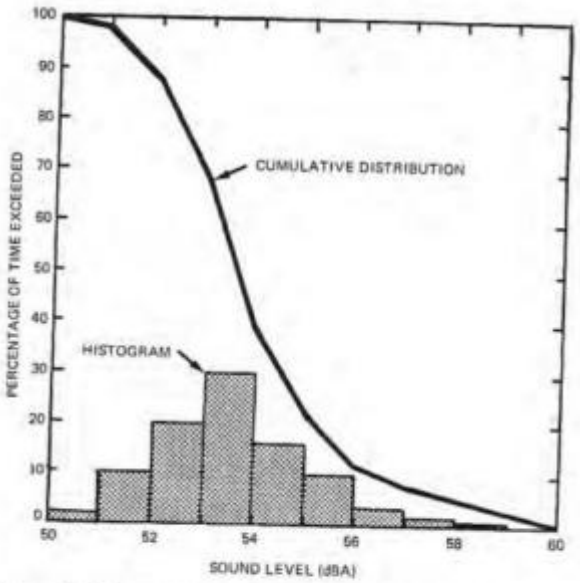


Figure 16.6 Statistically processed community noise showing histogram and cumulative distribution of A weighted sound levels.

Industrial Noise Control, Lewis Bell, Marcel Dekker, Inc. 1994

The most common statistical descriptors are:

L_{min} - minimum sound level measured
L_{01} - sound level that was exceeded only 1% of the time
L_{10} - sound level that was exceeded only 10% of the time.
- Good measure of intermittent or intrusive noise
- Good measure of Traffic Noise

L_{50} - sound level that was exceeded 50% of the time (arithmetic average)
- Good to compare to L_{eq} to determine steadiness of noise

L_{90} - sound level that was exceeded 90% of the time
- Good indicator of typical "ambient" noise levels

L_{99} - sound level that was exceeded 99% of the time
L_{max} - maximum sound level measured

These descriptors can be used to provide a more detailed analysis of the varying noise climate:

- If there is a large difference between the L_{eq} and the L_{50} (L_{eq} can never be any lower than the L_{50}) then it can be surmised that one or more short duration, high level sound(s) occurred during the time period.
- If the gap between the L_{10} and L_{90} is relatively small (less than 15 – 20 dBA) then it can be surmised that the noise climate was relatively steady.

Sound Propagation

In order to understand sound propagation, the nature of the source must first be discussed. In general, there are three types of sources. These are known as 'point', 'line', and 'area'. This discussion will concentrate on point and line sources since area sources are much more complex and can usually be approximated by point sources at large distances.

Point Source

As sound radiates from a point source, it dissipates through geometric spreading. The basic relationship between the sound levels at two distances from a point source is:

$$\therefore SPL_1 - SPL_2 = 20\log_{10}\left(\frac{r_2}{r_1}\right)$$

Where: SPL_1 = sound pressure level at location 1, SPL_2 = sound pressure level at location 2
r_1 = distance from source to location 1, r_2 = distance from source to location 2

Thus, the reduction in sound pressure level for a point source radiating in a free field is **6 dB per doubling of distance**. This relationship is independent of reflectivity factors provided they are always present. Note that this only considers geometric spreading and does not take into account atmospheric effects. Point sources still have some physical dimension associated with them, and typically do not radiate sound equally in all directions in all frequencies. The directionality of a source is also highly dependent on frequency. As frequency increases, directionality increases.

Examples (note no atmospheric absorption):

- A point source measuring 50 dB at 100m will be 44 dB at 200m.
- A point source measuring 50 dB at 100m will be 40.5 dB at 300m.
- A point source measuring 50 dB at 100m will be 38 dB at 400m.
- A point source measuring 50 dB at 100m will be 30 dB at 1000m.

Line Source

A line source is similar to a point source in that it dissipates through geometric spreading. The difference is that a line source is equivalent to a long line of many point sources. The basic relationship between the sound levels at two distances from a line source is:

$$SPL_1 - SPL_2 = 10\log_{10}\left(\frac{r_2}{r_1}\right)$$

The difference from the point source is that the '20' term in front of the 'log' is now only 10. Thus, the reduction in sound pressure level for a line source radiating in a free field is **3 dB per doubling of distance**.

Examples (note no atmospheric absorption):

- A line source measuring 50 dB at 100m will be 47 dB at 200m.
- A line source measuring 50 dB at 100m will be 45 dB at 300m.
- A line source measuring 50 dB at 100m will be 44 dB at 400m.
- A line source measuring 50 dB at 100m will be 40 dB at 1000m.

Atmospheric Absorption

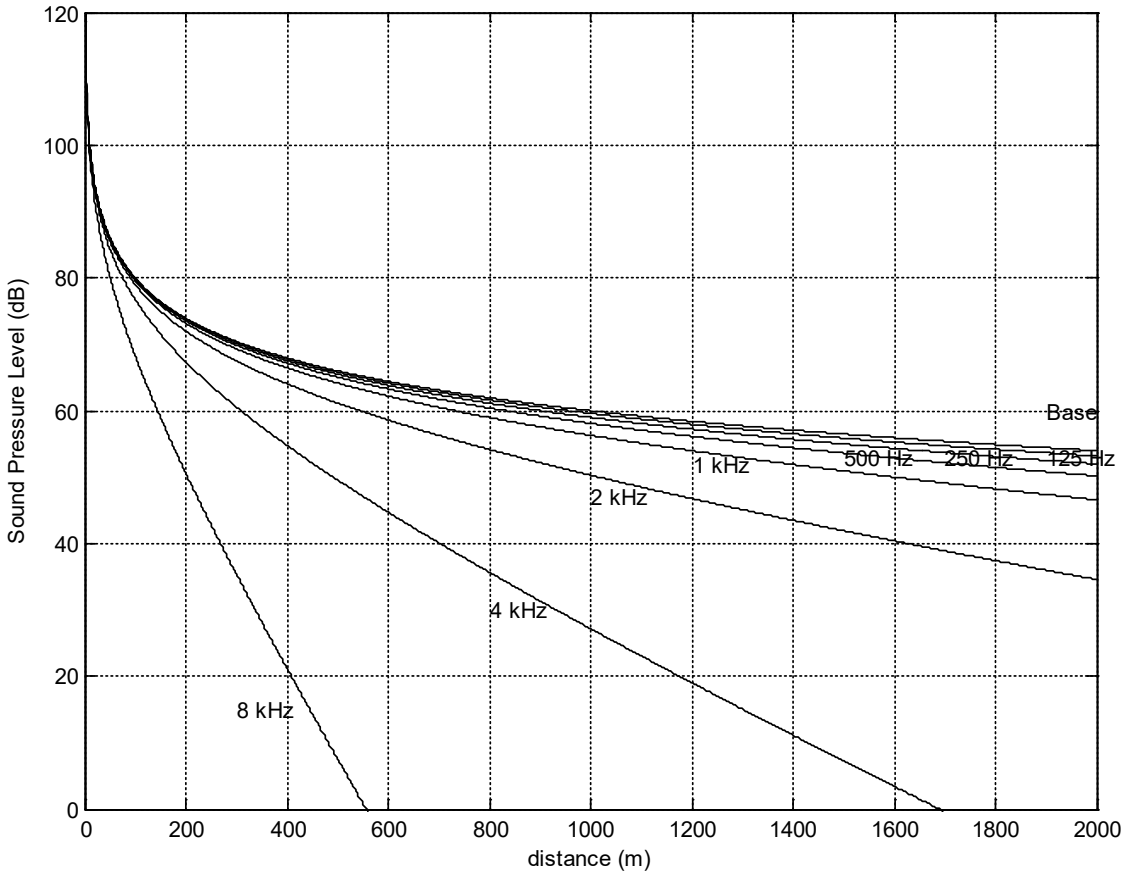
As sound transmits through a medium, there is an attenuation (or dissipation of acoustic energy) which can be attributed to three mechanisms:

1) **Viscous Effects** - Dissipation of acoustic energy due to fluid friction which results in thermodynamically irreversible propagation of sound.
2) **Heat Conduction Effects** - Heat transfer between high and low temperature regions in the wave which result in non-adiabatic propagation of the sound.
3) **Inter Molecular Energy Interchanges** - Molecular energy relaxation effects which result in a time lag between changes in translational kinetic energy and the energy associated with rotation and vibration of the molecules.

The following table illustrates the attenuation coefficient of sound at standard pressure (101.325 kPa) in units of dB/100m.

Temperature	Relative Humidity	Frequency (Hz)					
°C	(%)	125	250	500	1000	2000	4000
30	20	0.06	0.18	0.37	0.64	1.40	4.40
	50	0.03	0.10	0.33	0.75	1.30	2.50
	90	0.02	0.06	0.24	0.70	1.50	2.60
20	20	0.07	0.15	0.27	0.62	1.90	6.70
	50	0.04	0.12	0.28	0.50	1.00	2.80
	90	0.02	0.08	0.26	0.56	0.99	2.10
10	20	0.06	0.11	0.29	0.94	3.20	9.00
	50	0.04	0.11	0.20	0.41	1.20	4.20
	90	0.03	0.10	0.21	0.38	0.81	2.50
0	20	0.05	0.15	0.50	1.60	3.70	5.70
	50	0.04	0.08	0.19	0.60	2.10	6.70
	90	0.03	0.08	0.15	0.36	1.10	4.10

- As frequency increases, absorption tends to increase
- As Relative Humidity increases, absorption tends to decrease
- There is no direct relationship between absorption and temperature
- **The net result of atmospheric absorption is to modify the sound propagation of a point source from 6 dB/doubling-of-distance to approximately 7 – 8 dB/doubling-of-distance (based on anecdotal experience)**



Atmospheric Absorption at 10°C and 70% RH

acoustical consultants inc

Meteorological Effects

There are many meteorological factors which can affect how sound propagates over large distances. These various phenomena must be considered when trying to determine the relative impact of a noise source either after installation or during the design stage.

Wind

- Can greatly alter the noise climate away from a source depending on direction
- Sound levels downwind from a source can be increased due to refraction of sound back down towards the surface. This is due to the generally higher velocities as altitude increases.
- Sound levels upwind from a source can be decreased due to a "bending" of the sound away from the earth's surface.
- Sound level differences of ±10dB are possible depending on severity of wind and distance from source.
- Sound levels crosswind are generally not disturbed by an appreciable amount
- Wind tends to generate its own noise, however, and can provide a high degree of masking relative to a noise source of particular interest.

Temperature

- Temperature effects can be similar to wind effects
- Typically, the temperature is warmer at ground level than it is at higher elevations.
- If there is a very large difference between the ground temperature (very warm) and the air aloft (only a few hundred meters) then the transmitted sound refracts upward due to the changing speed of sound.
- If the air aloft is warmer than the ground temperature (known as an *inversion*) the resulting higher speed of sound aloft tends to refract the transmitted sound back down towards the ground. This essentially works on Snell's law of reflection and refraction.
- Temperature inversions typically happen early in the morning and are most common over large bodies of water or across river valleys.
- Sound level differences of ±10dB are possible depending on gradient of temperature and distance from source.

Rain

- Rain does not affect sound propagation by an appreciable amount unless it is very heavy
- The larger concern is the noise generated by the rain itself. A heavy rain striking the ground can cause a significant amount of highly broadband noise. The amount of noise generated is difficult to predict.
- Rain can also affect the output of various noise sources such as vehicle traffic.

Summary

- In general, these wind and temperature effects are difficult to predict
- Empirical models (based on measured data) have been generated to attempt to account for these effects.
- Environmental noise measurements must be conducted with these effects in mind. Sometimes it is desired to have completely calm conditions, other times a "worst case" of downwind noise levels are desired.

Topographical Effects

Similar to the various atmospheric effects outlined in the previous section, the effect of various geographical and vegetative factors must also be considered when examining the propagation of noise over large distances.

Topography

- One of the most important factors in sound propagation.
- Can provide a natural barrier between source and receiver (i.e. if berm or hill in between).
- Can provide a natural amplifier between source and receiver (i.e. large valley in between or hard reflective surface in between).
- Must look at location of topographical features relative to source and receiver to determine importance (i.e. small berm 1km away from source and 1km away from receiver will make negligible impact).

Grass

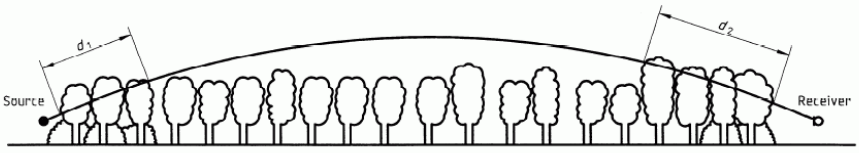
- Can be an effective absorber due to large area covered
- Only effective at low height above ground. Does not affect sound transmitted direct from source to receiver if there is line of sight.
- Typically less absorption than atmospheric absorption when there is line of sight.
- Approximate rule of thumb based on empirical data is:

$$A_g = 18\log_{10}(f) - 31 \qquad (dB/100m)$$

Where: A_g is the absorption amount

Trees

- Provide absorption due to foliage
- Deciduous trees are essentially ineffective in the winter
- Absorption depends heavily on density and height of trees
- No data found on absorption of various kinds of trees
- Large spans of trees are required to obtain even minor amounts of sound reduction
- In many cases, trees can provide an effective visual barrier, even if the noise attenuation is negligible.



NOTE — $d_f = d_1 + d_2$

For calculating d_1 and d_2, the curved path radius may be assumed to be 5 km.

Figure A.1 — Attenuation due to propagation through foliage increases linearly with propagation distance d_f through the foliage

Table A.1 — Attenuation of an octave band of noise due to propagation a distance d_f through dense foliage

Propagation distance d_f	Nominal midband frequency Hz							
m	63	125	250	500	1 000	2 000	4 000	8 000
	Attenuation, dB:							
$10 \leq d_f \leq 20$	0	0	1	1	1	1	2	3
	Attenuation, dB/m:							
$20 \leq d_f \leq 200$	0,02	0,03	0,04	0,05	0,06	0,08	0,09	0,12

Tree/Foliage attenuation from ISO 9613-2:1996

Bodies of Water

- Large bodies of water can provide the opposite effect to grass and trees.
- Reflections caused by small incidence angles (grazing) can result in larger sound levels at great distances (increased reflectivity, Q).
- Typically air temperatures are warmer high aloft since air temperatures near water surface tend to be more constant. Result is a high probability of temperature inversion.
- Sound levels can “carry” much further.

Snow

- Covers the ground for approximately 1/2 of the year in northern climates.
- Can act as an absorber or reflector (and varying degrees in between).
- Freshly fallen snow can be quite absorptive.
- Snow which has been sitting for a while and hard packed due to wind can be quite reflective.
- Falling snow can be more absorptive than rain, but does not tend to produce its own noise.
- Snow can cover grass which might have provided some means of absorption.
- Typically sound propagates with less impedance in winter due to hard snow on ground and no foliage on trees/shrubs.

Appendix II. SOUND LEVELS OF FAMILIAR NOISE SOURCES

Used with Permission Obtained from the Alberta Energy Regulator Directive 038 (2007)

Source[1]	Sound Level (dBA)
Bedroom of a country home	30
Soft whisper at 1.5 m	30
Quiet office or living room	40
Moderate rainfall	50
Inside average urban home	50
Quiet street	50
Normal conversation at 1 m	60
Noisy office	60
Noisy restaurant	70
Highway traffic at 15 m	75
Loud singing at 1 m	75
Tractor at 15 m	78-95
Busy traffic intersection	80
Electric typewriter	80
Bus or heavy truck at 15 m	88-94
Jackhammer	88-98
Loud shout	90
Freight train at 15 m	95
Modified motorcycle	95
Jet taking off at 600 m	100
Amplified rock music	110
Jet taking off at 60 m	120
Air-raid siren	130

[1] Cottrell, Tom, 1980, *Noise in Alberta*, Table 1, p.8, ECA80 - 16/1B4 (Edmonton: Environment Council of Alberta).

SOUND LEVELS GENERATED BY COMMON APPLIANCES

Used with Permission Obtained from the Alberta Energy Regulator Directive 038 (2007)

Source[1]	Sound level at 3 feet (dBA)
Freezer	38-45
Refrigerator	34-53
Electric heater	47
Hair clipper	50
Electric toothbrush	48-57
Humidifier	41-54
Clothes dryer	51-65
Air conditioner	50-67
Electric shaver	47-68
Water faucet	62
Hair dryer	58-64
Clothes washer	48-73
Dishwasher	59-71
Electric can opener	60-70
Food mixer	59-75
Electric knife	65-75
Electric knife sharpener	72
Sewing machine	70-74
Vacuum cleaner	65-80
Food blender	65-85
Coffee mill	75-79
Food waste disposer	69-90
Edger and trimmer	81
Home shop tools	64-95
Hedge clippers	85
Electric lawn mower	80-90

[1] Reif, Z. F., and Vermeulen, P. J., 1979, "Noise from domestic appliances, construction, and industry," Table 1, p.166, in Jones, H. W., ed., *Noise in the Human Environment*, vol. 2, ECA79-SP/1 (Edmonton: Environment Council of Alberta).

Appendix III. NOISE MODELING PARAMETERS

Enhance Compressor Station – Octave Band Sound Power Levels (Re 10^{-12} Watts, un-mitigated)

Item	Qty	Source Height (m)	SWL (dBA)	32 Hz	63 Hz	125 Hz	250 Hz	500 Hz	1 kHz	2 kHz	4 kHz	8 kHz
Large Unmitigated Compressor	2	4	100.5	112.0	107.0	104.0	99.0	99.0	96.0	90.0	84.0	77.0
Large Mitigated Compressor	1	4	97.8	105	105	108	101	95	89	83	79	69

Project Related - Octave Band Sound Power Levels (Re 10^{-12} Watts, un-mitigated)

Item	Qty	Source Height (m)	SWL (dBA)	32 Hz	63 Hz	125 Hz	250 Hz	500 Hz	1 kHz	2 kHz	4 kHz	8 kHz
MWM MGM TCG 3020 V20 2.2 MW	9	2.0	135.4	123.0	130.0	143.0	133.0	131.0	129.0	128.0	125.0	121.0
Data Centre Building Fan (each)	5	1.5	92.7	93.5	96.5	96.5	93.5	90.5	86.5	83.5	80.5	72.5
Data Centre Building Transformer (each)	5	1.5	85.8	82.4	88.4	90.4	85.4	85.4	79.4	74.4	69.4	62.4

Booster Building Attenuation

	31.5 Hz	63 Hz	125 Hz	250 Hz	500 Hz	1 kHz	2 kHz	4 kHz	8 kHz
Hospital Plus Silencer	8	15	38	43	41	39	39	40	41

Noise Modeling Parameters

Parameter	Value
Modeling Software	CADNA/A (Version 2025 MR1, build: 211.5558)
Standard Followed	ISO 9613-2
Ground Sound Absorption Coefficient	0.7
Wind Speed	1 - 5 m/s (3.6 - 18 km/hr)
Wind Direction	Downwind from all sources to all receptors
Temperature	10 °C
Humidity	70%
Topography	Digital Terrain Model Contours obtained from AltaLis

Appendix IV. PERMISSIBLE SOUND LEVEL DETERMINATION

Permissible Sound Levels for Residential and 1,500 m Theoretical Receptors

Basic Sound Level

	Dwelling Density (Per Quarter Section of Land)						Night-Time	Day-Time
Proximity to Transportation	1 - 8 Dwellings	9 - 160 Dwellings	161 to 400 Dwellings	400 to 1,000 Dwellings	>1,000 Dwellings	>1,000 Dwellings		
Category 1	40	43	46 dBA	48 dBA	53 dBA	53 dBA	40	40
Category 2	45	48	51 dBA	51 dBA	53 dBA	53 dBA		
Category 3	50	53	56 dBA	56 dBA	56 dBA	56 dBA		
Basic Sound Level (dBA)							40	40

Time of Day Adjustment

Time of Day	Adjustment (dBA)		
Night-time adjustment for hours 22:00 - 07:00	0	0	n/a
Day-time adjustment for hours 07:00 - 22:00	10	n/a	10
Time of day adjustment (dBA)		0	10

Class A Adjustments

Class	Reason for Adjustment	Adjustment (dBA)		
A1	Seasonal Adjustment (Winter)	0 to +5	0	0
A2	Ambient Monitoring Adjustment	-10 to +10	0	0
Sum of A1 and A2 cannot exceed maximum of 10 dBA Leq				
Class A Adjustment (dBA)			0	0

Class B Adjustments

Class	Duration of Activity	Adjustment (dBA)		
B1	≤ 1 Day	15	0	0
B2	≤ 7 Days	10	0	0
B3	≤ 60 Days	5	0	0
B4	> 60 Days	0	0	0
Can only apply one of B1, B2, B3, or B4				
Class B Adjustment (dBA)			0	0

Total Permissible Sound Level (PSL) [dBA]	40	50

Appendix V NOISE IMPACT ASSESSMENT

Licensee: **Armada Energy**

Facility name: **Power Generation & Data Facility** Type: **Power Generation & Data Processing Site**

Legal location: **08-16-040-24 W4M**

Contact: **Steven Feng** Email: **steven.feng@armada-nowlit.com**

1. Permissible Sound Level (PSL) Determination (*AUC Rule 012,* Section 2)

(Note that the PSL for a pre-1988 facility undergoing modifications is the equivalent noise level (L_{eq}) that currently exists at the dwelling if no prior complaint exists and the current sound level L_{eq} exceeds the calculated PSL from Section 2.1.)

Complete the following for the most impacted dwelling(s) or at a distance of 1.5 km where there are no dwellings:

Dwelling Distance from facility	Dwelling Direction from facility	BSL (dBA)	Daytime adjustment (dBA)	Nighttime PSL (dBA)	Daytime PSL(dBA)
(R-01) 970 m	**North**	**40**	**10**	**40**	**50**

2. Sound Source Identification

For the new and existing equipment, identify major sources of noise from the facility, their associated sound power level (PWL) or sound pressure level (SPL).

New & Existing Equipment Noise Sources (include make and model, power rating)	Predicted X PWL (dBA) / X SPL (dBA)	OR	Measured X PWL (dBA) / X SPL (dBA)	Data source (Vendor Measurement, Theoretical, etc.)	Distance SPL measured from the noise source (m)
Provided in Appendix III				**Measurements / Calculations**	

Provide a Tentative Schedule and timing for the operation, maintenance, and testing of the equipment

Construction of the station to start in Q2 or Q3 2026.

3. Normal Operating Conditions

When using manufacturer's data for expected performance, it may be necessary to modify the data to account for actual operating conditions (for example, indicate conditions such as operating with window/doors open or closed). Describe any considerations and assumptions used in conducting engineering estimates:

Equipment assumed to be operating at all times at maximum capacity

4. Modelling Parameters

If modelling was conducted, identify the parameters used (see Section 3.2):

Ground absorption 0.7, Temperature 10^{0}C, Relative Humidity 70%, all receptors downwind, Following ISO 9613

5. Predicted Sound Level/Compliance Determination

Identify the predicted overall (cumulative) sound level at the nearest of most impacted residence. Typically, only the nighttime sound level is necessary, as levels do not often change from daytime to nighttime. However, if there are differences between day and night operations, both levels must be calculated.

