Synapse Real Estate Corp
Synapse Data Center Power Plant Project
Proceeding 30732
Application 30732-A001

Synapse Real Estate Corp ("Synapse") Response to
Alberta Utilities Commission ("AUC") Information Request ("IR") No. 1

Synapse-AUC-2026MAY14-001

References: **Exhibit 30732-X0001, Rule 007 - Thermal Power Plant Application, PDF pages 1, 3 and 6**

Issue: **Procurement of project components**

Quote: PDF page 1:

"The Project consists of twenty (20) natural gas-fired combustion turbine generating units, each with a nominal simple-cycle capability of approximately 50 MW [megawatts], and ten (10) Heat Recovery Steam Generators (HRSGs) supplying steam to ten (10) steam turbine generators, each with a nominal capability of approximately 40 MW in combined-cycle configuration.

…

Final equipment selection remains subject to