Predicted sound level to the nearest or most impacted residence from new facility (including any existing facilities):

R-01 (970 m)

Modeled L_{eq}-Night = **30.0 dBA,** ASL = **35.0 dBA**, Overall L_{eq}-Night = **36.2 dBA,** PSL-Night: **40 dBA**

Is the predicted sound level less than the permissible sound level? **YES** If **YES**, go to number 7

Is the predicted sound level less than the permissible sound level by a margin of three dBA? **NO**
If No, conduct a detailed NIA as per Section 3 of AUC Rule 012.

6. Supply any other relevant information you want to provide to the AUC. Submit additional pages if required

N/A

7. If the nighttime permissible sound level is higher than 40 dBA L_{eq}, provide supplementary information to support the use of such permissible sound level.

NIA Attached

8. Explain what measures have been taken to address construction noise.

Advising nearby residents of significant noise sources and appropriately scheduling
Mufflers on all internal combustion engines
Taking advantage of acoustical screening
Limiting vehicle access during night-time

9. Acoustical practitioner's information (See Section 3.2 (12)):

Company: **ACI Acoustical Consultants Inc.**
Name: **Patrick Froment, B.Sc., B.Ed., P.L.(Eng.)**
Experience: **- Acoustical Consultant since 2007**
- Hundreds of Noise Impact Assessments
- Responsible Member with APEGA

Title: **Director** Telephone: **(780) 499-1591** Date: **February 10, 2026**

Appendix V: Environmental Protection Plan

ENVIRONMENTAL PROTECTION PLAN (EPP)

CLIVE NATURAL GAS–FIRED POWER GENERATION FACILITY – 19.8 MW

Prepared for
Armada Nowlit Energy Ltd.

ANE Armada Nowlit

Prepared by
VL Energy Ltd.

VL ENERGY

https://vlenergy.ca/

Table of Contents

1.0 Purpose, Scope, and Application

This Environmental Protection Plan (EPP) defines the environmental requirements, controls, accountabilities, and verification measures for the proposed Clive Facility. It applies to planning, site preparation, construction, commissioning, operation, maintenance, decommissioning, and reclamation.

The EPP is intended to function as a field-implementable control document. It establishes minimum environmental expectations without replacing final engineering, the site-specific ERP, the Fire Safety Plan, the final Erosion and Sediment Control (ESC) Plan, the final Drainage and Stormwater Management Plan, or approval-specific monitoring plans.

1.1 Objectives

- Prevent or minimize adverse effects to air, land, surface water, groundwater, wildlife, adjacent properties, and community receptors.
- Keep all work within the approved disturbance footprint and protect identified environmental constraints and existing drainage functions.
- Ensure environmental controls are incorporated into contractor scopes, issued drawings, operating procedures, inspections, and corrective actions.
- Establish clear stop-work authority, notification requirements, and records sufficient to demonstrate due diligence and compliance.
- Provide a management-of-change process so that equipment, layout, access, drainage, or operating changes do not invalidate supporting technical studies.

2.0 Project Description and Basis of Design

2.1 Project Description

Armada Nowlit Energy Ltd. proposes to construct and operate an integrated natural gas-fired power generation and modular data processing facility at LSD 08-16-040-24 W4M in Lacombe County, Alberta. The Project is planned as a compact, secured, behind-the-fence facility.

The facility will comprise nine natural gas-fired generator sets, each rated at approximately 2.2 MW, for a combined gross installed capacity of approximately 19.8 MW. Associated equipment includes selective catalytic reduction (SCR) systems, modular data processing containers, closed-loop liquid-cooling systems, electricity distribution systems, natural gas supply connection, internal access, fencing, and ancillary site services.

All electricity generated by the Project is intended to be consumed by the on-site data processing infrastructure. No export to the Alberta Interconnected Electric System and no supply to off-site customers are proposed under the current Project description.

2.2 Environmental Setting

The Project footprint is located within an actively cultivated agricultural landscape. Desktop information indicates no mapped wetland or defined watercourse within the proposed disturbance footprint. A mapped wetland feature is located east of the Project boundary, reported in the current desktop ESA as approximately 130 m from the facility footprint.

Final grading and stormwater design must preserve existing catchment contribution to the eastern wetland where practicable or provide equivalent retention, infiltration, dispersion, or other mitigation

accepted by the applicable reviewers. The design must not concentrate runoff at the southeast boundary or create adverse drainage effects on adjacent lands or road allowances.

3.0 Organization, Responsibilities, and Competency

Table 1: Organization, Responsibilities, and Competency

Role	Minimum Environmental Responsibilities
Project / Site Manager	Accountable for implementation, resources, stop-work decisions, contractor compliance, and escalation to senior management.
Environmental Lead	Owns the EPP, Approval and Commitment Register, inspections, technical review, incident reporting support, and document revisions.
Construction Manager / Prime Contractor	Implements approved controls, schedules inspections, corrects deficiencies, maintains field records, and controls subcontractors.
Environmental Monitor	Completes risk-based and event-based inspections, verifies controls, documents non-conformance, and has authority to stop environmentally unsafe work.
Operations and Maintenance Lead	Maintains equipment, containment, SCR, acoustic controls, waste areas, operating records, and approval-specific monitoring.
Regulatory / Community Lead	Maintains agency and stakeholder communications, complaints, notices, commitments, and controlled contact information.
Qualified Professionals	Review matters within their competence, including drainage, ESC, wildlife, soils, noise, air, heritage, and reclamation.
All Personnel	Attend orientation, comply with controls, report incidents and defects, and exercise stop-work authority where an imminent risk exists.

One person may perform more than one role where competency, authority, availability, and absence of conflicts are documented. Personal contact details and on-call assignments will be maintained in the controlled ERP and contact register rather than in the public EPP.

3.1 Stop-Work Authority

Any worker may stop work when an activity presents an imminent risk to people, the environment, an environmental constraint, an approval condition, or the integrity of a required control. Work may resume only after the condition is assessed, corrective measures are implemented, and the authorized person responsible documents release of the stop-work.

3.2 Training and Orientation

- Project environmental constraints, approved limits of disturbance, and no-go areas.
- Spill prevention, initial response, reporting, and protection of drainage pathways.
- Waste segregation, hazardous-material handling, SDS access, and TDG responsibilities.
- ESC, soil handling, weed prevention, wildlife encounters, and chance finds.
- Traffic, lighting, dust, noise, complaint, and housekeeping requirements.

- Activity-specific competency for sampling, herbicide use, equipment transfer, ground disturbance, or other regulated work.

3.3 Inspections, Corrective Actions, and Records

Inspection frequency will be risk-based and must meet the applicable approval and supporting plan. Deficiencies will be recorded with a description, risk rating, interim control, responsible person, target date, corrective action, and effectiveness verification. Conditions presenting an immediate release or off-site migration risk will be corrected or isolated before work continues.

Records will be retained for the period required by legislation or approval. Where no period is prescribed, environmental compliance records will be retained for at least seven years. Approval-critical monitoring, incident, and closure records will be retained for the Project life and applicable post-closure period.

4.0 Pre-Construction Environmental Release Gate

No ground disturbance may begin until the Project Manager and Environmental Lead have verified the following items, as applicable to the work scope:

- Municipal and provincial approvals required for the work are issued and their conditions are entered in the Approval and Commitment Register.
- A final non-preliminary survey, rezoning plan, site plan, equipment layout, access design, and pipeline crossing details are available.
- The field-verified ESA is complete and its wetland, wildlife, drainage, setback, and mitigation requirements are incorporated into drawings and work plans.
- Final grading and stormwater calculations demonstrate suitable minor and major drainage performance, including the applicable County design events.
- The site-specific ESC drawing identifies flow directions, stabilized entrance, stockpiles, perimeter controls, dewatering locations, wetland constraint, pipeline crossing controls, and inspection points.
- The NIA and air assessment have been reconciled with final vendor data, including generator, stack, silencer, cooling fan, transformer, and enclosure data.
- The site-specific ERP, Fire Safety Plan, emergency access plan, and responder coordination requirements are complete for the work phase.
- Historical Resources Act requirements, utility locates, ground-disturbance permits, crossing agreements, and proximity consents are complete.
- Contractor environmental plans, competent personnel, spill resources, waste services, and records systems are mobilized.

5.0 Construction Environmental Management

5.1 Limits of Disturbance and Housekeeping

All work, laydown, parking, stockpiles, temporary access, and material storage will remain within approved areas. Environmental constraints, pipeline rights-of-way, drainage pathways, and no-go areas will be staked or otherwise clearly identified before work begins. Unapproved expansion of the disturbance footprint is prohibited.

- Keep work areas orderly and prevent windblown debris.

- Cover or secure materials that could migrate off site.
- Inspect open excavations before work and provide escape measures where wildlife entrapment is credible.
- Restore temporary disturbed areas promptly when they are no longer required.

5.2 Equipment Cleaning and Weed Prevention

Soil-disturbing equipment will arrive clean and free of soil, plant material, and fluid leaks. Equipment arriving from a known weed-infested area will be cleaned before mobilization. Routine washing will occur off site where practicable. Any on-site cleaning required for environmental protection will occur in a designated contained area; wash water will be collected and managed as potentially contaminated water. Wash water may not be discharged to soil, roadside drainage, or the eastern wetland catchment.

5.3 Dust and Track-Out Control

- Apply water or an approved suppressant at a rate that controls dust without creating runoff, ponding, or contaminated water.
- Reduce vehicle speeds and modify work during dry or windy conditions when controls are ineffective.
- Cover trucks carrying fine materials and stabilize inactive stockpiles.
- Remove tracked soil or gravel from public roads promptly using methods accepted by Lacombe County; do not wash sediment into roadside drainage.
- Investigate dust complaints and document corrective action.

5.4 Traffic, Access, and Pipeline Crossings

Construction traffic, heavy-haul routing, oversize or overweight permitting, road-ban compliance, access improvements, and road-cleanliness measures will be implemented in accordance with the final traffic document, County conditions, road-use agreements, and applicable permits.

- Use the approved single access point and designated internal routes.
- Schedule deliveries to avoid unsafe queuing or obstruction of Range Road 243.
- Keep parking, loading, and staging within authorized areas.
- Use traffic control personnel and plans where required for a specific movement.
- Verify pipeline locations using approved non-destructive methods and comply with crossing agreements before disturbing an identified crossing area.
- Use non-intrusive ESC controls in pipeline crossing zones unless excavation is authorized by the pipeline operator.

5.5 Lighting and Community Protection

Exterior lighting will comply with County requirements for dark-sky and Crime Prevention Through Environmental Design principles. Fixtures will be full-cutoff or equivalently shielded, directed downward and inward, and limited to the minimum illumination required for safe work and security. Temporary lights will be switched off when no longer required. Light spill beyond the Project boundary and direct glare toward residences or road users will be avoided.

5.6 Winter, Snow, and Severe Weather

- Manage snow so that snowbanks do not block drainage or create uncontrolled meltwater pathways; notch temporary snow berms where required by the drainage plan.

- Segregate snow suspected of contamination and manage meltwater as contaminated water.
- Inspect ESC and drainage controls during thaw and snowmelt.
- Suspend work where precipitation, saturated soils, wind, wildfire, or severe weather makes environmental controls ineffective.

6.0 Hazardous Materials, Waste, and Wastewater

6.1 Inventory, SDS, and Compatibility

Before a hazardous product is brought to site, the responsible supervisor will confirm its need, classification, storage location, compatibility, SDS, handling procedure, spill response method, and disposal route. The Hazardous Materials Inventory will identify bulk storage and maximum planned quantities. Normal day-to-day consumption will be reconciled through the site inventory system.

Containers will be labelled and compatible materials segregated. SDS information will be readily accessible to workers and responders. Dangerous goods will be classified, documented, marked, handled, and transported by trained persons in accordance with applicable TDG requirements.

6.2 Storage and Secondary Containment

Fuel, lubricants, used oil, coolant, urea solution, batteries, chemicals, and hazardous wastes will be stored in designated, stable, secured areas outside confirmed wetland boundaries, environmental buffers, and drainage pathways. Secondary containment will be designed to meet applicable approval, fire code, equipment, and regulatory requirements, accounting for the largest container, precipitation, and operational freeboard. This EPP does not establish a generic containment percentage in place of final engineering.

- Protect containment from damage, precipitation accumulation, and unauthorized drainage.
- Keep drains closed or locked where a drain is present; inspect retained water before managed removal.
- Use level indication and overfill protection appropriate to the bulk system.
- Supervise bulk transfers, secure connections, use drip containment, and keep spill materials immediately available.
- Inspect storage, hoses, valves, tanks, and containment at a frequency based on use and risk, and before and after bulk delivery.

6.3 Waste Management

Waste will be minimized using the hierarchy of reduce, reuse, recycle, recover, and dispose. Expected streams include used oil and filters, oily rags and absorbents, coolant, batteries, spent catalyst, electronic equipment, scrap metal, packaging, domestic waste, and sanitary waste. Waste will be characterized, segregated, labelled, protected from weather, and removed before designated storage capacity is exceeded.

Authorized carriers and approved receiving facilities will be used. Manifests, shipping records, disposal certificates, and waste inventories will be retained for the applicable regulatory period.

6.4 Water and Wastewater Management

No routine discharge of process wastewater or contaminated stormwater to the environment is proposed. Water suspected of contamination will be contained, characterized, and transported to an approved receiving facility or managed under an applicable approval and written procedure.

- Manage sanitary sewage using approved portable facilities or an approved private sewage system, with removal by an authorized service provider.
- Maintain closed-loop coolant systems and contain leaks, drained coolant, and maintenance fluids.
- Do not discharge urea solution, equipment wash water, oily water, floor-drain contents, or contaminated snowmelt to soil or drainage.
- Keep clean stormwater separate from hazardous-material handling and waste areas through final grading and operating controls.
- Intentional discharge of contaminated water is prohibited unless specifically authorized. An unplanned release or overflow is an environmental incident.

7.0 Surface Water, Drainage, and ESC

7.1 Drainage Design Principles

Compacted gravel, access surfaces, equipment pads, and roofed or covered infrastructure will reduce localized infiltration and may increase runoff. The Project therefore relies on final grading, flow spreading, infiltration, shallow storage, stable conveyance, and controlled overflow rather than an assumption of unchanged post-development runoff.

- Direct runoff away from equipment without transferring unreasonable risk to adjacent land, road allowances, or the wetland catchment.
- Maintain eastern wetland catchment contribution where practicable or provide equivalent accepted mitigation.
- Avoid a new concentrated discharge at the southeast access or lease boundary.
- Keep berms, swales, culverts, stockpiles, snowbanks, and landscaping from blocking existing drainage unless addressed in the final drainage design.
- Provide stable emergency overflow routes that do not cause erosion, flooding, or uncontrolled off-site sediment transport.

7.2 Discharge and Dewatering

No routine point-source off-site stormwater discharge is proposed. Temporary dewatering will be minimized and contained where feasible. Where a release is authorized, water will be visually assessed and sampled if required, and the release will use filtration, energy dissipation, and stable vegetated or engineered receiving areas without causing erosion, sedimentation, or wetland impact. Suspected contaminated water will not be released.

7.3 ESC Implementation and Inspection

The final ESC Plan and site-specific ESC drawing govern BMP selection, location, installation, and removal. Controls will be installed before the related ground disturbance and maintained until the contributing area is stabilized.

- Inspect weekly during active construction.
- Inspect during significant precipitation or snowmelt events when safe and practical.
- Inspect within 24 hours after a rainfall event of 10 mm or greater in 24 hours.
- Increase frequency where active discharge, exposed erodible soil, dewatering, steep temporary grades, winter thaw, or repeated deficiencies increase risk.

- Repair damaged, bypassed, sediment-loaded, undermined, or overtopped controls promptly.
- Treat off-site sediment transport as an environmental incident and recover deposited material where safe and authorized.

Inspection records will include rainfall or snowmelt conditions, photographs, BMP condition, sediment accumulation, flow evidence, deficiencies, responsible person, correction date, and effectiveness verification.

8.0 Wildlife, Wetland, and Heritage Protection

8.1 Field Verification and Wildlife Protection

Desktop databases did not identify confirmed site-specific Bald Eagle, Sharp-tailed Grouse, rare plant, or other species-at-risk records within the Project footprint. Absence of a database record does not confirm absence of a species or habitat feature. Government screening layers identify broad Bald Eagle and Sharp-tailed Grouse sensitivities that require field verification.

Before ground disturbance, a qualified wildlife professional will complete the field verification required for the season, habitat, and proposed work. If an active nest, lek, sensitive wildlife feature, or other constraint is identified, the professional will establish an appropriate species-, activity-, timing-, and site-specific setback, timing restriction, or other mitigation in accordance with applicable regulatory guidance. The EPP does not impose generic fixed buffers in place of that professional determination.

- Limit disturbance to approved areas and avoid unnecessary vegetation clearing.
- Inspect open excavations, stored pipe, containers, and equipment before use or backfill.
- Secure waste and food; prohibit feeding or harassment of wildlife.
- Direct lighting downward and minimize unnecessary night lighting.
- Reduce speed and stop safely when wildlife is present in the active work area.
- Pause work in the immediate area of a nest, lek, injured animal, or sensitive feature and obtain qualified direction before resuming.
- Allow wildlife to leave on its own; do not handle wildlife unless authorized.

8.2 Wetland and Unmapped Water Features

No grading, filling, excavation, culverting, drainage modification, material placement, or other disturbance may occur within a confirmed wetland unless the applicable Water Act, Alberta Wetland Policy, and approval requirements have been addressed. If an unmapped wetland, seep, saturated depression, or drainage feature is encountered, work in the immediate area will stop for qualified review.

9.0 Community, Lighting, and Complaint Management

The Project will maintain a documented complaint process for noise, light, dust, traffic, odour, smoke, drainage, or other environmental concerns. Complaints will be acknowledged promptly and investigated in proportion to their risk and urgency.

- Record complainant contact information where voluntarily provided, date, time, location, concern, weather, and observed conditions.
- Review operating status, deliveries, construction activities, alarms, maintenance, monitoring data, and other credible sources.
- Implement interim control where a continuing impact is reasonably suspected.

- Use a qualified professional where technical measurement or model review is needed.
- Document findings, corrective action, follow-up, and closure communication.
- Report complaints to regulators or the County where an approval requires reporting.

Public, municipal, landowner, and Indigenous engagement will be completed in accordance with applicable rezoning, development-permit, AUC, Crown-consultation, and Project-specific requirements. This EPP does not create honoraria, procurement, mediation, or community-monitoring commitments unless separately authorized.

10.0 Environmental Monitoring and Inspection Matrix

The matrix below establishes the EPP minimum. Approval, final ESC Plan, qualified-professional recommendation, incident, complaint, or material change may require additional monitoring.

Table 2: Environmental Monitoring and Inspection Matrix

Element	Phase / Frequency	Responsible Role	Trigger and Response
Equipment leaks and drip control	Daily visual check during active construction and routine operation rounds	Operator / Contractor	Isolate, repair, clean up, and assess reporting.
Hazardous-material and waste areas	Weekly and before/after bulk transfer; more often for active high-risk work	Site Supervisor	Correct storage, labelling, containment, capacity, or documentation.
ESC and drainage	Weekly during active construction; during significant precipitation or snowmelt; within 24 h after at least 10 mm rain in 24 h	Environmental Monitor	Repair or augment BMPs; stabilize source; respond to off-site sediment.
Soil stockpiles	Weekly during active earthworks and after significant events	Construction Supervisor	Correct erosion, mixing, drainage obstruction, sloughing, or weeds.
Wildlife / nests / leks	Before disturbance as required for season and habitat; ongoing observation	Qualified Professional / All Personnel	Pause work and establish site-specific mitigation.
Weeds	Monthly in first growing season; at least annually thereafter	Environmental Lead / Authorized Applicator	Treat, reseed, and verify control effectiveness.
Air emissions	As required by approval and accepted monitoring plan	Operations Lead	Investigate alarm or deviation; repair; assess notification and testing.
Noise	As required by approval, substantiated complaint, or material change	Operations Lead / Acoustic Professional	Investigate and restore the NIA design basis; complete verification.
Lighting	At commissioning, after fixture changes, and upon complaint	Site Manager	Re-aim, shield, dim, repair, or revise controls.
Reclamation	At least annually for two growing seasons and until success	Qualified Professional	Repair erosion, manage weeds, reseed, or amend soil as required.

Appendix VI: Environmental Evaluation

ENVIRONMENTAL EVALUATION

CLIVE NATURAL GAS FIRED POWER GENERATION FACILITY

Prepared for
Armada Nowlit Energy Ltd.

ANE Armada Nowlit

Prepared by
VL Energy Ltd.

VL ENERGY

VL ENERGY
BRINGING EFFIENCY AND SUSTAINABILITY TO THE WORLD

VL Energy Ltd.
2720-140 4 Ave SW, Calgary T2P 3N3
https://vlenergy.ca/

June 5, 2026

Dear Armada Nowlit Team,

Please find attached the Environmental Evaluation Report prepared for the proposed Clive Power Plant.

This report is being transmitted for your review and records in support of the project's environmental due diligence, permitting, and regulatory planning process. The assessment summarizes the environmental considerations reviewed for the subject property, including available site information, surrounding land use, potential environmental constraints, and relevant project-specific factors.

Based on the information reviewed, the Environmental Evaluation provides supporting documentation to assist with responsible project development and future regulatory submissions.

VL Energy has prepared this package to support a clear, professional, and well-documented project review process. We trust the attached report is satisfactory at this stage.

Please contact us if you have any questions or require additional information.

Thank you,

Ling Bai, EP
Environmental Professional
Emissionsight

LingBai


ENVIRONMENTAL CAREERS ORGANIZATION OF CANADA
Ling Bai
Environmental Professional

ENVIRONMENTAL PROFESSIONAL

eco canada

Alicia Wang, EPt
Project Coordinator
Emissionsight


ENVIRONMENTAL CAREERS ORGANIZATION OF CANADA
Alicia Wang
Environmental Professional in training

Table of Contents

1.0 Project Summary and Regulatory Context

Armada Nowlit Energy Ltd. proposes to construct and operate a 19.8 MW natural gas-fired power generation facility and associated modular data-processing facility at LSD 8-16-040-24 W4M in Lacombe County, Alberta. The Project includes nine enclosed generator sets, modular data-processing containers, electrical and cooling equipment, access, a gas supply connection and associated infrastructure within the proposed disturbance footprint. Electricity generated by the off-grid facility will be consumed on site.

This Desktop Environmental Evaluation was completed to support municipal planning, project design and regulatory review. It evaluates available environmental information relevant to the proposed footprint and surrounding area using government databases, mapping, aerial imagery, survey information, technical studies and the current project layout.

This report constitutes the Desktop Environmental Evaluation prepared for the current municipal planning and project-review stage. No physical site inspection, wetland delineation, wildlife survey, vegetation survey, soil sampling, groundwater investigation or intrusive investigation was completed as part of this scope. The conclusions are limited to the information available at the time of review and do not represent confirmation of surveyed environmental boundaries or subsurface conditions.

1.1 Desktop Review Methods and Limitations

The review considered the Alberta Government Wetland Inventory and merged wetland mapping; the Fish and Wildlife Internet Mapping Tool and FWMIS records; the Alberta Conservation Information Management System; AGRASID soil information; government wildlife sensitivity mapping; aerial imagery; municipal and land-use mapping; AER OneStop; AbaData; pipeline and infrastructure information; OPaC/Historical Resources screening; survey and project-layout information; and the supporting noise, air, drainage, erosion and sediment control, and environmental protection documents available for the Project.

Government databases and mapped layers are screening-level sources. Mapped boundaries may not coincide with surveyed environmental boundaries, and the absence of a mapped feature or database record is not proof that unmapped environmental feature is absent. Aerial-imagery interpretation and project-design information are likewise limited by image date, resolution and the design stage current at the time of review.

The assessment is suitable for desktop environmental screening and municipal planning. Construction must remain within the final approved footprint and comply with final survey, grading and drainage design, the Environmental Protection Plan (EPP), the Erosion and Sediment Control (ESC) Plan, applicable approvals and activity-specific environmental controls.

2.0 Location and Mapping Elements

Legal location: LSD 8-16-040-24 W4M

Existing approach coordinates (NAD83): Latitude 52°26'15.7" N; Longitude 113°23'15.6" W (52.437694, -113.387667)

Mapped elevation: approximately 908 m above sea level

The legal location, access and proposed equipment arrangement are shown on the project layout. Detailed construction control must use the final approved layout and survey.

Figure 1: Site layout

3.0 Site Setting and Surrounding Land Use

Available aerial imagery, land-use mapping and project information show the proposed footprint within cultivated agricultural land near Clive, Alberta. The proposed lease area has a history of agricultural use and is situated within a rural landscape that also contains existing oil and gas infrastructure, pipelines, access roads and utility rights-of-way.

Surrounding land uses include cultivated cropland, rural residences, shelterbelts and energy infrastructure. Project survey information identifies the Hamlet of Tees approximately 5.7 km northeast of the facility, the nearest identified residence approximately 1.0 km northeast (NW 15-40-24 W4M), and the nearest identified surface development approximately 260 m southeast (SW 15-40-24 W4M). These distances are project-planning information and must be confirmed through final survey and detailed design where relied upon for approvals.

The regional setting is characterized by agricultural fields, scattered farmsteads, treed shelterbelts and linear infrastructure typical of central Alberta.

Available terrain information, survey information and aerial imagery indicate gently undulating terrain with low local relief. Regional mapping places the site within the broader Parlby Creek drainage area.

Final grading must establish stable gravel pads and controlled positive drainage away from equipment while tying into the surrounding landform without causing unreasonable off-site effects. The design must avoid uncontrolled concentrated discharge, erosion and sediment transport and must protect mapped wetland features and associated drainage functions.

4.0 Wildlife and Species-at-Risk Evaluation

4.1 Wildlife Sensitivity Mapping and Regional Context

The wildlife review used FWMIS, the Fish and Wildlife Internet Mapping Tool, ACIMS, Government of Alberta wildlife sensitivity mapping, AbaData, aerial imagery and the proposed project layout. The reviewed databases did not identify a site-specific Bald Eagle, Sharp-tailed Grouse, rare plant or other species-at-risk occurrence within the proposed disturbance footprint.

Available imagery and project information show cultivated land within the footprint, but no physical habitat assessment was completed. Government sensitivity mapping identifies overlap with broad Bald Eagle sensitive range and Sharp-tailed Grouse lek sensitive range layers. These screening layers indicate regional planning sensitivity; they do not confirm an active nest, lek or occupied habitat within the footprint.

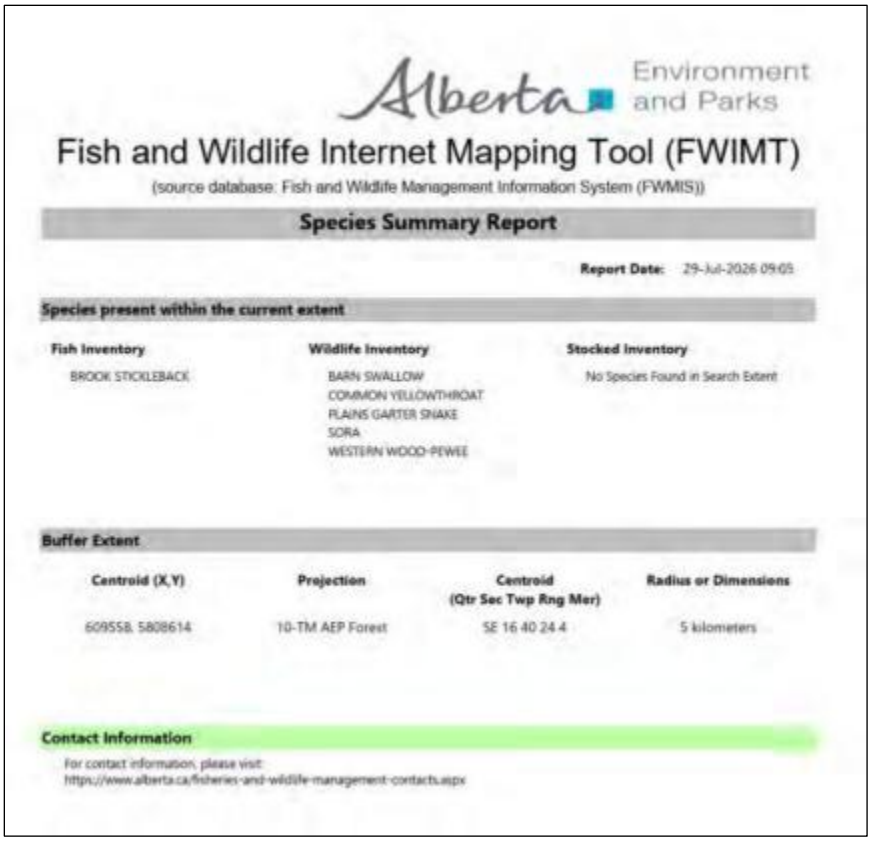
4.1.1 FWMIS and ACIMS Desktop Screening Results

A desktop review of the Fish and Wildlife Management Information System (FWMIS), accessed through the Fish and Wildlife Internet Mapping Tool, was completed using a 5-km search radius centred on SE 16-40-24 W4M. The search identified records for Brook Stickleback, Barn Swallow, Common Yellowthroat, Plains Garter Snake, Sora and Western Wood-Pewee within the broader search extent. These records represent regional observations and do not indicate that the species, their nests, breeding sites or critical habitat occur within the proposed Project disturbance footprint.

The Alberta Conservation Information Management System (ACIMS) search identified zero sensitive Element Occurrences and zero non-sensitive Element Occurrences within the reviewed search area. Accordingly, no documented rare plant, rare ecological community or other ACIMS-tracked sensitive ecological feature was identified within or immediately associated with the proposed Project footprint.

The proposed facility is located on previously disturbed cultivated agricultural land and does not involve the direct removal of native vegetation, mapped critical habitat or a documented sensitive ecological feature. Based on the desktop information reviewed, the Project is not expected to result in a significant adverse effect on wildlife, species at risk or sensitive ecological features, provided that disturbance remains within the approved footprint and the wildlife, vegetation-clearing and migratory-bird protection measures identified in this report are implemented.

The database results are screening-level information and do not confirm biological absence. If an active nest, sensitive wildlife feature or previously unidentified habitat feature is encountered during construction, work in the affected area will be stopped or adjusted until appropriate avoidance or mitigation measures have been established.



Alberta Environment and Parks

Fish and Wildlife Internet Mapping Tool (FWIMT)

(source database: Fish and Wildlife Management Information System (FWMIS))

Species Summary Report

Report Date: 29-Jul-2026 09:05

Species present within the current extent

Fish Inventory	Wildlife Inventory	Stocked Inventory
BROOK STICKLEBACK	BARN SWALLOW COMMON YELLOWTHROAT PLAINS GARTER SNAKE SORA WESTERN WOOD-PEWEE	No Species Found in Search Extent

Buffer Extent

Centroid (X,Y)	Projection	Centroid (Qtr Sec Twp Rng Mer)	Radius or Dimensions
609558, 5808614	10-TM AEP Forest	SE 16 40 24 4	5 kilometers

Contact Information

For contact information, please visit:
https://www.alberta.ca/fisheries-and-wildlife-management-contacts.aspx

Figure 2: Fish and Wildlife Internet Mapping Tool Report

Figure 3: ACIMS data search report

4.1.2 Bald Eagle and Sharp-tailed Grouse Sensitivity Mapping

AbaData wildlife sensitivity mapping shows the proposed facility within broad Bald Eagle and Sharp-tailed Grouse sensitivity layers. The mapping is appropriate for screening and mitigation planning but does not establish a project-specific wildlife setback or confirm an active feature.

Project implementation must therefore use activity-specific wildlife protection measures. If an active nest, lek or other sensitive feature is encountered or confirmed during construction planning or construction, work must be adjusted and any required setback or timing restriction established using applicable provincial guidance, approval conditions and qualified advice.

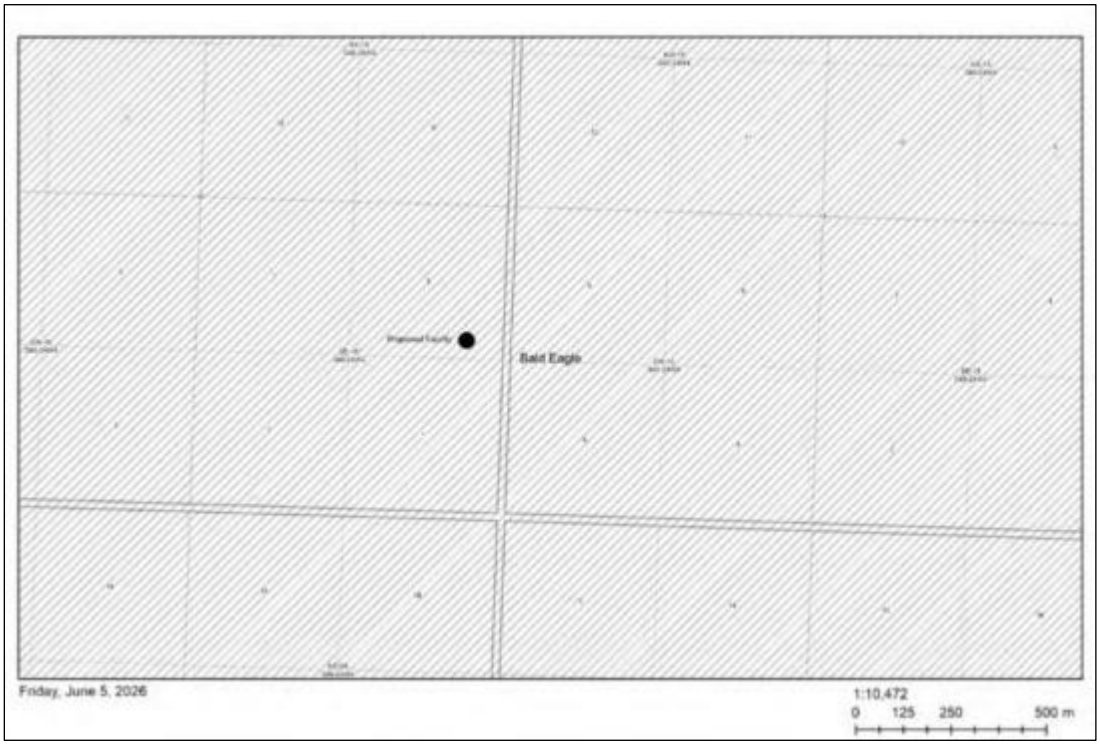


Figure 4: Bald Eagle sensitive range in relation to the proposed facility

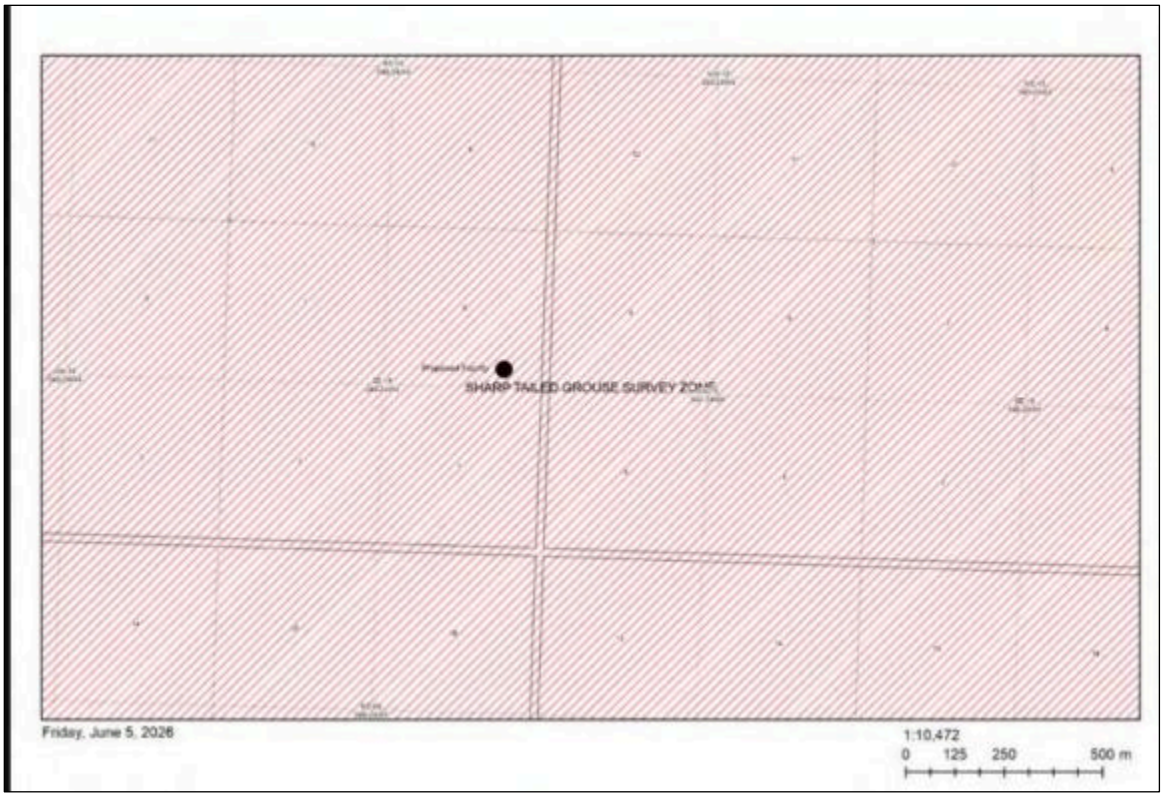


Figure 5: Sharp-tailed Grouse lek sensitive range in relation to the proposed facility

4.2 Pre-Construction Wildlife Protection Requirements

Before vegetation disturbance or construction during a regulated or sensitive wildlife period, the Project will determine whether an activity-specific nest or wildlife check is required under applicable legislation, regulatory guidance or approval conditions. Any required check will be completed by appropriately qualified personnel before the applicable activity begins.

If an active nest, lek or sensitive wildlife feature is encountered, work in the affected area must stop or be modified until appropriate avoidance measures, timing restrictions or a setback have been established in accordance with applicable requirements. Construction may resume only after the feature is no longer active or after qualified or regulatory direction permits work to proceed.

4.2.1 Migratory Bird and Nest Protection

Vegetation clearing should be scheduled outside sensitive nesting periods where practicable. Where clearing or ground disturbance is planned during a nesting period, applicable nest-protection requirements must be followed and any activity-specific check required by legislation, guidance or approval conditions must be completed before work begins.

An active nest must not be disturbed contrary to applicable legislation. Where an active nest is encountered, the Project must establish site-specific mitigation based on species, nest location, activity type, habitat conditions and current regulatory guidance.

4.3 Raptor and Sensitive Wildlife Setback Guidance

The desktop review did not identify a site-specific active raptor nest or Sharp-tailed Grouse lek within the proposed footprint. This finding is limited to the reviewed databases and mapping and does not confirm biological absence.

No unsupported project-specific buffer is assigned by this desktop evaluation. If an active raptor nest, lek or other sensitive feature is encountered or is subject to an approval condition, the required setback, timing restriction or construction adjustment must be established using current provincial guidance and appropriately qualified advice.

4.4 Wildlife Mitigation

1. Limit disturbance and unnecessary vegetation clearing to the final approved work areas and access routes.
2. Control vehicle speeds and require drivers to yield to wildlife.
3. Prohibit wildlife feeding, harassment and unauthorized firearms or pets on site.
4. Secure food, waste and other wildlife attractants in closed containers.
5. Direct required lighting downward, shield it and limit unnecessary nighttime lighting.
6. Inspect open excavations where appropriate and provide safe egress or cover when unattended.
7. Slow or stop work when wildlife occupies the active work area and allow the animal to leave without harassment.
8. Stop work where an active nest, lek or other sensitive feature may be affected and obtain qualified direction where required.
9. Document significant wildlife encounters, mitigation and any reportable incident in accordance with the EPP.

5.0 Soils and Pre-Disturbance Conditions

AGRASID and existing land-use information identify cultivated farmland and Orthic Black Chernozem soils associated with moderately coarse fluvial or glaciofluvial materials in the project area.

Pre-disturbance photographs, survey control and soil-handling records should be prepared as construction-management and reclamation documentation before soil disturbance.

5.1 Soil Salvage, Stockpiling and Erosion/Sediment Control

Topsoil and subsoil must be stripped and stored separately in designated, clearly identified stockpiles. The stripping depth and handling method must be established through the final soil-handling and reclamation plan and adjusted to actual construction conditions without implying a surveyed baseline depth in this report.

Soil handling should be avoided during excessively wet conditions where practicable. Stockpiles must be stabilized, protected from mixing and located so that runoff does not carry sediment off site or toward mapped wetland or drainage features. During reclamation, subsoil and topsoil must be replaced in sequence and the land restored in accordance with applicable reclamation requirements.

5.2 LSRS/Agricultural Suitability (Desktop)

AGRASID mapping places the site within Soil Polygon 13725 and identifies Orthic Black Chernozem soils in a hummocky landform with generally good Land Suitability Rating System capability for spring-seeded cereals, subject to mapped limitations associated with topography and moisture. This is a desktop soil-mapping interpretation and not a site-specific agricultural capability assessment.

Figure 6: AGRASID soil data

5.3 Clubroot and Salinity Risk (Desktop)

Lacombe County agricultural lands have recognized clubroot management requirements. Soil-bearing equipment must be inspected and cleaned as needed before entering or leaving the site to reduce soil- and weed-borne transfer. Where salinity indicators are encountered during construction, soil handling and drainage practices must be adjusted to avoid concentrating salts in reclaimed soils or adjacent lands.

6.0 Vegetation, Weeds and Wildlife

Available aerial imagery and land-use information indicate that the proposed footprint is within cultivated agricultural land. The desktop databases reviewed did not identify a site-specific rare plant or sensitive ecological-community record within the proposed footprint. Record absence does not confirm that rare plants or sensitive vegetation are absent, and no vegetation survey was completed.

A weed-management program must be implemented in accordance with Alberta's Weed Control Act and applicable Lacombe County requirements. Controls include clean-equipment practices, monitoring for regulated weeds during construction and early operation, prompt treatment by qualified or licensed personnel where required, and records of inspections and treatment.

6.1 Nesting and Sensitive Activity Periods

The broader agricultural landscape may be used seasonally by migratory birds, raptors and Sharp-tailed Grouse. The following controls are planning and implementation requirements and do not represent completion of a wildlife survey.

Table 1: Nesting and Sensitive Activity Periods

Seasonal consideration	Desktop constraint	Implementation requirement
Migratory bird nesting periods	No site-specific active nest record was identified in the databases reviewed.	Schedule vegetation clearing outside sensitive periods where practicable. If work occurs during a nesting period, follow applicable nest-protection requirements and complete an activity-specific check when required.
Sharp-tailed Grouse sensitive periods	The footprint overlaps a broad screening-level lek sensitivity layer; no site-specific active lek record was identified.	If an active lek is encountered or a regulatory condition applies, establish timing and setback measures using current provincial guidance and qualified advice.
Raptor nesting periods	The desktop review did not identify a site-specific active raptor nest within the footprint.	If an active nest is encountered or confirmed, stop or adjust the affected work and establish a species- and activity-specific setback using current guidance.

6.2 Construction Mitigation Measures

1. Determine whether an activity-specific wildlife or nest check is required based on construction timing, legislation, guidance and approval conditions.
2. Minimize the extent and duration of vegetation disturbance and keep equipment within approved work limits.
3. Direct and shield construction lighting and limit lighting to the area and duration needed for safety.
4. Instruct personnel not to approach, feed or harass wildlife and to report significant encounters.
5. Store waste and food in closed containers and remove waste regularly.

6. Apply a stop-work and qualified-review process where an active nest, lek or other sensitive feature may be affected.

6.3 Operation-Phase Wildlife Mitigation

During operation, exterior lighting must be minimized, directed downward and shielded. Vegetation within the developed footprint should be maintained to support erosion control without creating unnecessary attractants or conflicts with operating equipment. Equipment must be operated and maintained consistent with the completed Noise Impact Assessment. If sensitive wildlife use is observed in or immediately adjacent to the facility, affected activities must be adjusted and qualified or regulatory direction obtained where required.

6.4 Monitoring and Reporting

Table 2: Monitoring and Reporting

Monitoring element	Timing	Trigger/action
Activity-specific wildlife or nest check	Before applicable work when required by timing, legislation, guidance or approval conditions	Document the check and apply avoidance, timing or setback measures if an active feature is identified.
Construction wildlife observations	During routine construction inspections	Report significant observations; stop or adjust work if a sensitive feature or wildlife conflict is identified.
Post-construction implementation review	At or near commissioning	Confirm that wildlife controls, lighting and waste-management measures have been implemented.

Records of required checks, wildlife observations, mitigation and incidents must be retained in accordance with project document-control and approval requirements.

7.0 Wetlands and Watercourses

The Alberta Government Wetland Inventory, merged wetland mapping, aerial imagery and the current project layout do not identify a mapped wetland or mapped watercourse within the proposed facility disturbance footprint. Mapped wetland features occur in the surrounding area, including a feature east of the facility shown approximately 130 m from the footprint on the existing mapping.

The mapped wetland boundary is not a surveyed or physically delineated boundary. No wetland delineation or drainage inspection was completed, and the absence of a mapped feature within the footprint does not confirm the absence of an unmapped wetland, drainage pathway or seasonal surface-water condition.

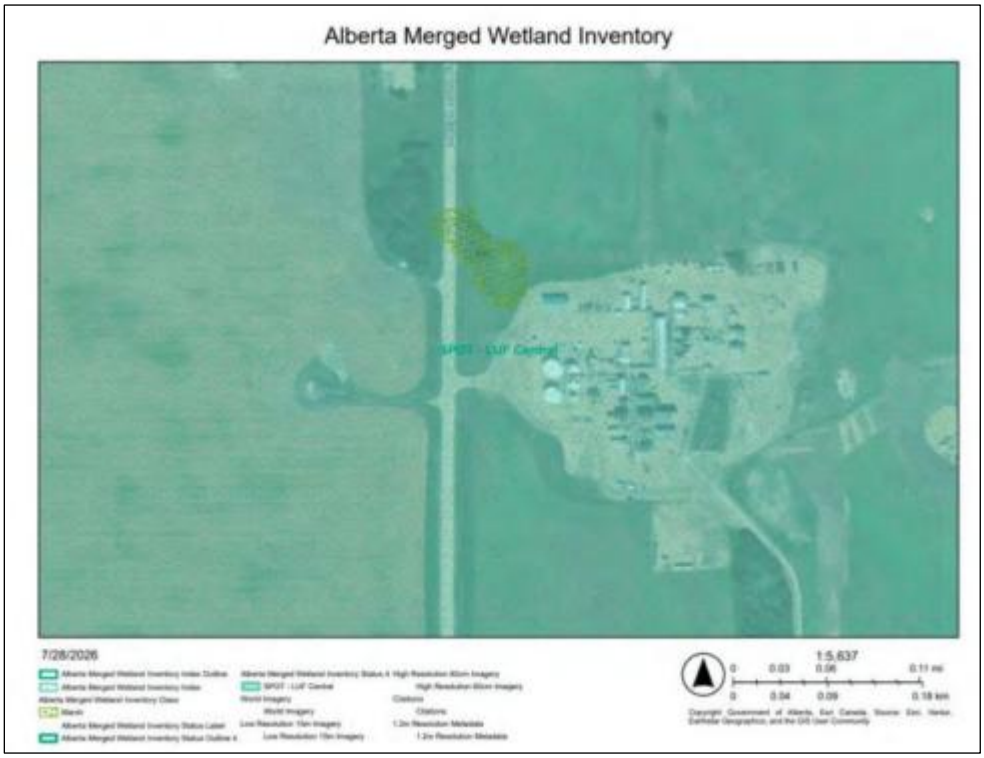


Figure 7: Alberta merged wetland search

7.1 Wetland Mitigation Commitments

1. Keep project disturbance within the final approved footprint.
2. Avoid direct disturbance to mapped wetland features.
3. Maintain controlled site drainage and avoid materially reducing, redirecting or concentrating flows in a manner that could adversely affect mapped wetlands or adjacent lands.
4. Prevent sediment, fuel, chemicals and contaminated runoff from reaching mapped wetland areas.
5. Locate soil stockpiles, fuels and hazardous-material storage away from drainage routes and areas that could convey a release toward mapped wetlands.
6. Implement and maintain the ESC Plan and the Drainage and Stormwater Management Plan.

7. Reassess Water Act and Alberta Wetland Policy requirements before implementing a material change to the footprint, grading, drainage or discharge arrangement that could directly or indirectly affect a mapped wetland.

Based on the current project layout and available desktop mapping, no direct disturbance to a mapped wetland is proposed. If the approved footprint, grading, drainage or discharge arrangement materially changes, the potential implications for mapped wetlands and applicable regulatory requirements must be reassessed before the change is implemented.

If an unmapped saturated depression, seep, wetland indicator or drainage feature is encountered during construction, work in the affected area must stop until the feature has been reviewed and the appropriate design, mitigation and regulatory response has been determined.

7.2 Watercourses

No mapped watercourse is identified within the proposed footprint based on the desktop sources reviewed. This conclusion is limited to mapped information and aerial imagery and is not based on physical inspection.

Final grading and drainage design must account for roadside drainage, shallow swales, seasonal runoff and any drainage pathway encountered during construction. Uncontrolled concentrated discharge is not permitted; any authorized discharge must be managed through the applicable project plans and approval conditions.

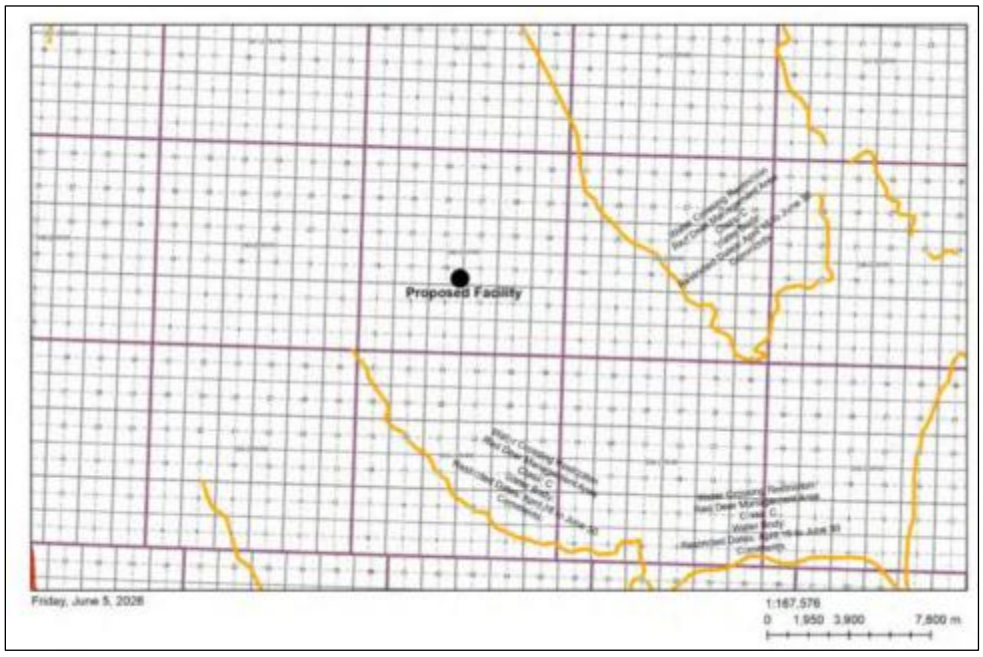


Figure 8: Watercourse mapping search

8.0 Construction Plan, Staging and Footprint Management

Generators, modular data-processing containers and associated electrical and cooling equipment will be installed on prepared gravel pads within the final approved lease and disturbance limits. Construction traffic, staging, parking and material storage must remain within the final approved layout, access and surveyed work limits except where separate authorization is obtained.

Environmentally constrained or no-go areas identified on final construction drawings must be clearly marked. Fuels and chemicals must be stored in labelled, contained systems on stable ground and located away from drainage routes and mapped wetlands, with a preference for at least 100 m separation where practicable. Spill kits and Safety Data Sheets must be readily available.

Topsoil and subsoil stockpiles must be separated, stabilized and drained in accordance with the construction and reclamation plans. Environmental orientations and toolbox talks must communicate work limits, spill response, wildlife procedures, erosion and sediment controls, waste requirements and reporting responsibilities.

8.1 Dust and Particulate Control

Unpaved routes and work areas must be watered or otherwise stabilized as needed during dry or windy conditions. Construction speed limits should generally not exceed 30 km/h unless a lower limit is required. Soil and aggregate stockpiles not expected to be used within 30 days must be stabilized or covered, and trucks carrying loose material must be covered before leaving the site. Work must be adjusted or temporarily paused where dust suppression is ineffective or visibility and off-site effects cannot be controlled.

8.2 Construction and Temporary Lighting Controls

Temporary lighting must be down-shielded, aimed toward the active work area and limited to the intensity and duration needed for safety. Upward-directed floodlighting is not permitted. Night construction should be minimized where practicable, and lighting must be adjusted if it causes an avoidable off-site nuisance or wildlife conflict.

8.3 Construction Traffic and Haul-Route Management

Construction vehicles must use approved access approaches and haul routes. Equipment staging and loading must occur within the approved work area unless otherwise authorized. Haul routes must be monitored for rutting, mud tracking, gravel loss and public-safety issues, with maintenance coordinated with Lacombe County. Major deliveries must use appropriate signage, flagging and traffic control, and incidents or complaints must be documented and corrected.

9.0 Waste, Spill Prevention, Air and Noise

9.1 Waste Management

Construction and operational wastes must be minimized and segregated into general, recyclable, hazardous and electronic waste streams. Wastes must be labelled, stored in suitable containers and transported to approved facilities with required manifests in accordance with EPEA and applicable waste requirements. Housekeeping must prevent litter, windblown debris and waste accumulation.

9.2 Spill Prevention and Response Summary

Fuels, chemicals and hazardous materials must be stored in labelled containers with primary and secondary containment. Tanks, hoses and storage systems must be inspected for leaks or damage and repaired promptly. Spill kits must be maintained at fuelling and storage areas, and personnel must be trained in their use. A release with potential to cause an adverse effect must be contained, cleaned up, documented and reported without delay in accordance with EPEA and the Release Reporting Regulation.

9.3 Air Quality and Noise

Engines and supporting equipment must be maintained and operated consistent with the completed air-dispersion assessment, applicable Alberta ambient air-quality objectives and approval conditions. Material equipment, stack, fuel or operating changes must be reviewed against the completed air assessment before implementation.

Refer to the completed Noise Impact Assessment and maintain the equipment layout, acoustic enclosures, silencers, cooling systems and operating assumptions relied upon by that assessment. A material change to sound-source quantity, location, duty or sound power must be acoustically reviewed before implementation. Post-construction noise verification or complaint investigation must be completed where required by the AUC, Lacombe County, an approval condition or a substantiated complaint.

9.4 Fuel and Chemical Storage Overview

Table 3: Fuel and Chemical Storage Overview

Substance	Expected use	Typical volume	Storage method
Engine lubricating oil	Generator servicing	Low to moderate	Sealed, labelled drums in the designated lubricant-storage area
Coolant/antifreeze	Engine maintenance	Low	Sealed containers in an indoor or covered chemical cabinet
Hydraulic oils/grease	Mechanical servicing	Low	Small containers in an enclosed cabinet or service trailer

Substance	Expected use	Typical volume	Storage method
Diesel, if temporarily required	Construction equipment fuel	Low to moderate; short term	Approved double-walled tank or tote with secondary containment

9.5 Secondary Containment Requirements

Fuel and lubricant containers must be stored within secondary containment having at least 110% of the largest single container capacity. Temporary diesel tanks must be double-walled or placed within lined and bermed containment. Refuelling must occur at controlled, level locations away from mapped wetlands, drainage depressions and pad edges, under trained supervision with spill-response equipment present.

9.6 Spill Response Procedure

1. Stop the source by shutting valves or pumps and isolating the damaged line or container when safe to do so.
2. Contain the release using absorbents, booms, berms or other suitable controls and block pathways toward drainage or mapped wetlands.
3. Recover free product and remove contaminated soil or absorbent for disposal at an approved facility.
4. Document the incident and complete required regulatory and internal reporting within the applicable time limits.

9.7 Spill Kits and Emergency Equipment

Spill kits must be located at fuelling points, maintenance areas and chemical-storage locations. Kits should include hydrocarbon-absorbent pads and booms, granular absorbent, non-sparking tools, disposal containers, suitable personal protective equipment and basic soil-removal tools. Locations and contents must be verified before commissioning and reviewed during orientations and toolbox talks.

10.0 Desktop Constraint and Planning Setback Review

Desktop screening considered AbaData, AER OneStop, FWMIS, ACIMS, AGRASID, wetland mapping, municipal and land-use mapping, aerial imagery, OPaC/Historical Resources information, survey information, the completed Noise Impact Assessment and the current project layout. The review did not identify a mapped environmental constraint within the proposed footprint that precludes the current layout.

The table below provides desktop planning considerations. It does not establish surveyed environmental boundaries or replace final engineering, utility-locate, operator-consent or approval requirements.

Table 4: Desktop Constraint and Planning Setback Review

Constraint/feature	Within footprint?	Setback/action	Source/qualification
Natural wetlands	No mapped wetland identified	Avoid mapped wetland features and manage drainage in accordance with the stormwater and ESC plans.	Alberta wetland inventory, merged wetland mapping and aerial imagery; boundaries are not surveyed.
Watercourses	No mapped watercourse identified	Manage drainage and any authorized discharge through the applicable project plans and approval conditions.	Government hydrology mapping and aerial imagery; unmapped pathways may occur.
Residences/receptors	Nearest identified residence approximately 1.0 km northeast; nearest identified surface development approximately 260 m southeast	Maintain the equipment layout and acoustic assumptions used in the completed Noise Impact Assessment; review material changes.	Project survey information, aerial imagery and completed Noise Impact Assessment.
Rare plants/wildlife	No site-specific record identified in the databases reviewed	Apply construction mitigation and complete an activity-specific check when required by timing, legislation, guidance or approvals.	FWMIS, ACIMS and sensitivity mapping; record absence is not confirmation of absence.
Pipelines/rights-of-way	Existing utilities nearby	Complete utility locates, One-Call notification, crossing coordination and operator consent as applicable.	AbaData, AER OneStop, project survey and operator information.

11.0 Conclusions and Project Implementation Requirements

1. This document is the completed Desktop Environmental Site Assessment for the current Lacombe County municipal-planning and project-review scope.
2. Available mapping, aerial imagery and project information show the proposed footprint within cultivated agricultural land.
3. No mapped wetland or mapped watercourse is identified within the proposed disturbance footprint.
4. Mapped wetland features occur in the surrounding area, including east of the facility; mapped boundaries are not surveyed or physically delineated boundaries.
5. No site-specific species-at-risk, rare plant, active nest or lek record was identified within the proposed footprint through the desktop databases reviewed, where supported by the existing searches.
6. The absence of a database record is not confirmation that a species, feature or environmental condition is absent.
7. Potential environmental effects can be managed through the approved footprint, final grading and drainage design, the EPP, the ESC Plan, spill prevention, waste management, wildlife protection and approval conditions.
8. A material change to the footprint, access, drainage, equipment layout or discharge arrangement must be screened against the desktop environmental constraints and supporting technical studies before implementation.
9. This report does not constitute a physical environmental delineation, intrusive investigation or confirmation of soil, groundwater or other subsurface conditions.
10.

Appendix VII: Erosion and Sediment Control Plan

EROSION AND SEDIMENT CONTROL PLAN (ESC)

CLIVE NATURAL GAS–FIRED POWER GENERATION FACILITY – 19.8 MW

Prepared for
Armada Nowlit Energy Ltd.

ANE Armada Nowlit

Prepared by
VL Energy Ltd.

VL ENERGY

https://vlenergy.ca/

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Purpose & Scope

This Erosion & Sediment Control (ESC) Plan prescribes best practice measures to prevent erosion and control sediment transport during site preparation, construction, commissioning, and early operations of the Clive Natural Gas Power Generation Facility. The Plan aligns with provincial and municipal expectations for EPEA approvals in Alberta and is tailored to the site conditions in Lacombe County. It applies to:

- Clearing, grubbing, topsoil salvage, grading, trenching, utility installation, pad construction, gravel surfacing, and temporary laydowns.
- Operation phase soil exposure until full stabilization/revegetation is achieved.
- Decommissioning and reclamation disturbances.

Objectives:

1. Prevent off-site transport of sediment and turbid water.
2. Maintain stable drainage and protect adjacent lands and roadways.
3. Meet or exceed applicable provincial guidelines and municipal requirements.
4. Document compliance via routine inspection, maintenance, and reporting.

1. Project Overview & Site Conditions

Footprint & Surfaces: The total project disturbance area is approximately 1.783 ha (17,830 m^2), comprising a 1.734 ha data center site and a 0.049 ha access road, based on the Precision Geomatics Inc. Sketch Plan, Drawing C26-017356 SK(0), Revision 0, dated June 10, 2026. The data center site is an irregular polygon with a west boundary of approximately 143.86 m, a principal southern boundary of approximately 107.50 m, and an east boundary of approximately 89.52 m. For general planning purposes, the footprint may be described as approximately 144 m by 108 m. The graded footprint will accommodate generator pads, data-center containers, transformers, internal gravel roads, laydown areas, and associated infrastructure within the fenced site boundary.

Topography & Slopes. The site is located on gently undulating prairie terrain, with typical slopes of approximately 0.5% to 2%, minimal relief, and no steep breaks.

Soils. Site soils are characterized as Orthic Black Chernozem developed on moderately coarse-textured sandy loam sediments. These soils generally have relatively high infiltration capacity, which reduces surface-runoff potential, but may be susceptible to wind erosion when vegetation is removed.

Hydrology. No mapped wetlands or defined watercourses occur within the surveyed site boundary. Local drainage occurs through shallow agricultural swales and overland flow, with Parlby Creek identified as the nearest named watercourse.

Climate. The area has a semi-arid to sub-humid prairie climate, with approximately 350 to 430 mm of annual precipitation, the majority occurring between May and August. The site may experience high-intensity summer storms, winter freeze-thaw cycles, and Chinook conditions.

Utilities/Constraints:

Access. 6.00 m access road extending approximately 65 m from the data centre site to Range Road 243; ACCESS CROSSINGS TO 8-16-40-24-4 DATA CENTRE: X1 Pipe 10.06 Enhance P/L R/W Plan 6678 MC.

Access Distance. Highway #12 approx. 4.8 km PAVED; Government Road Allowance (Rge. Rd. 243) approx. 2.8 km PAVED.

Survey notes. Nearest Urban Centre is the Hamlet of Tees approx. 5.7 km Northeast of Data Centre; Nearest Residence is approx. 1.0 km Northeast of the Data Centre (N.W. 15-

40-24 W. 4M.); Nearest Surface Development is approx. 260 m Southeast of the Data Centre (S.W. 15-40-24 W. 4M.).

Buried Infrastructure. Existing pipeline rights-of-way and buried infrastructure are located within and adjacent to the proposed development area. Ground disturbance, access construction, excavation, and stockpile placement near these features will be completed in accordance with pipeline crossing agreements, utility-location requirements, and applicable setback and ground-disturbance procedures.

Table 1: Roles and Responsibilities

Role	Responsibility
Owner (Armada Nowlit)	Provide resources; ensure contractor compliance; maintain records; report as required.
Prime Contractor	Implement ESC BMPs; maintain daily logs; schedule inspections; correct deficiencies; train crews.
Environmental Monitor	Conduct routine and storm-event inspections; document and escalate non-conformances; verify stabilization.
All Site Personnel	Follow BMPs; maintain housekeeping; immediately report spills, erosion, and damaged controls.

2. ESC Risk Assessment (Site-Specific)

Primary Risks:

- Sheet flow erosion of exposed subsoil and stockpiles during spring winds and summer storms.
- Potential conflict with existing buried pipelines (NW and SE corners) during perimeter trenching or sump excavation.
- Sediment tracking onto municipal roads from haul and access points.
- Localized rilling at perimeter breaks and culvert outlets.
- Turbid water from excavations/utility trenches during storm events or snowmelt.
- Winter melt events generating slushy flows that bypass conventional silt fences.

Risk Rating: High for Wind Erosion; Low for Water Erosion.

- Primary Risk: Wind scour of exposed sandy subsoils during dry spring/summer conditions.

- Mitigation Focus: Mitigation Focus: Emphasis on surface stabilization (tackifiers/mulch), strict non-intrusive perimeter controls at pipeline crossings, and stockpile management.

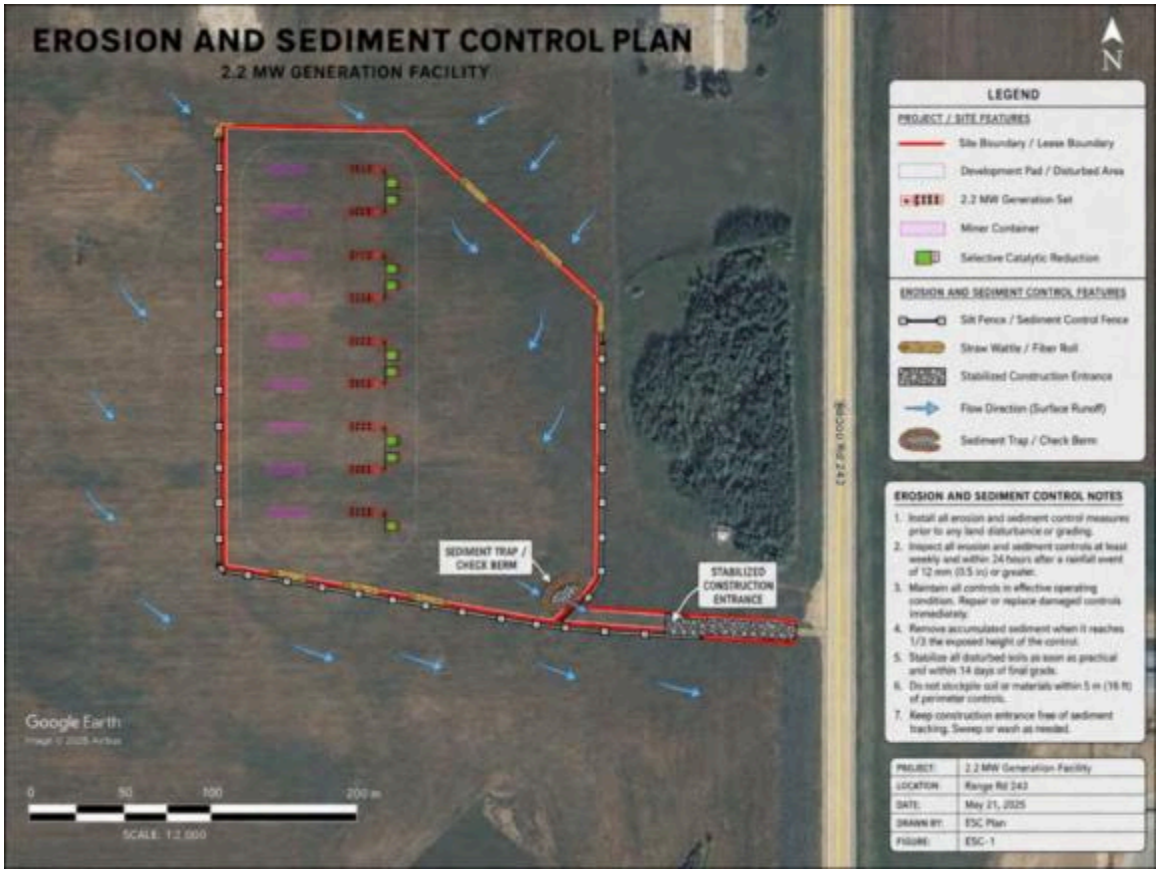

Figure 1: Conceptual ESC Layout

3. Erosion Prevention BMPs (Priority Measures)

Disturbance Minimization & Phasing

- Limit open-ground area to active work zones; sequence grading by sub-areas (<0.5 ha where practicable).
- Stabilize completed sub-areas within 7–14 days (gravel surfacing, mulch, or seed).

Topsoil Salvage & Protection

- Salvage 200–300 mm of topsoil (final depth per field verification).
- Stockpiles ≤2.0 m high, 3H:1V faces, perimeter silt fence/sock; seed and mulch within 7 days of formation; weed control per Weed Control Act.

Surface Stabilization

- Temporary stabilization with hydromulch/fiber mulch (≥3,000 kg/ha with tackifier) or rolled erosion control products (RECPs) on slopes ≥2%; tackifier at entrances/exits.
- Permanent stabilization: gravel capping of roads/pads; agronomic seeding of non-traffic areas.

Wind Erosion Controls

- Keep soils moist during high-wind advisories; apply mulch/crimping; install windbreaks (snow/wind fences) as needed on upwind edges.

Cover Maintenance

- Repair bare patches within 48 hours of discovery; re-mulch/re-seed as needed.

4. Sediment Control BMPs (Perimeter & Point Source)

Stabilized Construction Entrances (SCEs)

Crushed rock 75–150 mm, thickness 150–200 mm, length ≥10 m, geotextile underlay; wheel wash/sweep protocol; daily street sweeping if tracking observed.

Perimeter Controls

Silt fence on the downslope boundary; trench-keyed 150 mm; posts at ≤2 m centers; returns at 15–30 m intervals.

Silt socks / wattles as linear BMPs where trenching is impractical or in winter.

Check Dams in Swales

Rock or wattles in temporary swales at approx. 15–20 m spacing on ~2% slopes; tie into banks; low-point notch to pass baseflow; maintain freeboard.

Sediment Traps / Micro-basins

Temporary traps at culvert inlets, downspouts, and low points; provide pump-off to vegetated/infiltration areas through dewatering filter bags.

Inlet Protection

Gravel bags/geotextile wraps on any catch basins (if temporary basins are installed).

Stockpile Toe Controls

Silt fence or wattles around stockpiles; double-row on downwind/down-slope side.

Pipeline Crossing Zones (X1 & X2)

In the identified access corridor (Crossing X1), do not trench silt fences. Use weighted sediment logs (silt socks), sandbag barriers, or non-ground-disturbance fence installation methods to maintain perimeter control without excavation

5. Stormwater Management Strategy

Design Intent: Detain and infiltrate the *water-quality ("first-flush") volume* within the site; provide controlled conveyance for larger events without off-site erosion.

5.1 Water-Quality Volume (WQV) – Preliminary Sizing

For preliminary sizing, a conservative water-quality rainfall depth of 15 mm is applied over the total disturbed area.

- Total disturbed area, A = 1.783 ha = 17,830 m^2
- Rainfall depth, P = 15 mm = 0.015 m

WQV = A × P

WQV = 17,830 m^2 × 0.015 m = 267.45 m^3

Therefore, the preliminary water-quality volume is approximately 267.5 m^3.

5.2 Conveyance & Overland Flow

- Grade internal surfaces to stable swales (nManning per selected lining); velocity ≤ permissible for lining (e.g., vegetated ≤1.5 m/s).
- Armored outlets (riprap aprons) at culverts/pipe outfalls; dissipate energy with apron length ≥10× pipe dia. or per design.
- Maintain positive drainage away from stockpiles and equipment.

5.3 Water Quality Controls

- Settle coarse sediment in forebays; use flocculant logs only if approved and under monitor oversight.
- No direct discharge to natural waterbodies (none present on-site). Any release to adjacent lands must be non-erosive sheet flow over vegetated areas.

6. Construction Phasing

Table 2: Construction Phasing

Phase	Key Activities	ESC Focus
Pre-mob	Delineation, staking, ESC installs, SCEs, perimeter fencing	Install BMPs before ground break; protect wetlands/none on site; set photo points
Topsoil Salvage	Strip & stockpile; haul roads	Stockpile seeding/mulch; toe controls; wind protection
Rough Grade	Cut/fill; swales; pads	RECPs on ≥2% slopes; check dams; traps at low points
Utilities	Trenching; backfill; tie-ins	Trench plugs; dewatering to filter bags/infiltration; inlet protection
Surfacing	Gravel roads/pads; fencing	Stabilize travelways; remove redundant perimeter controls incrementally
Final	Permanent drainage; seeding	As-built ESC; transition to O&M inspection until full cover

7. Topsoil, Stockpiles & Stabilization

- Salvage depth: target 200–300 mm (verify in field).
- Stockpile siting: on high ground within lease; ≥5 m from fence and clear of existing pipeline Rights-of-Way (NW and SE corners).
- Stabilization: seed with agronomic cover (e.g., annual cereal nurse crop + perennial grasses) and mulch within 7 days; repair erosion scars promptly.
- Weed control: inspect monthly growing season; treat per Lacombe County and provincial Weed Control Act.

8. Dewatering & Water Release

- Prefer infiltration on-lease; otherwise pump through dewatering filter bags to level, vegetated areas with velocity dissipation.
- Inspect discharge: no visible sheen, no erosive flow, and no off-site sedimentation.
- Field turbidity checks during pumping; stop and adjust if water is visibly turbid; add settling time or additional treatment.

9. Inspection, Monitoring & Maintenance

Frequencies:

- Weekly during active construction, daily during precipitation/snowmelt events and within 24 h post-event ≥10 mm.
- Monthly while site remains partially stabilized.

Records:

- ESC checklist, rainfall log, photo-point log, deficiency list & close-out, maintenance log, incident log.

Typical Repairs: Tighten/replace silt fence posts, remove accumulated sediment (>⅓ height), re-stake socks, restore check-dam notches, re-seed/mulch bare spots, sweep roads, re-grade rills.

Performance Indicators: No off-site turbid flows or sediment deposition; stable channels; stockpiles vegetated; entrances free of tracking beyond daily clean-up.

10. Adaptive Management & Stop-Work Triggers

Trigger conditions (examples):

- Repeated bypass/overtopping of perimeter BMPs.
- Gully formation (>100 mm depth) after storms.
- Visible turbid runoff leaving lease boundary.

Actions:

1. Stop relevant work, stabilize exposed areas immediately (mulch/RECP).
2. Add/upsized BMPs (double-row fence, additional traps, larger forebays).
3. Engage Engineer/Monitor for redesign; document corrective actions.
4. Notify Owner/Regulator as required by approval conditions.

11. Training & Communication

- Site orientation includes ESC BMPs, sensitive areas, spill response, and reporting lines.
- Toolbox talks prior to forecast storms; reinforce housekeeping and BMP checks.
- Contractor method statements to reference specific BMP details from this Plan.

12. Incident Response & Reporting

- Spill prevention: secondary containment; drip trays; fueling >30 m from drains/low points; spill kits at workfaces.
- Response: stop source → contain → notify → clean → dispose; document with photos and quantities; report as per EPEA Approval conditions and internal procedures.
- Sediment release: treat as environmental incident; recover sediment if deposited off-site; repair source area and controls.

13. Post-Construction Stabilization & Reclamation

- Remove temporary ESC once permanent stabilization established.
- De-compaction of work areas (ripping to ~300 mm where needed).
- Replace salvaged topsoil; final grades to promote positive drainage without concentrating flow.
- Seeding: agronomic mix suitable for agricultural end-use (final species and rates to be confirmed with landowner and Lacombe County); consider nurse crop plus perennial grasses.
- Acceptance criteria: ≥80% vegetative cover or as specified by approval; no active erosion; functioning drainage.

14. As-Built & Close-Out

- Provide as-built ESC/stormwater drawings showing final drainage grades, infiltration basins, and stabilized areas.
- Submit close-out report: inspection summary, rainfall/maintenance logs, photo log, and statement of compliance.

Appendix VIII: Emergency Response Plan

EMERGENCY RESPONSE PLAN (ERP)

CLIVE NATURAL GAS FIRED POWER GENERATION FACILITY

Prepared for
Armada Nowlit Energy Ltd.

ANE Armada Nowlit

Prepared by
VL Energy Ltd.

VL ENERGY

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1.0 Introduction

Armada Nowlit Energy Ltd., alongside its site contractors, is responsible for maintaining emergency readiness and safety supplies at the Clive Natural Gas Power Generation and Modular Data-Processing Facility (LSD 8-16-040-24 W4M). This plan establishes the immediate actions required to safeguard life, the environment, and property during construction, commissioning, operation, maintenance, and closure.

The facility comprises nine natural-gas generator units rated at approximately 2.2 MW each, with associated modular data-processing containers, electrical distribution, cooling, selective catalytic reduction, natural-gas supply, access, fencing, and site services. Following commissioning, the facility is automated, normally unstaffed, and remotely monitored. Routine attendance is limited to planned inspection, maintenance, delivery, and abnormal-condition response.

Emergency access is from Range Road 243 through single-controlled private access on the west side of the road. All work and operations must comply with applicable Alberta occupational health and safety, environmental, fire, dangerous-goods, and approval requirements. The Site Manager will ensure that emergency equipment, access arrangements, alarm response, and contact information are maintained in operational readiness.

2.0 Types of Emergencies

Personnel at the Clive site and the remote monitoring operator must be prepared to respond to the following emergency scenarios:

- Serious injury or medical emergency.
- Facility-wide evacuation or failed personnel accountability.
- Fire or explosion involving natural-gas systems, generator units, transformers, batteries, or mobile equipment.
- Uncontrolled natural-gas release, combustion-exhaust exposure, or hazardous atmosphere.
- Environmental release involves lubricating oil, coolant, DEF/urea, fuel, solvents, or contaminated water.
- Severe weather, flooding, wildfire, grassfire, or loss of safe site access.
- Security threats, violence, suspicious packages, or bomb threats.
- Utility failure, blackout, control-system failure, or abnormal island restart.
- Vehicle collision, blocked access, or dangerous-goods incident affecting the private access or Range Road 243.

3.0 Emergency Procedures

3.1 Serious Injury or Medical Emergency

- Evacuate the immediate area, assess surrounding hazards, and protect yourself before providing medical aid.
- Halt work in the vicinity and secure the incident scene except where disturbance is required to care for a person or prevent further harm.
- Assign a designated first-aider or the on-site Safety Officer to administer immediate care within their training.
- Call 911 immediately and provide LSD 8-16-040-24 W4M, Range Road 243 access, gate status, number of patients, and known hazards.
- When the site is occupied, dispatch a worker to the Range Road 243 entrance to guide EMS. When unoccupied, the remote operator provides access instructions and dispatches the on-call representative.
- Relinquish command of patient treatment and transportation to EMS on arrival.

3.2 Site Evacuation and Accountability

- Stop working safely and shut down equipment only when this can be completed without delaying evacuation.
- Proceed by the safest route to the designated muster point. Use the secondary muster point when the primary point or access route is compromised.
- Gather by employer or contractor affiliation so supervisors can conduct immediate headcounts using the site sign-in record.
- Relay final accountability numbers and the last known location of any missing person to the Incident Commander without delay.
- Under no circumstances may a worker re-enter the hazard zone to search for missing personnel.
- Await authorization from the Incident Commander or public emergency service before re-entering the facility.

3.3 Fire or Explosion Emergency

- Trigger the facility alarm, evacuate the immediate area, call 911, and approach only from an upwind direction.
- Isolate electrical power and natural-gas fuel strictly in accordance with approved lockout/tagout and emergency shutdown procedures and only from a safe location.
- Use a portable extinguisher only for an incipient-stage fire when trained, the correct agent is available, and a clear escape route is maintained.
- Do not apply water to energized electrical equipment or enter a gas, smoke, or explosion hazard zone.
- Establish hot, warm, and cold zones and keep the single access road open for responding fire apparatus.
- Yield command of the incident scene to the responding fire service upon arrival.

3.4 Gas Release (Natural Gas or Combustion Exhaust)

- Evacuate the area promptly, moving in an upwind or crosswind direction.

- Eliminate ignition sources, stop hot work, and isolate the gas supply only when the isolation point is outside the hazard zone.
- Use calibrated LEL and multi-gas monitors from a safe location to assess atmospheric hazards.
- Call 911 immediately if the release presents a fire, explosion, exposure, or public-safety threat.
- Ventilate only under an approved procedure and permit re-entry only after the source is isolated and atmospheric testing confirms safe conditions.

3.5 Environmental Spill (Oil, DEF/Urea, Solvents)

- Protect people first and stop the release at its source when this can be done safely.
- Deploy compatible spill kits, absorbent booms, pads, drain covers, and temporary berms to contain the release.
- Protect the eastern drainage pathway, low areas, culverts, and roadside drainage from contamination.
- Wear product-specific respiratory, skin, and eye protection identified in the Safety Data Sheet.
- Recover free product and contaminated absorbent, soil, snow, or water into compatible labelled containers for approved transport and disposal.
- Notify the Incident Commander and call the Alberta Energy and Environmental Response Line at 1-800-222-6514 immediately when release causes or may cause an adverse environmental effect.

3.6 Severe Weather Events

- Suspend crane work, work at height, lifting, excavation, hot work, and outdoor electrical work when established stop-work thresholds are reached.
- Direct workers to an approved shelter during lightning, extreme wind, tornado warning, or airborne-debris conditions.
- Protect generators, cooling, SCR, piping, and emergency systems from freezing during extreme cold.
- Stop site entry when flooding, drifting snow, ice, visibility, or road conditions make the private access or Range Road 243 unsafe.

3.7 Wildfire or Grassfire

- Call 911 immediately when a wildfire or grassfire is discovered on or approaching the site.
- Stop hot work and ignition-producing activity and isolate fuel and electrical systems from a safe location.
- Close modular data-processing air intakes when smoke threatens equipment and this can be done without delaying evacuation.
- Keep the private access clear for fire apparatus and follow evacuation directions issued by Lacombe County Fire Services.

3.8 Security Threat

- Call 911 from a safe location and provide the threat description, location, persons involved, and any known weapons or devices.
- Do not engage a hostile person or touch a suspicious package.
- Evacuate, shelter in place, or lock down as directed by the Incident Commander or police.
- Preserve messages, video, access records, and observations and coordinate gate access for law enforcement.

3.9 Utility Failure, Blackout, or Islanded Restart

- Perform a safe plant shutdown in accordance with original equipment manufacturer procedures.
- Verify natural-gas isolation, engine cooling, SCR/DEF systems, ventilation, battery condition, and control power.
- Apply lockout/tagout before inspection or repair and treat conductors as energized until proven otherwise.
- Execute a black start or islanded restart only after the cause is identified, protection systems are reset, and the approved restart checklist is complete.

3.10 Vehicle or Dangerous Goods Incident

- Stop approaching project traffic, raise the alarm, and call 911 for injury, fire, spill, blocked emergency access, or danger to Range Road 243 users.
- Do not enter the public-road travel lane without trained traffic control and high-visibility protection.
- Identify placards, shipping documents, product, container condition, and safe approach direction without entering a vapor or spill zone.
- Call Alberta EDGE on 1-800-272-9600 for a dangerous good transport incident.
- Keep the private access clear for responders and establish a safe holding point for project vehicles.

4.0 Emergency Equipment on Site

Contractors and Armada Nowlit Energy Ltd. will ensure that emergency supplies appropriate to the current work phase and facility hazards are maintained on site:

- Alberta-compliant first-aid provisions and an automated external defibrillator (AED) during occupied work.
- Portable fire extinguishers are selected for ordinary combustibles, flammable liquids, energized electrical equipment, and mobile equipment.
- Calibrated combustible-gas/LEL and multi-gas monitors.
- Hydrocarbon and chemical spill kits, absorbent booms, drain covers, temporary berms, overpack containers, and lined waste containers.
- Portable pumps and non-sparking recovery tools where product compatibility permits.
- Chemical eyewash and emergency washing equipment appropriate to stored chemicals and Safety Data Sheet requirements.
- Charged radios, mobile phones, alarm devices, emergency contact sheets, flashlights, high-visibility apparel, cones, and barricades.

5.0 Emergency Equipment Location

- **Southeast entrance gate / emergency cabinet:** ERP, contact list, first-aid kit, AED, radio, flashlight, high-visibility apparel, cones, and gate-access information.
- **Construction site office:** Primary first-aid supplies, AED, emergency records, radios, weather alerts, gas monitor, and supervisor communication equipment.
- **Main control/electrical enclosure:** Emergency shutdown controls, alarm panel, emergency lighting, gas monitor, first-aid kit, and portable extinguishers.

- **Generator and transformer areas:** Correctly rated portable extinguishers at marked, unobstructed points outside equipment hazard zones.
- **Chemical and maintenance areas:** Compatible spill kits, eyewash, Safety Data Sheets, overpack containers, drain protection, and supervised shutdown capability.
- **Private access and Range Road 243 entrance:** Portable signs, cones, barricades, high-visibility apparel, and flashlights for responder guidance and traffic control.
- **Drainage low points and eastern migration pathway:** Absorbent booms, pads, drain covers, and temporary containment materials.

6.0 Emergency Response Training Requirements

- **Site inductions:** Every employee, contractor, visitor escort, and delivery coordinator receives an ERP overview before unescorted access.
- **Construction drills:** Conduct an evacuation and accountability drill within 30 days of mobilization and at least quarterly while the site remains continuously occupied.
- **Spill response drills:** Conduct a tabletop or physical deployment exercise at least semi-annually and after a material change to spill-response arrangements.
- **Operational drills:** Conduct at least one annual exercise covering remote alarm receipt, dispatch, gate access, isolation, accountability, and external notification.
- **Corrective actions:** Record participants, scenario, performance, deficiencies, assigned actions, due dates, and completion evidence.

7.0 Fire Protection Requirements

- Perform preventive maintenance, thermal scanning, and strict housekeeping to control fire hazards.
- Enforce hot-work permits, gas testing, fire-watch, and ignition-control requirements.
- Maintain required separation from ignition sources and keep generator, transformer, battery, storage, gate, and fire-apparatus areas unobstructed.
- Inspect portable extinguishers monthly and service them at the frequency required by the Alberta Fire Code and manufacturer.
- Do not perform interior structural firefighting or offensive gas-fire response; personnel evacuate and Lacombe County Fire Services controls suppression.
- Call Lacombe County Fire Services at 403-782-8959 for non-emergency coordination; call 911 for every active fire, explosion, rescue, or immediate threat.

8.0 Alarm and Emergency Communication Requirements

- **Audible alarms:** Three short air-horn or audible-alarm blasts signal evacuation; a continuous signal directs personnel to shelter in place.
- **Radio protocols:** Use plain language with no codes. Channel 1 is reserved for Incident Command and Channel 2 for Operations and isolation.
- **External communications:** Only the Site Manager, designated Liaison Officer, or Public Information Officer may speak with regulators, media, landowners, or nearby stakeholders.
- **Remote alarm response:** The remote operator acknowledges every safety-critical alarm, reviews available alarm and camera information, and calls 911 immediately for fire, explosion, gas release, intrusion with threat, or immediate public danger.

- **Unoccupied-site dispatch:** The remote operator notifies the on-call Site Manager, dispatches a qualified technician, and provides responders with the legal location, Range Road 243 access, gate instructions, known hazards, and alarm history.

9.0 Evacuation & Muster Points

- **Primary muster point - P1:** The gravel apron immediately outside the southeast facility gate, clear of the gate swing, emergency vehicle path, generator equipment, and fenced operating area.
- **Secondary muster point - P2:** Range Road 243-side end of the private access, west of the public-road allowance and completely clear of the public travel lane.
- **Alternate safe assembly:** Move farther upwind or crosswind to the safe location directed by the Incident Commander or 911 responder when P1 and P2 are unsafe.
- **Accountability:** Supervisors use the sign-in record or electronic roster, including visitors and delivery drivers, and immediately report missing persons and their last known locations.

10.0 Incident Command & Regulatory Notifications

10.1 Command Structure

- The Site Manager assumes overall command, protects life, establishes incident objectives, and transfers command to public responders.
- The HSE Lead manages immediate hazard controls, first aid, environmental containment, and regulatory reporting.
- The Shift or Technical Lead directs safe equipment shutdowns, lockout/tagout, natural-gas isolation, and electrical isolation.
- The Accountability Officer maintains the roster, conducts headcounts, and reports missing personnel.
- The Access Coordinator opens the gate, meets responders, and keeps private access clear without entering Range Road 243 lanes unsafely.
- The Remote Monitoring Operator receives alarms, calls 911 when required, notifies the on-call team, and provides remote status until relieved.

10.2 Mandatory External Reporting

- **911:** Call immediately for life-threatening injury, active fire, explosion, uncontrolled gas release, rescue, security threat, major collision, or immediate public danger.
- **Alberta Environment and Protected Areas:** Call the Energy and Environmental Response Line at 1-800-222-6514 immediately for an energy or environmental emergency, incident, complaint, or release causing or capable of causing an adverse effect.
- **Alberta OHS Contact Centre:** Call 1-866-415-8690 as soon as possible for workplace fatality, hospital admission, or reportable unplanned or uncontrolled explosion, fire, flood, or structural event.
- **Alberta EDGE:** Call 1-800-272-9600 for a dangerous-goods transport incident or urgent transportation-of-dangerous-goods assistance.
- **Lacombe County Fire Services:** Call 403-782-8959 for non-emergency coordination, fire-safety review, permits, or post-incident follow-up. Emergencies go to 911.

10.3 Emergency Contact Personnel

Name	Role	Contact Info
Emergency Services	Fire, police, ambulance, rescue, life safety	911
Alberta Energy and Environmental Response Line	24-hour energy or environmental emergency, incident, or complaint	1-800-222-6514
Alberta OHS Contact Centre	Serious workplace injury, illness, or reportable incident	1-866-415-8690
Alberta EDGE	Dangerous-goods transport incident and TDG assistance	1-800-272-9600
Lacombe County Fire Services	Non-emergency fire-service coordination	403-782-8959 lcfs@lacombecounty.com
Jeff Zhao	Site Supervisor; Maintenance Superintendent / Reliability Lead, Armada Nowlit Energy Ltd.	jeff.zhao@armada-nowlit.com
Marcc Ma	Armada Nowlit Project Contact; CEO, Armada Nowlit Energy Ltd.	marcc.ma@armada-nowlit.com
James Hou	Instrumentation and Controls Contact, Armada Nowlit Energy Ltd.	james.hou@armada-nowlit.com
Ling Bai	Environmental Lead / EP; CEO, VL Energy Ltd.	ling.bai@vlenergy.ca
Alicia Wang	Project Coordinator/EPr, VL Energy Ltd.	Alicia.wang@vlenergy.ca
Yiyang Du	Engineering / Technical Support; Project EIT, VL Energy Ltd.	yiyang.du@vlenergy.ca

Appendix IX: Traffic Impact Memorandum

TRAFFIC IMPACT ASSESSMENT MEMORANDUM

CLIVE NATURAL GAS FIRED POWER GENERATION FACILITY

Prepared for
Armada Nowlit Energy Ltd.

ANE Armada Nowlit

Prepared by
VL Energy Ltd.

VL ENERGY

Contents

1. Purpose and Scope

This final transportation assessment addresses the proposed Armada Nowlit Clive Facility at LSD 8-16-040-24 W4M in Lacombe County, Alberta. It supports the project rezoning and Concept Plan review by defining the adopted regional transport route, the site access from Range Road 243, final construction and operational traffic volumes, and the measures that manage traffic safely.

The assessment focuses on the traffic generated by a compact, single-purpose 19.8 MW natural-gas-fired power generation and modular data-processing facility. Construction traffic is temporary and short-duration. Following commissioning, the facility will operate as an automated, normally unstaffed, remotely monitored site with no routine employee commuting and zero project traffic on most days.

This final memorandum assesses the defined construction and operating traffic envelope for the Clive Facility. The projected traffic volumes are sufficiently low that classified turning-movement counts, collision analysis, and a detailed network-capacity model are not required to establish the transportation finding. The access, routing, permitting, and traffic-control measures stated in this memorandum are project implementation commitments.

2. Project and Assessment Basis

The project comprises nine natural-gas generator units rated at approximately 2.2 MW each, together with modular data-processing containers, electrical equipment, cooling systems, natural-gas connection, internal circulation, fencing, and ancillary infrastructure. The surveyed project area is approximately 1.783 ha, consisting of a 1.734 ha facility site and a 0.049 ha access-road area.

Table 1: Project and traffic assessment basis

Assessment item	Project basis	Transportation implication
Location	LSD 8-16-040-24 W4M, Lacombe County	Primary public-road connection from Range Road 243
Development program	19.8 MW; nine 2.2 MW generator sets; modular data-processing infrastructure	Generator, container, transformer, electrical, aggregate, and concrete deliveries during construction
Development footprint	1.734 ha facility site plus 0.049 ha access road; 1.783 ha total	Compact single-site circulation and one controlled access
Utility profile	Natural gas by pipeline; electricity consumed on site; closed-loop cooling	No routine operational fuel hauling or bulk-material throughput
Operational profile	Normally unstaffed and remotely monitored; approximately 1-3 scheduled maintenance, inspection, or service visits per month	Zero routine traffic on most days; approximately 2-6 one-way light-vehicle trips per month
Construction schedule	Construction from September to October 2026; commercial operation in December 2026	Short-duration traffic increase concentrated in daytime construction periods
Construction logistics	250-450 load events over the project; 10-30 in a typical week; 30-60 in a peak week; up to 2-4 arrivals/hour; approximately 10 persons/day typical and 15 persons/day peak	Short-duration, managed construction traffic with no material road-network capacity effect

3. Existing Transportation Setting

3.1 Regional transport route

The adopted construction transport route extends from the Calgary staging location at 563 Hurricane Drive to the project site. The route is approximately 210 km and 2 hours 5 minutes under normal conditions. It uses the provincial highway network for most of the distance and transitions to the Lacombe County road network only for the final approach on Range Road 243.

Table 2: Adopted transport route

Segment	Road or access	Route basis	Function and condition
1	563 Hurricane Drive to AB-1 East	Calgary staging-area departure	Urban/industrial origin and provincial highway connection
2	AB-1 / Calgary ring-road connection to Highway 2 north	Route shown on the project Google Maps figure	Primary high-standard regional freight corridor
3	Highway 2 Exit 391, McKenzie Road / Township Road 374, AB-595 East, and AB-11 East	Clive Concept Plan route description	Transition from Highway 2 to the east side of Red Deer and the central Alberta regional network
4	AB-815 / Highway 12 / local connection to Range Road 243	Adopted Highway 12 and Range Road 243 approach to the Clive Facility	Final provincial and municipal approach used by project carriers
5	Range Road 243 to the site	Approximately 2.8 km of paved Range Road 243 identified on the survey plan	Paved Secondary Local Main Road and direct site-access corridor
Total	Calgary staging area to the surveyed Clive Facility access	Approximately 210 km / 2 h 5 min	Adopted project construction transport route

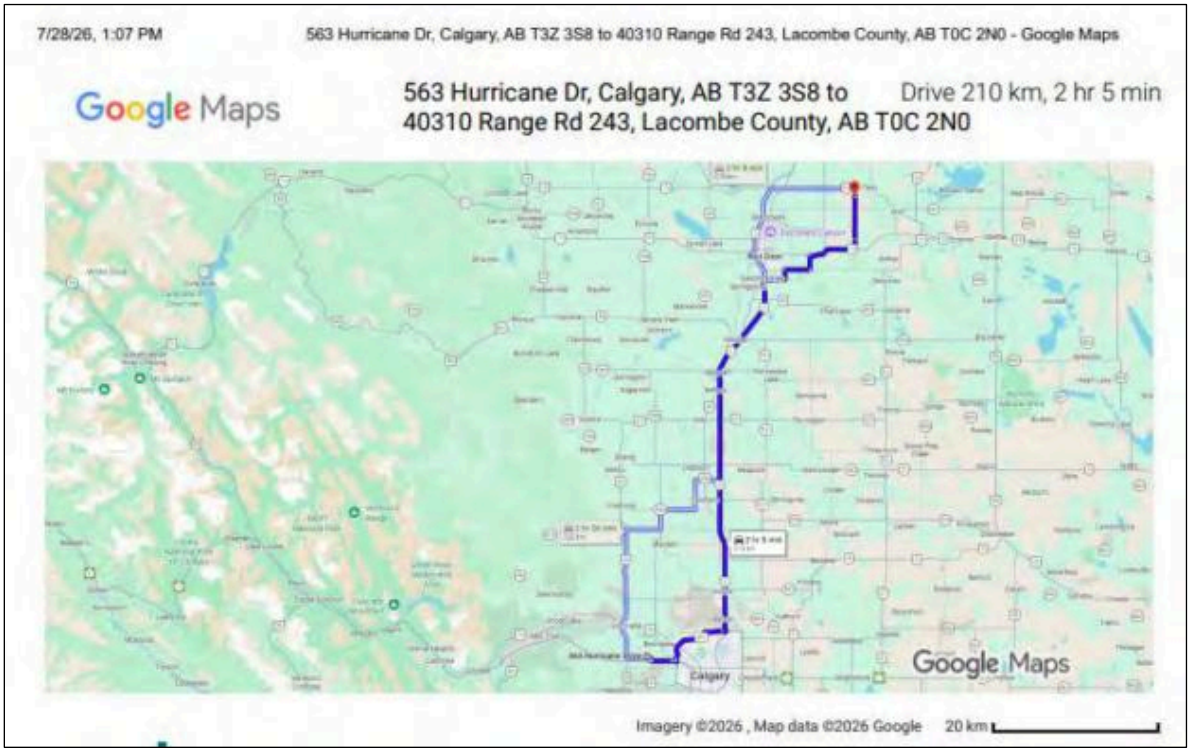

Figure 1: Regional transport route map

Figure note. Google Maps civic destination is a navigation reference; the legal land description and surveyed gate location control project access. All project carriers will use the adopted route, except for an official temporary detour imposed by the road authority.

3.2 Site access and approach

A single controlled access is proposed from Range Road 243. The survey identifies a 6.00 m-wide internal access road extending approximately 64.86 m (about 65 m) from the southeast side of the facility site to the public road allowance. The access-road area is approximately 0.049 ha.

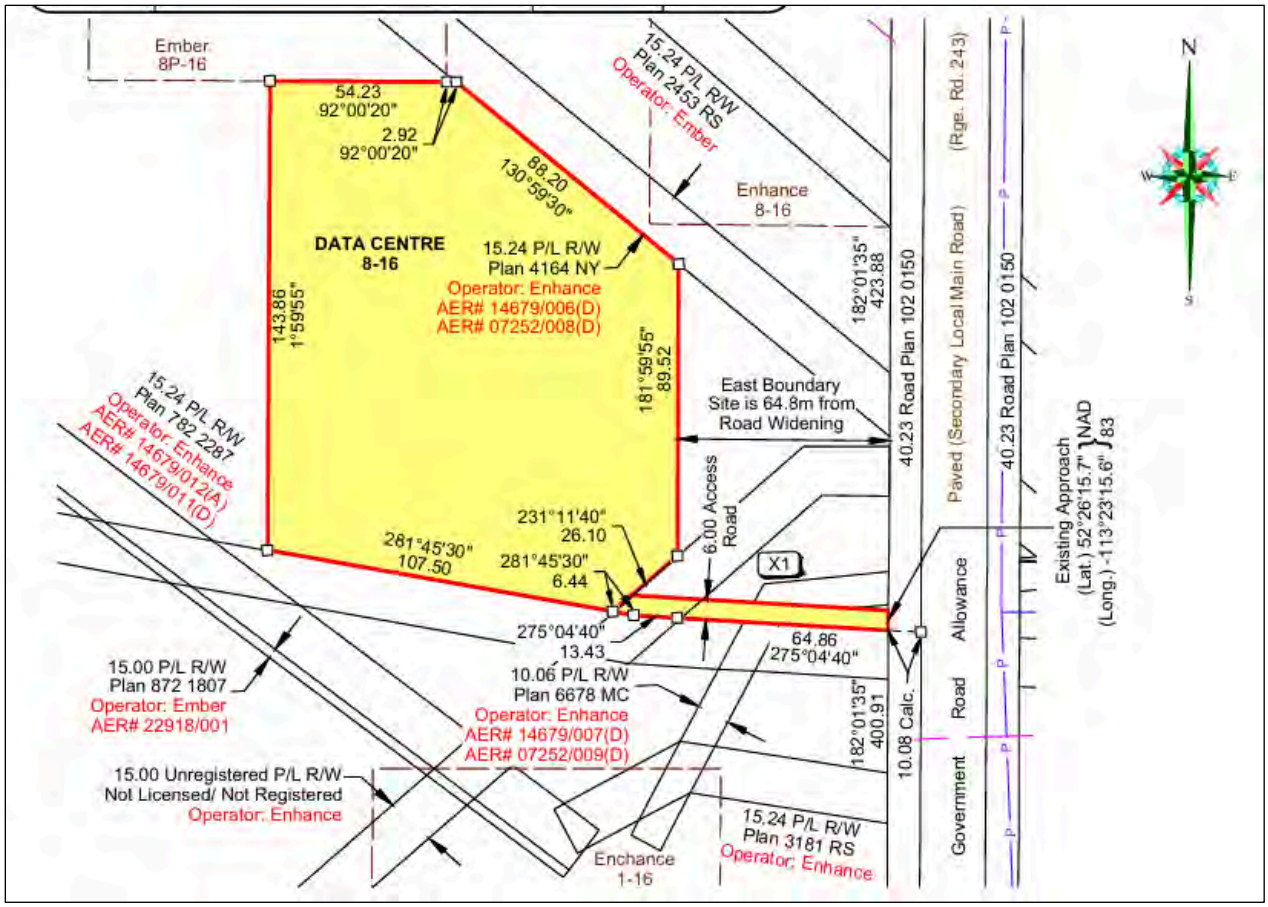

Figure 2: Surveyed site access arrangement

Range Road 243 is a paved Secondary Local Main Road. Lacombe County Policy OP(29) requires prior County approval for an approach within a County road allowance. The industrial approach will provide at least 200 m of sight distance in both directions, at least 200 m separation from an intersection, a maximum gradient of ±2%, a width of 11.5 m to 14 m, 4:1 side slopes, compatible surfacing, and a minimum 400 mm culvert at the drainage crossing.

The survey identifies access crossing X1 at a 10.06 m Enhance pipeline right-of-way (Plan 6678 MC). Before access construction, the project will complete the utility locate, verify depth of cover and allowable construction loading, implement the operator-approved crossing protection, and obtain the required pipeline crossing authorization. The approach design will also include roadside drainage, gate setback, on-site truck storage, emergency access, and swept paths for the critical 5-axle tractor-trailer and lowboy vehicle.

4. Trip Generation and Operating Profile

4.1 Construction traffic

Construction traffic comprises heavy equipment, aggregate and concrete trucks, generator and electrical-equipment deliveries, modular container deliveries, contractor vehicles, and service vehicles. Project vehicles include tandem or truck-and-pup dump trucks, ready-mix trucks, 5-axle tractor-trailers, flatbed or step-deck trailers, lowboy trailers, and light-duty pickups or vans.

Construction staffing will average approximately 10 persons on site per day and will not exceed approximately 15 persons per day during peak equipment installation and commissioning. Assuming one vehicle per person gives a conservative estimate of 20 one-way worker trips on a typical day and 30 one-way worker trips on a peak day. Actual worker traffic will be lower when personnel arrive in shared crew vehicles or carpool.

Table 3: Construction and operational traffic profile

Activity	Final project basis	Assessed one-way movements and traffic effect
Typical construction week	10–30 load events	Approximately 20–60 one-way heavy-vehicle movements/week
Peak construction week	30–60 load events per 7-day period	Approximately 60–120 one-way heavy-vehicle movements/week before light vehicles
Peak construction hour	Up to 2–4 load arrivals/hour	Approximately 4–8 one-way heavy-vehicle movements/hour; manage gate and queueing
Total construction program	Approximately 250–450 load events	Approximately 500–900 one-way heavy-vehicle movements over the full logistics program
Construction workforce	Approximately 10 persons/day typical; up to 15 persons/day peak	Conservative 20-30 one-way worker trips/day; lower with shared crew vehicles or carpooling
Normal operations	Normally unstaffed; approximately 1-3 scheduled visits per month	Approximately 2-6 one-way light-vehicle trips per month; zero routine trips on most days

For assessment, each construction load event represents one inbound and one outbound heavy-vehicle movement. Using the conservative upper case of 450 load events over 30 days gives approximately 30 one-way heavy-vehicle movements per day. Adding the conservative peak workforce estimate produces a combined upper-bound total of approximately 60 one-way vehicle trips per day. This activity is temporary, uses the regional highway network for nearly the entire route, and will not create a material road or intersection capacity effect.

Normal hauling will occur during daytime construction hours, Monday to Friday from approximately 7:00 a.m. to 6:00 p.m. Scheduled Saturday hauling will use the same daytime window. Night hauling is not part of the project program.

4.2 Normal operations

The facility will operate as an automated, remotely monitored, normally unstaffed site with no routine public or customer access. Natural gas will be supplied by pipeline, and routine fuel, aggregate, or bulk-material hauling will not occur after commissioning. Most days will generate no project vehicle trips.

Scheduled operational activity will be limited to approximately 1 to 3 maintenance, inspection, or service visits per month. At one inbound and one outbound movement per visit, this equals approximately 2 to 6 one-way light-vehicle trips per month and an average substantially below one vehicle trip per day. No routine operational heavy-truck traffic is generated.

5. Construction Traffic and Transportation Management

5.1 Route and delivery control

Figure 1 establishes the project construction transport route. The project contractor and carriers will use this route and will complete the required bridge, overhead-clearance, turning, seasonal-restriction, and vehicle-permit checks before dispatching major deliveries. The Range Road 243 approach will accommodate the stated design vehicles.

- Use the approved single site access and the confirmed transport route.
- Schedule heavy and oversize deliveries so vehicles do not queue, park, reverse, or stage on Range Road 243.
- Provide on-site truck holding and turnaround space before the gate becomes operational.
- Schedule deliveries outside school-bus movements, identified agricultural traffic peaks, and commuter peaks.
- Use temporary warning signs and trained traffic-control personnel for every exceptional delivery that temporarily affects public traffic, in accordance with the project Traffic Accommodation Plan.

5.2 Seasonal, weather, and permit controls

All commercial movements will comply with posted road bans, closures, weight restrictions, speed limits, and County and provincial permit conditions. Overweight or over-dimensional movements will be authorized through the applicable RoaData and provincial permitting processes before dispatch. Hauling will be suspended during unsafe road, visibility, or weather conditions.

5.3 Approach, access, and utility coordination

- Submit the detailed industrial approach design to Lacombe County Operations and obtain approval before approach construction.
- Provide at least 200 m of sight distance in both directions together with the required approach spacing, grades, roadside drainage, culvert, and pavement tie-in.
- Apply the completed swept-path design for the critical 5-axle tractor-trailer, step-deck, and lowboy vehicle configurations.
- Provide the gate setback, internal queuing, turnaround, emergency access, and all-weather surface shown by the project access design.
- Use the operator-approved X1 crossing design, including the completed utility locate, verified depth of cover, crossing protection, and allowable construction loading.

5.4 Public safety and road housekeeping

- Secure and cover every regulated load, and remove loose debris before vehicles enter the public road.
- Prevent track-out of mud, gravel, and sediment, and promptly clean any material deposited on the public road.
- Apply site speed controls and maintain clear sight triangles at the gate.
- No unloading, refuelling, or equipment staging will occur within the public road allowance.
- Maintain an incident and complaint contact during the active construction period and document corrective actions.

5.5 Road Condition, Damage and Repair

Prior to the commencement of major construction hauling, Armada Nowlit Energy Ltd. will document the existing condition of the municipal road segment used for final site access, including Range Road 243, in coordination with Lacombe County where required. During construction, the project will monitor the haul route

for damage or deterioration attributable to project traffic, including pavement distress, shoulder damage, rutting, drainage impacts, or damage at the site approach.

Any road damage determined by Lacombe County to have resulted from project construction traffic will be repaired by Armada Nowlit Energy Ltd., or its contractor, at the project's cost and to the satisfaction of Lacombe County. Repairs will be completed promptly or within a timeframe agreed with the County. The project will also comply with any applicable road-use agreement, road-haul agreement, security requirement, or other County condition imposed through the development permit or construction approval process.

6. Impact Assessment

Table 4: Transportation impact summary

Impact category	Normal operations	Construction and commissioning	Assessment
Road and intersection capacity	Zero traffic on most days; approximately 2-6 one-way trips per month	Approximately 10 persons/day typical and 15 persons/day peak, plus scheduled deliveries; conservative upper screen approximately 60 one-way trips/day	No material capacity effect. Existing highways and paved Range Road 243 have sufficient capacity; no widening, turn lane, or intersection improvement is required.
Access and turning	Light vehicles only during infrequent scheduled visits	5-axle semis, step-decks, lowboys, dump trucks, and concrete trucks	The OP(29)-compliant industrial approach and internal circulation accommodate all project vehicle types without an adverse traffic effect.
Sight distance and safety	Low-frequency exposure	Infrequent scheduled heavy-vehicle turns during the short construction period	The approach provides the required sightlines, clear sight triangles, and traffic control for exceptional movements; no adverse safety effect is anticipated.
Pavement and road condition	Negligible routine effect	Temporary construction loading on the final paved municipal segment	Minor and temporary effect managed through legal axle weights, permits, road-ban compliance, and road housekeeping.
Queuing and internal circulation	Single controlled gate is adequate for low-frequency access	Scheduled low-frequency arrivals with on-site gate processing and turnaround	No off-site queueing, staging, or reversing will occur on Range Road 243.
Agricultural and community traffic	No material long-term effect expected	Short-duration construction interaction only	Minor and temporary effect; delivery scheduling avoids school-bus and peak agricultural traffic periods.
Pipeline crossing	Occasional light vehicles	Repeated construction and delivery axle loading at X1	The operator-authorized and protected X1 crossing accommodates project vehicle loading without a transportation impact.

No roadway widening, turn lane, intersection improvement, or supplemental traffic capacity analysis is required for the assessed project. Normal operations produce zero traffic on most days and only 2 to 6 one-way trips per month. The conservative construction screen is approximately 60 one-way trips per peak day and is temporary. The existing regional highway network and paved Range Road 243 have sufficient capacity to accommodate this traffic without a material operational or safety effect.

7. Conclusions and Recommendations

The proposed Clive Facility will be served by the existing regional highway network and paved Range Road 243 without a material traffic impact. Construction traffic is temporary, limited to approximately 10 persons per typical day and 15 persons per peak day plus scheduled deliveries, and remains within a low-volume rural-road operating envelope. Following commissioning, the normally unstaffed facility will generate no traffic on most days and only 1 to 3 scheduled visits per month. No road widening, turn lane, or intersection-capacity improvement is warranted.

1. Use the adopted construction route. Figure 1 is the project transport route from the Calgary staging area to Range Road 243, and all project carriers will follow it except during an official temporary detour.
2. Construct the industrial approach to OP (29). The approach will provide an 11.5-14 m width within the road allowance, transition to the 6 m internal access road, provide 200 m sightlines, and include the required grade, surfacing, drainage, and culvert details.
3. Accommodate the critical vehicle. The approach and internal circulation will accommodate the controlling 5-axle tractor-trailer and lowboy with forward entry, on-site turnaround, and forward exit without encroachment on opposing traffic.
4. Protect the pipeline crossing. The X1 crossing will be located, authorized by the operator, and protected for the stated construction vehicle loading before the access is placed in service.
5. Maintain the construction traffic envelope. Site staffing will average approximately 10 persons per day and will not exceed approximately 15 persons per day at peak. Deliveries will remain within the stated weekly, hourly, and total load ranges.
6. Implement traffic accommodation measures. The project will use delivery scheduling, temporary signage, trained traffic-control personnel for exceptional moves, emergency contacts, and public-road housekeeping throughout construction.
7. Comply with road and vehicle restrictions. The project will observe road bans and obtain every required overweight or over-dimensional vehicle permit before dispatch.
8. Maintain the final operating profile. The facility will remain normally unstaffed and remotely monitored, with no routine daily commuting, no routine heavy-truck deliveries, and only 1 to 3 scheduled service visits per month.

Appendix X: Drainage and Stormwater Management Memorandum

DRAINAGE AND STORMWATER MANAGEMENT MEMORANDUM

Armada Nowlit Clive Facility

Jean Wang
Jean.Wang@armada-nowlit.com

1.0 Purpose

This Drainage and Stormwater Management Memorandum has been prepared in support of the proposed rezoning and Concept Plan submission for the Armada Nowlit Clive Facility in Lacombe County, Alberta.

The purpose of this memorandum is to:

- describe existing site drainage conditions;
- summarize the proposed development drainage catchment and runoff management approach;

confirm the basis on which post-development runoff changes from compacted gravel, equipment pads, roofed/covered infrastructure, and access surfaces can be managed so that drainage remains compatible with existing site conditions; and

- provide drainage-related design and implementation considerations to support County review.

This memorandum is intended to demonstrate, at a concept planning level, that the proposed development can be accommodated without creating unreasonable drainage, runoff, erosion, or sedimentation impacts on adjacent lands, public roads, or downstream drainage systems.

2.0 Site Description

The subject lands are legally described as LSD 8, Section 16, Township 040, Range 24, West of the 4th Meridian (8-16-040-24 W4M) in Lacombe County, Alberta.

The proposed development consists of a compact industrial footprint intended to accommodate:

- natural gas-fired power generation equipment;
- associated on-site modular data processing infrastructure;
- electrical and control equipment;
- internal access and circulation;
- service and support areas; and
- associated ancillary infrastructure.

The primary development footprint is an irregular polygon with a surveyed area of approximately 1.734 ha (4.28 acres). For general planning purposes, the footprint may be described as approximately 144 m by 108 m. The site is situated within a rural agricultural

setting and is currently characterized by cultivated land and typical agricultural surface drainage conditions.

3.0 Existing Drainage Conditions

Based on available site information, the subject lands are characterized by flat to gently rolling topography with minor agricultural drainage patterns typical of cultivated prairie land. No steep slopes, coulees, or major topographic constraints have been identified within the proposed development footprint.

Existing drainage is understood to occur primarily as shallow overland flow following local grade toward existing rural drainage pathways. Available mapping and project information indicate that:

- no mapped wetlands occur within the proposed development footprint;
- no defined intermittent or permanent watercourses occur within the footprint;
- no major on-site drainage channels have been identified; and
- the site functions within a typical rural agricultural drainage regime.

In the context of the proposed development, these existing conditions are considered manageable through conventional grading, runoff control, and erosion and sediment management measures appropriate to a compact rural industrial site.

4.0 Proposed Development Drainage Catchment

The proposed Clive Facility will occupy only a limited and clearly defined portion of the subject lands. The development footprint will include equipment pads, gravelled operational surfaces, internal circulation, access, and associated support infrastructure within the surveyed Data Centre Site = 1.734 ha (4.28 ac.) and Access Road = 0.049 ha (0.12 ac.).

The addition of compacted gravel pads, access surfaces, equipment pads, roofed or covered infrastructure, and ancillary hardstand areas will change runoff generation within the immediate development footprint by reducing localized infiltration and increasing the potential rate and volume of shallow overland flow during rainfall and snowmelt events. The stormwater approach therefore does not rely on a conclusion of unchanged drainage within the disturbed area; it relies on controlling, dispersing, temporarily storing, and infiltrating runoff so that post-development discharge remains compatible with the existing rural drainage context.

Final grading and stormwater drawings will identify pre-development and post-development catchment boundaries and will demonstrate that runoff is not diverted away

from the adjacent eastern wetland catchment or concentrated toward the southeast access/lease boundary unless equivalent retention, infiltration, dispersion, or other mitigation is incorporated into the design and accepted by the County.

The proposed development is not intended to rely on large-scale urban stormwater infrastructure. Rather, the drainage strategy is based on preserving orderly site drainage, maintaining compatibility with the existing rural drainage context, and avoiding new adverse effects on adjacent lands or downstream systems.

5.0 Drainage and Runoff Management Approach

The proposed stormwater management approach for the Clive Facility is based on the following principles:

- maintaining existing drainage directions and catchment contributions where practicable, including avoiding unnecessary diversion away from the adjacent eastern wetland catchment;
- directing runoff through controlled site grading that disperses flow rather than concentrating all surface runoff toward the southeast;
- managing routine runoff by sheet flow across gravelled or stabilized surfaces, with shallow swales, micro-basins, level spreaders, or vegetated receiving areas used where needed to offset reduced infiltration from compacted and roofed surfaces;
- allowing for localized infiltration and/or temporary surface storage where appropriate, including around gravel margins and other stable areas where infiltration can occur without ponding against equipment;
- avoiding new concentrated discharge conditions onto adjacent lands, road allowances, or wetland catchments; and
- maintaining compatibility with downstream rural drainage systems.

The fundamental drainage objective for the proposed development is that post-development runoff changes are managed so the site does not create unreasonable adverse effects on neighbouring properties, road allowances, wetland catchments, or downstream drainage features. This objective requires final grading to preserve pre-development catchment function where practicable and to use on-site storage, infiltration, flow spreading, or other controls where impermeable or compacted surfaces increase runoff.

6.0 Minor and Major Drainage Systems

The site drainage concept should recognize both minor and major stormwater pathways.

6.1 Minor Drainage

For typical rainfall events, runoff is expected to be managed through:

- site grading;
- sheet flow;

localized infiltration and temporary surface storage where feasible to offset runoff from compacted gravel, equipment pads, and roofed/covered infrastructure; and

- movement across gravelled or otherwise stabilized surfaces.

6.2 Major Drainage

For larger rainfall events, runoff should be conveyed in a controlled manner toward the existing downstream drainage context without creating unsafe, erosive, or concentrated discharge conditions. Final grading must avoid directing all surface flows to the southeast if that would remove runoff from the adjacent eastern wetland catchment or otherwise alter existing catchment contribution. Existing rural drainage pathways should remain unobstructed and functional so that stormwater can continue to move through the landscape in a manner generally consistent with current site conditions.

7.0 Erosion and Sediment Control

The highest drainage-related risk associated with the project will occur during construction, when soils are exposed and grading activities are underway. Accordingly, construction-phase erosion and sediment control measures should be implemented to protect adjacent lands, roadside drainage features, and downstream systems.

Typical measures may include:

- stabilized construction entrances;
- silt fencing or equivalent perimeter controls;
- controlled stockpile locations;
- temporary berms or sediment controls;
- staged grading and progressive stabilization; and
- final stabilization of disturbed areas following construction.

These measures should be installed prior to major ground disturbance where required and maintained until disturbed areas are stabilized.

8.0 Downstream Drainage Compatibility

A key design objective for the Clive Facility is that the project not create adverse drainage effects on adjacent lands or downstream systems.

The compact project footprint, together with controlled grading, localized runoff management, and construction-phase erosion and sediment control, is intended to ensure that downstream drainage patterns and adjacent catchment functions continue to operate without unreasonable adverse effects. Because compacted gravel pads, roofed/covered infrastructure, and access surfaces can reduce infiltration and increase runoff, the final drainage design must include measures such as dispersed sheet flow, shallow storage, infiltration areas, and stable outlets so that runoff is not simply transferred to the southeast or removed from the eastern wetland catchment.

Based on the information reviewed to date, no significant downstream drainage incompatibility has been identified, provided that final grading and site drainage design are revised or confirmed to address the changed runoff response from proposed hardstand/roofed surfaces and to maintain the existing catchment function of adjacent lands, including the mapped wetland area east of the development footprint.

The Proposed Stormwater Management Plan/flow-arrow drawing will show how runoff is retained, dispersed, or routed so the eastern wetland catchment is not inadvertently dewatered and no new concentrated discharge is created at the southeast boundary.

9.0 Recommended Design and Implementation Measures

To support County review and subsequent detailed design, the following measures are recommended:

Final site grading should maintain controlled runoff, account for increased runoff from compacted gravel, equipment pads, roofed/covered infrastructure, and access surfaces, and prevent uncontrolled concentration of flows onto neighbouring lands.

Existing drainage pathways and catchment contributions adjacent to the site should remain functional and unobstructed, including the adjacent eastern wetland catchment.

1. Construction-phase erosion and sediment control measures should be installed prior to major ground disturbance and maintained until final stabilization is achieved.
2. Stockpiles, laydown areas, and temporary disturbed surfaces should be managed to prevent sediment transport, nuisance runoff, and localized ponding.

3. Disturbed areas should be stabilized as soon as practicable following grading and construction.

Any subsequent drainage design should demonstrate, using final grades and catchment boundaries, that post-development drainage conditions remain compatible with existing site conditions after accounting for reduced infiltration and increased overland flow from the proposed hardstand and roofed/covered surfaces.

The Proposed Stormwater Management Plan will show surface-flow directions that avoid broadly redirecting runoff to the southeast in a way that removes water from the eastern wetland catchment. Where southeast routing is unavoidable for localized areas such as the access, the design will include equivalent retention, infiltration, dispersion, or other mitigation acceptable to Lacombe County.

10.0 Final Drainage Design Commitments

Impermeable and compacted surfaces: Final grading and stormwater design will account for compacted gravel, equipment pads, roofed/covered infrastructure, and access surfaces that are expected to reduce localized infiltration and increase overland runoff within the development footprint. The drainage approach is based on mitigation and compatibility, not unchanged runoff within the disturbed area.

Eastern wetland catchment: Final grading and stormwater drawings will be completed so the surface-flow pattern does not direct all site runoff southeast in a way that removes water from the adjacent eastern wetland catchment. Final design will maintain existing catchment contribution where practicable, or provide equivalent retention, infiltration, dispersion, or other mitigation acceptable to Lacombe County.

11.0 Conclusion

Based on the information available at this stage, the subject lands appear capable of accommodating the proposed development from a drainage and stormwater management perspective.

The site is located within a manageable rural drainage setting, does not contain mapped wetlands or watercourses within the proposed development footprint, and can be developed using a limited-scope stormwater management approach based on grading, localized runoff control, infiltration and/or temporary surface storage where appropriate, and construction-phase erosion and sediment control. This conclusion is conditional on final grading and stormwater design addressing the reduced infiltration and increased runoff expected from compacted gravel, equipment pads, roofed/covered infrastructure, and access surfaces.

Subject to detailed design and implementation of the measures described above, the proposed Armada Nowlit Clive Facility can be developed in a manner that:

- maintains orderly site drainage while accounting for changed runoff from proposed hardstand and roofed/covered surfaces;
- preserves compatibility with adjacent lands, downstream drainage systems, and the adjacent eastern wetland catchment; and
- avoids unreasonable adverse off-site drainage impacts, including concentrated southeast discharge or unintended removal of runoff from the eastern wetland catchment.

Appendix XI: Fire Safety Plan

FIRE SAFETY PLAN

LSD 8-16-040-24 W4M Lacombe County, Alberta

Jean Wang
Jean.Wang@armada-nowlit.com

1. Purpose

This Fire Safety Plan has been prepared in support of the proposed rezoning and Concept Plan submission for the Armada Nowlit Clive Facility at LSD 8-16-040-24 W4M in Lacombe County, Alberta.

The Plan establishes a planning-level framework for:

- fire prevention;
- emergency access;
- incident notification and evacuation;
- personnel accountability;
- equipment shutdown and isolation;
- coordination with emergency responders; and
- protection of surrounding lands and infrastructure.

The Plan will be updated as the final site layout, equipment specifications, emergency access arrangements, and applicable municipal fire safety requirements are confirmed.

2. Facility Description

The proposed Clive Facility is a secured industrial development that will include:

- natural gas-fired power generation equipment;
- modular data processing containers and associated cooling equipment;
- transformers, electrical equipment, and control systems;
- natural gas supply and tie-in infrastructure;
- internal access and circulation; and
- supporting site infrastructure.

The facility will operate as a controlled-access site and will not be open to the public.

3. Emergency Access and Site Layout

The facility will be accessed from the municipal road network through a controlled site entrance. Internal access routes will support normal operations, maintenance activities, and emergency response.

The final site layout will identify:

- the main entrance and gate;

- emergency vehicle access routes;
- major equipment areas;
- natural gas isolation points;
- emergency shutdown locations;
- electrical isolation points;
- the personnel muster point;
- the emergency responder staging area; and
- hazardous-material and spill-response locations, where applicable.

Emergency access routes will be kept clear and unobstructed during construction and facility operations.

Site security arrangements will allow emergency responders to obtain timely access to the facility. Site identification, the legal land description, available civic addressing, and emergency contact information will be posted at the site entrance before construction activities begin.

The final gate arrangement, internal road configuration, emergency vehicle turning requirements, and firefighting water provisions will be confirmed through detailed design and coordination with Lacombe County Fire Services.

4. Fire Prevention and Site Controls

Fire prevention and site control measures will include:

- controlled access to the facility;
- routine housekeeping and removal of combustible waste;
- maintenance of equipment in safe operating condition;
- appropriate storage and handling of oils, DEF/urea, batteries, and other operational materials;
- clear identification of emergency shutdown and isolation points;
- maintenance of clear access around major equipment;
- inspection and maintenance of emergency response equipment;
- suitable portable fire extinguishers where required; and
- appropriate controls for welding, cutting, or other hot-work activities.

Construction-specific fire controls will be implemented where applicable, including management of temporary heating, temporary electrical installations, combustible materials, and hot-work activities.

Smoking and open flames will be restricted to designated areas or prohibited where required by site conditions and operating procedures.

5. Emergency Response

The project Emergency Response Plan and Environmental Protection Plan provide the broader emergency and environmental response framework for the facility.

In the event of a fire, gas release, electrical incident, spill, or other emergency, the following general response procedure will apply:

1. Personnel will raise the alarm and notify others on site.
2. The incident will be reported through 9-1-1 using the site's legal land description and available civic address.
3. Personnel will evacuate to the designated muster point unless otherwise directed.
4. The site supervisor or designate will account for workers, contractors, and visitors.
5. Access to the affected area will be restricted.
6. Affected equipment or utilities will be shut down or isolated only where it is safe to do so.
7. Emergency responders will be met at the site entrance and directed to the incident location.
8. Responders will be provided with available information regarding site access, known hazards, equipment isolation, hazardous materials, and personnel status.

Site personnel will not undertake firefighting activities beyond their training and the safe use of available portable fire extinguishers.

The muster point and responder staging area will be located outside the main operational area and positioned to avoid interference with emergency vehicle access. Their final locations will be identified on the detailed site plan.

6. Hazardous Materials, Plan Review and Maintenance

The facility is expected to contain lubricating oils, DEF/urea, batteries, and other materials associated with the final equipment selection.

These materials will be stored and managed in accordance with applicable requirements and the project Environmental Protection Plan.

During an incident, response priorities will include:

- protecting personnel and emergency responders;

- isolating the source where safe to do so;
- preventing releases from entering drainage pathways or adjacent lands;
- using available spill-response materials; and
- coordinating fire response and environmental response activities.

Final material quantities, storage locations, secondary containment arrangements, and spill-response equipment locations will be documented once the equipment and operating inventory have been confirmed.

This Plan will be updated during detailed design to reflect:

- the final site layout;
- equipment specifications;
- emergency shutdown and isolation locations;
- emergency access arrangements;
- firefighting water provisions;
- hazardous-material storage locations;
- emergency contact information; and
- any additional requirements identified through municipal review.

The updated Plan will be coordinated with the project Emergency Response Plan and Environmental Protection Plan.

Emergency access, site identification, emergency contacts, isolation information, response equipment, and operating procedures will be maintained and updated throughout construction and facility operations.

Appendix XII: Decommissioning and Reclamation Plan

DECOMMISSIONING AND RECLAMATION ESTIMATE

CLIVE NATURAL GAS FIRED POWER GENERATION FACILITY

Prepared for
Armada Nowlit Energy Ltd.

ANE Armada Nowlit

Prepared by
VL Energy Ltd.

VL ENERGY

Executive Summary

The Armada Nowlit Clive Facility (the Project) is a planned approximately 19.8 MW natural gas-fired power generation and data processing facility at 8-16-040-24 W4M in Lacombe County, Alberta. The Project concept comprises nine 2.2 MW natural gas-fired gensets and associated modular data processing infrastructure, together with selective catalytic reduction systems, closed-loop cooling, electrical distribution equipment and transformers, a 3-inch natural-gas tie-in, fencing and gates, equipment pads, gravel surfacing, a 1.5 m screening berm, access, and drainage controls.

This decommissioning and reclamation plan provides a planning-level closure scope and cost estimate for the surveyed 1.783 ha Project footprint, including the 1.734 ha facility area and 0.049 ha access road. The estimate recognizes the Clive layout, equipment quantity, modular data processing infrastructure, longer access and utility interfaces, existing pipeline rights-of-way and buried infrastructure, and the eastern wetland catchment. The combined decommissioning and reclamation security estimate is CAD $1,957,384.

Gross decommissioning cost is estimated at CAD $1,463,912. After a conservative CAD $206,438 salvage allowance, the net decommissioning cost is CAD $1,257,474. A 10% administration allowance of CAD $125,747 and a 15% overbuild buffer of CAD $188,621 produce a total decommissioning estimate of CAD $1,571,842. The separate reclamation estimate is CAD $385,542.

The proposed approach is intended to restore the site to an acceptable post-closure condition, manage long-term environmental and safety risks, support practical material recovery, and maintain future land-use capability. The following sections document the scope, methodology, assumptions, schedule, cost basis, and supporting drawings.

Assumptions

The estimate is based on the Updated Clive Concept Plan, the Precision Survey Sketch, the Clive Erosion and Sediment Control Plan, and the Drainage and Stormwater Management plan available for the Project. Final quantities, means and methods, haul distances, disposal classifications, salvage markets, and contractor pricing will be confirmed at closure.

The surveyed disturbance basis is 1.783 ha (4.40 ac), comprising a 1.734 ha (4.28 ac) facility area and a 0.049 ha (0.12 ac) access road. The access extends approximately 65 m from Range Road 243. Reclamation quantities are scaled to this surveyed footprint and adjusted for the site-specific equipment pads, gravel, berm, drainage controls, and agricultural restoration requirements.

Transport and disposal allowances assume practical access from Range Road 243 and regional contractor availability. Unit rates include reasonable mobilization, handling, and disposal uncertainty for the Clive location. No specific disposal or recycling facility is assumed at this planning stage.

The operating concept includes nine 2.2 MW natural gas-fired gensets and associated modular data processing infrastructure. Supporting systems include selective catalytic reduction, exhaust and silencers, closed-loop cooling, switchgear, transformers and electrical distribution, controls, a 3-inch natural-gas tie-in, fencing and gates, equipment pads, gravel surfacing, a 1.5 m screening berm, access, and drainage features.

The estimate is a planning-level Class 4-style closure estimate prepared from concept and survey information. It is not a contractor quotation. Amounts are intentionally itemized at realistic non-rounded values and should be refreshed with field verification and competitive quotations before closure.

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1. Overview

The Armada Nowlit Clive Facility is planned at 8-16-040-24 W4M in Lacombe County, Alberta. The surveyed Project footprint totals 1.783 ha, including a 1.734 ha facility area and a 0.049 ha access road extending approximately 65 m from Range Road 243.

The Project is expected to provide approximately 19.8 MW of natural gas-fired generation using nine 2.2 MW natural gas-fired gensets and associated modular data processing infrastructure. The site concept includes selective catalytic reduction systems, closed-loop cooling, electrical distribution equipment and transformers, a 3-inch natural-gas tie-in, fencing and gates, equipment pads, gravel surfacing, a 1.5 m screening berm, access, and drainage controls.

At permanent shutdown, the Project will be safely isolated, dismantled, removed, and reclaimed in accordance with applicable approvals, landowner requirements, regulatory standards, and the conditions encountered at closure. Existing pipeline rights-of-way, buried infrastructure, agricultural soils, and the eastern wetland catchment will be protected throughout the work.

2. Scope of Work

Decommissioning will include planning and permitting; shutdown and isolation; draining and purging; dismantling and removal of the nine 2.2 MW natural gas-fired gensets and associated modular data processing infrastructure; removal of electrical, mechanical, fuel-gas, structural, and site infrastructure; regulated-material handling; waste segregation; and transport to approved reuse, recycling, or disposal facilities.

Reclamation will include environmental and geotechnical verification, removal of residual slabs and utilities where required, replacement of salvaged topsoil, recontouring, access-road reclamation, drainage stabilization, revegetation, monitoring, and certification. The Clive Erosion and Sediment Control Plan indicates topsoil salvage generally in the range of 200–300 mm; actual replacement depth will reflect field conditions and landowner requirements.

3. Decommissioning Plan

The decommissioning sequence is based on the Clive concept layout and surveyed footprint. Detailed work plans, isolation procedures, lifting plans, utility coordination, pipeline-crossing controls, wetland-protection measures, traffic management, and environmental controls will be prepared before field execution.

All activities will be planned and executed under approved isolation, safety, environmental-protection, lifting, transportation, and waste-management procedures. The sequence below is indicative and will be refined during detailed decommissioning planning.

General Sequence of Decommissioning

Stakeholder notification. Notify municipal authorities, environmental agencies, regulatory commissions, the electric system operator, aviation authorities where applicable, landowners, and other affected jurisdictions of the planned work and schedule.

Disconnect, isolate, drain, purge, dismantle, lift, and remove the nine 2.2 MW natural gas-fired gensets. Manage residual oil, coolant, filters, and other fluids through approved recycling or disposal pathways.

Permits and approvals. Obtain required permits before fieldwork and retain a qualified environmental professional, such as a Professional Agrologist or equivalent, to support compliance and site-specific environmental protection.

Electrically isolate and remove the associated modular data processing infrastructure, switchgear, panels, transformers, distribution equipment, cable trays, wiring, grounding, controls, protection, and monitoring systems. Preserve asset documentation and segregate recoverable components.

Isolate and remove the 3-inch natural-gas tie-in, site piping and valves, selective catalytic reduction systems, exhaust stacks and silencers, closed-loop cooling systems, and auxiliary mechanical equipment. Coordinate all work near existing pipeline rights-of-way and buried infrastructure.

Erosion and sediment control. Install and maintain temporary controls to limit soil displacement, runoff, erosion, and sediment transport during dismantling and excavation.

Above-ground electrical removal. Remove cables, busways, trays, poles, and other above-ground electrical infrastructure for approved recycling, salvage, or disposal.

Remove equipment pads and residual foundations as required, data processing enclosures and supports, fencing and gates, pipe racks, gravel surfacing, the screening berm, drainage controls, and other minor site infrastructure that is not required for the approved final land use.

Segregate reusable and recyclable metals, copper, electrical equipment, genset components, structural steel, and suitable data processing infrastructure components. Transport non-recoverable material and regulated waste to approved facilities with manifests and disposal records.

Regrade the 1.734 ha facility area and 0.049 ha access road to stable agricultural contours, restore drainage without increasing discharge to the eastern wetland catchment, replace salvaged topsoil, establish the agreed seed mix, monitor vegetation and erosion, and complete reclamation certification.

Expected Waste Materials

Potential regulated materials include lubricant oil, coolant, filters, oily rags, residual fuel- or gas-system contaminants, batteries, control equipment, glycol, and contaminated soil or water identified during environmental assessment. Each stream will be segregated, contained, documented, transported, and recycled or disposed of through an approved facility.

Certified containment and licensed hazardous-waste contractors will be used where required. Provincial and federal handling, transportation, documentation, and chain-of-custody requirements will be followed. The estimate includes the applicable salvage credits and disposal costs for the identified streams.

3.1 Environmental Effects

Closure activities will be planned to prevent releases to soil, surface water, groundwater, and the eastern wetland catchment. Erosion and sediment controls will be maintained during dismantling, gravel and berm removal, grading, topsoil replacement, and revegetation. Existing pipeline rights-of-way and buried infrastructure will be located and protected.

Spill prevention, secondary containment, controlled fluid transfer, waste manifests, dust and noise controls, and wet-weather shutdown criteria will be included in contractor work plans. Drainage will be restored using shallow swales, micro-basins, level spreaders, or equivalent measures appropriate to final grades and the eastern catchment.

Traffic, dust, particulate matter, and noise will increase temporarily as personnel, haul vehicles, and heavy equipment mobilize and operate. Dust suppression and reasonable noise-control measures will be applied where required to limit off-site disturbance during short-term industrial work.

Material recovery will be prioritized to reduce landfill disposal. Structural steel, copper cable, aluminium components, racks, electrical equipment, concrete, and other reusable or recyclable materials will be processed through appropriate recovery channels.

3.2 Methodology

The estimate has been developed from the Clive concept layout, surveyed Project area, the nine 2.2 MW natural gas-fired gensets, associated modular data processing infrastructure, utility connections, electrical distribution equipment, and available material quantities. Costs are grouped into project management, power-generation equipment, electrical infrastructure, mechanical and fuel-gas systems, structural and site infrastructure, hazardous-material handling, waste management and recycling, and indirect costs.

Conservative assumptions and internal allowances address uncertainty in equipment condition, dismantling effort, field access, and future scrap markets. Transportation allowances reflect regional logistics, specialized heavy-haul requirements, and potential variation in fuel and transportation-related expenses.

A 10% administration allowance and a 15% overbuild buffer are applied to the net decommissioning cost. These allowances address administration, permitting, regulatory coordination, documentation, and unforeseen field conditions that may require additional work.

Salvage value is assigned only to equipment and material expected to provide meaningful recovery, including eligible genset assets, larger electrical equipment, copper cable, data processing infrastructure components, steel frames and supports, and recyclable metal. Minor controls, communication modules, accessories, and miscellaneous electronics are not assigned separate salvage value. Conservative recovery factors protect the estimate from market uncertainty.

3.3 Decommissioning Cost Estimate

The following estimates are organized by major work category and line item. 'Lump Sum' denotes a single allowance for the described scope. Monetary values are presented in Canadian dollars and have been reformatted consistently without changing the underlying amounts.

3.3.1 Project Management and Mobilization

A dedicated Project Manager is budgeted for 528 hours at $139.65 per hour, totalling $73,735. A full-time HSE Officer is included for 528 hours at $92.85 per hour, totalling $49,025, to oversee electrical and gas-system isolation, regulated-material controls, pipeline and buried-infrastructure coordination, contractor safety, and environmental requirements.

Mobilization and demobilization are carried as a lump-sum allowance of $17,086 for personnel deployment, lifting coordination, specialty tools, containment materials, and temporary safety infrastructure. The category subtotal is $139,846.

Table 1: Project Management and Mobilization

Item	Quantity	Unit Cost	Total Cost
Project Manager (12 weeks)	528 hr	$139.65	$73,735
HSE Officer (12 weeks)	528 hr	$92.85	$49,025
Mobilization/Demobilization	1	Lump Sum	$17,086
Subtotal			**$139,846**

3.3.2 Power Generation Equipment Removal

Power-generation equipment removal includes disconnection, fluid preparation, lifting, loading, transport coordination, and documentation for all nine 2.2 MW natural gas-fired gensets. Associated modular data processing infrastructure isolation and asset documentation are included as a separate allowance.

The nine 2.2 MW natural gas-fired gensets carry a unit removal cost of $20,943 and a unit salvage value of $10,713, producing gross removal cost of $188,487 and salvage recovery of $96,417.

Oil and coolant draining and system preparation are allowed at $24,681. Data processing infrastructure isolation and asset documentation are allowed at $16,927, and lifting, loading, and transport coordination are allowed at $17,888. The category gross cost is $247,983, salvage value is $96,417, and net cost is $151,566.

Table 2: Power Generation Equipment Removal

		Decommissioning		Salvage	
Component	Quantity	Unit Cost	Approx. Total	Unit Cost	Approx. Total
2.2 MW Natural Gas-Fired Genset Removal	9	$20,943	$188,487	$10,713	$96,417
Oil/Coolant Drain and System Preparation	Lump Sum	$24,681	$24,681	—	$0
Data Processing Infrastructure Isolation and Asset Documentation	Lump Sum	$16,927	$16,927	—	$0
Lifting, Loading and Transport Coordination	Lump Sum	$17,888	$17,888	—	$0
Subtotal			**$247,983**		**$96,417**
Net Decommissioning Cost					**$151,566**

3.3.3 Electrical Infrastructure Removal

Electrical work includes qualified isolation, dismantling, and removal of switchgear and panels, transformers and distribution equipment, the associated modular data processing infrastructure electrical systems, cable trays, wiring, grounding, utility interfaces, SCADA, controls, protection, and monitoring systems. The principal allowances are $64,385 for switchgear and panels, $82,764 for transformers and distribution equipment, and $47,936 for data processing infrastructure electrical disconnect and removal.

Cable trays, wiring, and grounding are allowed at $40,872. Utility, SCADA, and control-equipment isolation and removal are allowed at $32,617. The category gross cost is $268,574, salvage value is $48,632, and net cost is $219,942. Fuel-gas isolation, purging, and fluid management are included in the mechanical and hazardous-material categories.

Table 3: Electrical Infrastructure Removal

		Decommissioning		Salvage	
Component	**Quantity**	**Unit Cost**	**Approx. Total**	**Unit Cost**	**Approx. Total**
Generator Switchgear and Panels	Lump Sum	$64,385	$64,385	Lump Sum	$9,746
Transformer and Electrical Distribution Equipment	Lump Sum	$82,764	$82,764	Lump Sum	$22,385
Data Processing Infrastructure Electrical Disconnect and Removal	Lump Sum	$47,936	$47,936	Lump Sum	$7,821
Cable Trays, Wiring and Grounding	Lump Sum	$40,872	$40,872	Lump Sum	$7,196
Utility, SCADA and Control Equipment Isolation and Removal	Lump Sum	$32,617	$32,617	Lump Sum	$1,484
Subtotal			**$268,574**		**$48,632**
Net Decommissioning Cost					**$219,942**

3.3.4 Mechanical and Fuel Gas Systems Removal

This category covers the 3-inch natural-gas tie-in, site piping and valves, selective catalytic reduction systems, exhaust stacks and silencers, closed-loop cooling systems, lubricant and coolant management, and auxiliary mechanical equipment. Work requires verified isolation, purging where required, controlled fluid handling, and qualified contractors.

Natural-gas piping, valves, and tie-in removal are allowed at $59,843 with $6,925 salvage. Selective catalytic reduction systems are estimated at $5,687 per unit for nine units ($51,183), with $6,678 total salvage. Exhaust stacks and silencers are estimated at $5,236 per unit for nine units ($47,124), with $9,774 total salvage. Closed-loop cooling systems are estimated at $4,139 per unit for nine units ($37,251), with $2,497 total salvage.

Residual-fluid handling and auxiliary mechanical removal are allowed at $26,338. The category gross cost is $221,739, salvage value is $25,874, and net cost is $195,865.

Table 4: Mechanical and Fuel Gas Systems Removal

		Decommissioning		Salvage	
Component	**Quantity**	**Unit Cost**	**Approx. Total**	**Unit Cost**	**Approx. Total**
Natural Gas Piping, Valves and Tie-In	Lump Sum	$59,843	$59,843	Lump Sum	$6,925
SCR Systems	9	$5,687	$51,183	$742	$6,678
Exhaust Stacks and Silencers	9	$5,236	$47,124	$1,086	$9,774
Closed-Loop Cooling Systems	9	$4,139	$37,251	$277.44	$2,497
Residual Fluid Handling and Auxiliary Mechanical Removal	Lump Sum	$26,338	$26,338	—	$0

		Decommissioning		Salvage	
Component	Quantity	Unit Cost	Approx. Total	Unit Cost	Approx. Total
Subtotal			**$221,739**		**$25,874**
Net Decommissioning Cost					**$195,865**

3.3.5 Structural and Site Infrastructure Removal

Structural and site work includes genset pads and foundations, data processing enclosures, skids and supports, fencing and gates, pipe racks, the 1.5 m screening berm, gravel surfacing, drainage features, and other minor infrastructure. Removal of nine genset pads and foundations is estimated at $33,842 per unit, totalling $304,578, with no concrete salvage credit.

Data processing enclosures, skids, and supports are allowed at $61,487 with $26,834 salvage. Fencing, gates, pipe racks, berm, gravel, and drainage-feature removal are allowed at $39,103 with $8,681 salvage. The category gross cost is $405,168, salvage value is $35,515, and net cost is $369,653.

Table 5: Structural and Site Infrastructure Removal

		Decommissioning		Salvage	
Component	Quantity	Unit Cost	Approx. Total	Unit Cost	Approx. Total
Genset Pads and Foundation Removal	9	$33,842	$304,578	—	$0
Data Processing Enclosures, Skids and Supports	Lump Sum	$61,487	$61,487	Lump Sum	$26,834
Fencing, Gates, Pipe Racks, Berm, Gravel and Drainage Features	Lump Sum	$39,103	$39,103	Lump Sum	$8,681
Subtotal			**$405,168**		**$35,515**
Net Decommissioning Cost					**$369,653**

3.3.6 Hazardous Materials Handling

Regulated-material management includes controlled removal, containment, documentation, recycling, and disposal of batteries, control-system components, lubricant oil, coolant, filters, oily waste, residual gas-system contaminants, and spill-response material.

Battery and control-system handling is allowed at $13,942. Lubricant oil, coolant, filters, and oily-waste handling is allowed at $23,857. Residual gas-system purging support is allowed at $14,736, and spill-response supplies and personal protective equipment are allowed at $8,897. No salvage value is assigned to these regulated or consumable materials.

The gross and net cost for hazardous-material handling is $61,432. The allowances support approved collection, transportation, recycling or disposal, documentation, and compliance with safety and environmental requirements.

Table 6: Hazardous Materials Handling

		Decommissioning		Salvage	
Component	Quantity	Unit Cost	Approx. Total	Unit Cost	Approx. Total
Battery and Control-System Handling	Lump Sum	$13,942	$13,942	—	$0
Lube Oil, Coolant, Filters and Oily Waste	Lump Sum	$23,857	$23,857	—	$0
Residual Gas-System Purging Support	Lump Sum	$14,736	$14,736	—	$0
Spill Response and PPE	Lump Sum	$8,897	$8,897	—	$0
Subtotal			**$61,432**		**$0**
Net Decommissioning Cost					**$61,432**

3.3.7 Waste Management and Recycling

Waste management provides approved pathways for construction debris, packaging, non-recoverable components, mixed materials, and regulated waste generated during closure. Recoverable materials will be segregated from disposal streams wherever practical.

Dumpster and bin rental is allowed at $23,954, including delivery, placement, and collection. Transportation and disposal fees are allowed at $33,486, including hauling, tipping, fuel, and related logistics. Specialized recycling and miscellaneous disposal are allowed at $25,177. The total category cost is $82,617, with no separate salvage credit.

Table 7: Waste Management and Recycling

		Decommissioning		Salvage	
Component	Quantity	Unit Cost	Approx. Total	Unit Cost	Approx. Total
Dumpster and Bin Rental	Lump Sum	$23,954	$23,954	—	$0
Transportation and Disposal Fees	Lump Sum	$33,486	$33,486	—	$0
Specialized Recycling and Miscellaneous Disposal	Lump Sum	$25,177	$25,177	—	$0
Subtotal			**$82,617**		**$0**
Net Decommissioning Cost					**$82,617**

3.3.8 Indirect Costs

Indirect costs support safe and compliant execution. The estimate assigns $13,462 to contractor liability insurance, $9,715 to permits and environmental fees, and $13,376 to office and administrative support, documentation, reporting, and coordination.

These allowances produce an indirect-cost subtotal of $36,553 and form the basis of the decommissioning estimate summary.

Table 8: Indirect Costs

Component	Quantity	Unit Cost	Total Cost
Contractor Liability Insurance	Lump Sum	$13,462	$13,462

Component	Quantity	Unit Cost	Total Cost
Permits and Environmental Fees	Lump Sum	$9,715	$9,715
Office/Administrative Expenses	Lump Sum	$13,376	$13,376
Subtotal			**$36,553**

3.3.9 Summary

The gross decommissioning estimate before salvage, administration, and overbuild allowances is CAD $1,463,912. It includes project management and mobilization, power-generation equipment removal, electrical infrastructure, mechanical and fuel-gas systems, structural and site infrastructure, hazardous-material handling, waste management and recycling, and indirect costs.

Structural and site infrastructure is the largest component at 27.7%, followed by electrical infrastructure at 18.3%, power-generation equipment at 16.9%, and mechanical and fuel-gas systems at 15.1%. The remaining categories comprise the balance of the gross estimate.

Estimated salvage recovery is CAD $206,438, principally from eligible genset assets, larger electrical equipment, copper wiring, data processing infrastructure components, steel supports, and other recyclable metal. After applying salvage, the net decommissioning cost is CAD $1,257,474.

A 10% administration allowance of CAD $125,747 and a 15% overbuild buffer of CAD $188,621 are then applied. The resulting total decommissioning estimate is CAD $1,571,842. These values are consolidated in the following page.

Table 9: Decommissioning Estimate Summary

Item	Decommissioning Cost	Total Decommissioning	Salvage Value	Net Decommissioning Cost
Project Management and Mobilization	$139,846	9.6%	$0	$139,846
Power Generation Equipment Removal	$247,983	16.9%	$96,417	$151,566
Electrical Infrastructure Removal	$268,574	18.3%	$48,632	$219,942
Mechanical and Fuel Gas Systems Removal	$221,739	15.1%	$25,874	$195,865
Structural and Site Infrastructure Removal	$405,168	27.7%	$35,515	$369,653
Hazardous Materials Handling	$61,432	4.2%	$0	$61,432
Waste Management and Recycling	$82,617	5.6%	$0	$82,617
Indirect Costs	$36,553	2.5%	$0	$36,553
Total	**$1,463,912**	**100.0%**	**$206,438**	**$1,257,474**
Administration Allowance (10%)				**$125,747**
Overbuild Buffer (15%)				**$188,621**
Grand Total				**$1,571,842**

3.4 Timeline

The schedule presents the intended progression from planning and permitting through isolation, equipment removal, structural removal, and site reclamation. Activities are sequenced to maintain safe access and prevent downstream work from beginning before the necessary isolation and removal steps are complete.

Planning and permits occupy Weeks 1–3, with shutdown and isolation in Week 3. Genset and data processing infrastructure removal is shown in Weeks 4–6; electrical removal in Weeks 5–7; mechanical and fuel-gas removal in Weeks 6–8; structural and site removal in Weeks 8–11; and site reclamation in Weeks 11–14.

The overall estimated duration is 12–14 weeks. The schedule is a planning basis and will be refined to reflect approvals, contractor availability, site conditions, material disposition, and coordination among affected parties.

Table 3-10. Decommissioning and Reclamation Timeline

Tasks	Weeks													
Task	W1	W2	W3	W4	W5	W6	W7	W8	W9	W10	W11	W12	W13	W14
Planning and Permits														
Shutdown and Isolation														
Genset and Data Processing Infrastructure Removal														
Electrical Infrastructure Removal														
Mechanical and Fuel Gas Removal														
Structural and Site Infrastructure Removal														
Site Reclamation														

4. Reclamation Plan

The reclamation plan is intended to return the Project area to a condition suitable for agricultural use or tame pasture following facility decommissioning. The plan applies to the surveyed 1.783 ha footprint, comprising the 1.734 ha facility area and 0.049 ha access road, and establishes the technical basis for the reclamation security estimate in Section 4.2.

Final methods will be confirmed through field assessment, landowner consultation, regulatory requirements, and the conditions encountered at closure. The Updated Clive Concept Plan, Precision Survey Sketch, Clive Erosion and Sediment Control Plan, and Drainage and Stormwater Management plan provide the current site-specific basis.

4.1 Reclamation Activities

Reclamation activities will be coordinated with the final decommissioning sequence so that residual infrastructure, environmental conditions, soil handling, drainage, access, and certification requirements are addressed without unnecessary rework.

4.1.1 Environmental Site Assessment and Remediation

Phase 1 and Phase 2 Environmental Site Assessments will be completed to identify potential releases associated with the 2.2 MW natural gas-fired gensets, electrical systems, associated modular data processing infrastructure, cooling and selective catalytic reduction systems, the gas tie-in, and other operational components. Soil and water samples will be analyzed for petroleum hydrocarbons, metals, glycol, and other relevant parameters.

Limited environmental drilling will be undertaken where required to confirm subsurface conditions. Material confirmed to be contaminated will be excavated and transported to an approved landfill, and the excavation will be backfilled with clean soil to restore soil integrity.

4.1.2 Geotechnical Validation

Soil compaction testing and certification will verify that reclaimed land is suitable for agricultural use. Grading and soil compaction will be completed to the applicable agricultural and stability requirements.

4.1.3 Soil Remediation

Areas affected by equipment pads, gravel surfacing, the screening berm, access construction, or localized compaction will be excavated or decompacted where required. Unsuitable or contaminated soil will be transported to an approved facility. Grading and compaction will restore stable agricultural contours, followed by replacement of salvaged subsoil and 200–300 mm of topsoil where practicable.

4.1.4 Utility Termination and Minor Foundation Removal

Electrical, natural-gas, and data processing services will be terminated and safely capped. Concrete pads, footings, and other residual structures will be removed where required, with pipeline rights-of-way and buried infrastructure located and protected. Removed material will be managed in accordance with applicable environmental requirements.

4.1.5 Farmland Restoration and Landscaping

Topsoil will be restored to a depth suitable for agricultural use or tame pasture, informed by the 200–300 mm salvage depth in the Clive Erosion and Sediment Control Plan and verified field conditions. The planned seed mixture comprises 45% meadow brome, 30% orchard grass, 10% timothy, 10% creeping red fescue, and 5% alfalfa. Fertilizer and soil amendments will be applied as needed. Trees or shrubs may be planted at the landowner's request.

4.1.6 Drainage and Wetland Catchment Restoration

Shallow swales, micro-basins, level spreaders, and minor drainage channels will be restored or constructed as required to maintain positive flow while avoiding increased discharge to the eastern wetland catchment. Disturbed drainage infrastructure will be repaired and stabilized to prevent waterlogging, erosion, or unintended concentration of runoff.

4.1.7 Documentation and Compliance

Environmental-clearance reports will document reclamation work and validation results. Applications for reclamation certification will be submitted to the applicable authorities, and records of professional services, laboratory analyses, field validation, landowner consultation, and regulatory communication will be maintained.

4.1.8 Machinery and Mobilization

Excavators, bulldozers, rollers, trucks, and other required equipment will be mobilized to the site and demobilized after completion. Operators will be appropriately qualified and equipment will be maintained in accordance with applicable industry requirements.

4.2 Reclamation Cost Estimate

The reclamation security estimate is based on the activities described in Section 4.1 and is scaled to the surveyed 1.783 ha Project footprint. Equipment pricing is based on the 2023 Equipment Rental Rates Guide (Alberta Roadbuilders and Heavy Construction Association, 2023). Professional fees use the 2025 consulting rates adopted for this estimate. Production assumptions are based on the Caterpillar Performance Handbook (Caterpillar Inc., 2017) and adjusted for the Clive site layout and approximately 65 m access road.

Tracked excavator: A 320 LF-class unit with an approximately 1 m^3 bucket is assigned an earthmoving production rate of 100 m^3/hour.

Tracked bulldozer: A D6-class unit is assigned a heavy-blading and ripping rate of approximately 0.868 ha/hour or 150 m^3/hour for a 50 m push distance.

Agricultural tractor: A 166–200 hp tractor is assigned approximately 5.1 ha/hour with an 11 m implement and 1.7 ha/hour with a 3.6 m implement.

Articulated truck: A 730-class truck with approximately 17.5 m^3 capacity is assigned 140 m^3/hour for a 400 m haul distance.

Motor grader: A 140M-class grader with a 3.6 m blade is assigned 1.1 ha/hour for heavy blading.

Professional fees: Project-specific rates of $107.35–$108.75/hour are applied as itemized in Table 10.

Laboratory analysis: $112.45 per sample, including processing and disposal. Parameters include petroleum hydrocarbons, metals, glycol, oil-related parameters, and other parameters applicable to genset, electrical, gas, mechanical, and data processing areas.

Environmental drilling: $322.25/hour, inclusive of the drill unit, crew, service truck, and supplies for limited subsurface verification.

Landfill fees: $37.85/$m^3$, subject to waste classification and the receiving facility.

Tractor-trailer transport: Allowance of $296.40/hour, with actual cycle time dependent on the selected approved disposal or recycling facility.

Recontouring and soil replacement: Primarily undertaken with a tracked bulldozer, with an excavator assisting for approximately 20% of the soil volume.

Soil preparation: Three disc passes after subsoil and topsoil placement.

Decompaction: Three passes with a paratill implement to relieve compaction caused by machinery and operational traffic.

Seedbed preparation: Two harrow passes before seeding.

Seed mixture: 45% meadow brome, 30% orchard grass, 10% timothy, 10% creeping red fescue, and 5% alfalfa, applied at 20 kg/ha and adjusted to the 1.783 ha disturbance basis.

Fertilization: One application at 225 kg/ha and $1.37/kg during seeding.

Hydro mulch: Hydroseeder and product at $3,500/ha for small areas requiring erosion control.

High-clearance spraying: Sprayer and broadleaf herbicide at $57/ha for weed management.

Equipment mobilization and demobilization: Priced as a project-specific lump-sum allowance reflecting access from Range Road 243, regional contractor availability, and the required excavators, bulldozers, rollers, trucks, and support equipment.

Miscellaneous costs: Line locating, hydrovac, and heavy-equipment mobilization are retained as separate line items rather than being distributed among individual reclamation activities.

The total reclamation security estimate is CAD $385,542. It is scaled to the 1.783 ha surveyed area, including the 1.734 ha facility area and 0.049 ha access road, and includes professional services, equipment, labour, material, access-road reclamation, drainage and eastern wetland catchment stabilization, and disposal. The equivalent cost is approximately CAD $216,232 per hectare.

Table 10: Reclamation Security Estimate

Item	Task	Expense Type	Quantity	Unit	Unit Cost	Total Cost
Environmental Site Assessment	Phase 1 Professional Fees	Professional Fees	12	hr	$108.75	$1,305
	Phase 2 Professional Fees	Professional Fees	24	hr	$108.75	$2,610
	Phase 2 Laboratory Analysis	Laboratory Analysis	9	Samples	$112.45	$1,012
	Phase 2 Environmental Drilling	Environmental Drilling	13.52	hr	$322.25	$4,357
	Subtotal Environmental Assessment					**$9,284**
Geotechnical Validation	Soil Compaction Testing and Certification	Engineering + Equipment	1	LS	$18,763	$18,763
	Subtotal Geotechnical Validation					**$18,763**
Soil Remediation	Professional Fees	Labour	112	hr	$108.75	$12,180
	Laboratory Analysis	Samples	12	Samples	$112.45	$1,349
	Excavation (Tracked Excavator)	320 LF-Class Excavator	27	hr	$197.35	$5,328
	Transport to Disposal (Truck/Trailer)	Truck/Trailer	18	hr	$296.40	$5,335
	Landfill Fees	Approved Facility	645	m^3	$37.85	$24,413
	Grading and Compaction	Bulldozer / Roller	217	hr	$278.07	$60,341
	Subtotal Soil Remediation					**$108,946**
Utility Termination and Minor Foundation Removal	Electrical, Gas and Data Processing Service Capping	Professional Fees + Equipment	1	LS	$48,927	$48,927
	Minor Concrete Slab Removal	Excavator / Bulldozer	51	hr	$281.53	$14,358

Item	Task	Expense Type	Quantity	Unit	Unit Cost	Total Cost
	Subtotal Utilities and Slabs					**$63,285**
Farmland Restoration and Landscaping	Topsoil Replacement	Excavator + Truck	1,783	m^3	$38.65	$68,913
	Grass/Crop Seeding	Tractor and Harrow	1.783	ha	$1,349.97	$2,407
	Optional Trees/Shrubs at Landowner Request	Labour + Tractor	0	LS	$0	$0
	Subtotal Landscaping					**$71,320**
Drainage and Wetland Catchment Restoration	Drainage Controls, Eastern Wetland Catchment Stabilization and Monitoring	Excavator / Labour	1	LS	$33,480	$33,480
	Subtotal Drainage and Wetland Catchment Restoration					**$33,480**
Documentation and Compliance	Environmental Clearance Reports	Professional Fees	110	hr	$107.35	$11,809
	Application and Certification	Professional Fees	80	hr	$107.35	$8,588
	Miscellaneous Professional Fees	Professional Fees	1	LS	$4,338	$4,338
	Subtotal Documentation and Compliance					**$24,735**
Machinery and Mobilization	Excavators, Bulldozers, Rollers and Trucks	Rental Equipment + Operators	1	LS	$31,942	$31,942
	Subtotal Machinery and Mobilization					**$31,942**
Access Road	Access Road Reclamation	Excavators, Bulldozers, Trucks	65	L.M	$365.95	$23,787
	Subtotal Access Road					**$23,787**
Overall Total						**$385,542**

4.3 Reclamation Security Plan

The proponent will establish and maintain appropriate financial assurance to support the decommissioning and reclamation of the Project at the end of its operating life or if the Project is permanently discontinued or abandoned.

The current combined decommissioning and reclamation cost estimate is CAD $1,957,384. This amount includes the Project-specific decommissioning estimate, anticipated salvage recovery from eligible equipment and materials, the reclamation estimate for the surveyed Clive footprint, and allowances for administration and unforeseen conditions.

The proponent proposes to satisfy the financial assurance requirement through a demand forfeiture bond, an equivalent surety bond, or another acceptable financial assurance instrument issued by a qualified third-party provider. The selected instrument will provide financial assurance for the Project's closure obligations without requiring the full estimated amount to be deposited in cash upfront.

The timing, amount, form, and terms of the financial assurance will be finalized in accordance with the applicable approval conditions, land requirements, and the decommissioning and reclamation cost estimate in effect at that time. The financial assurance is expected to be established prior to commercial operation or by another date specified through the applicable approval process.

The financial assurance instrument will be structured so that secured funds may be accessed if the proponent does not complete its required decommissioning or reclamation obligations, subject to the terms of the final instrument and any applicable notice or default provisions. It will remain in effect until the applicable closure obligations have been completed and authorization for release has been provided.

The cost estimate and corresponding financial assurance requirements will be reviewed at least once every five years and following any material change to the Project footprint, equipment configuration, ownership, reclamation requirements, or estimated closure costs. The amount may be adjusted where an updated estimate identifies a material change in the Project's anticipated decommissioning and reclamation liability.

Appendix XIII: Historical Resources Act Approval

HRA Number: 4940-26-0014-002
July 08, 2026

Historical Resources Act Approval

Proponent: Armada Nowlit Energy Ltd.
563 Hurricane Drive, Calgary, AB T3Z 3S8
Contact: Mr. Jean Wang

Agent: VL Energy
Contact: Ling Bai

Project Name: **Clive Natural Gas-Fired Power Plant Facility**

Project Components: Power Plant

Application Purpose: Requesting HRA Approval / Requirements
Amendment or Update to Project Submitted Previously
Update to Project Name and/or Ownership

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 Tourism and Sport

Proposed Development Location:

MER	RGE	TWP	SEC	LSD List
4	24	40	16	1,8

Documents Attached:

Document Name	Document Type
Survey	Illustrative Material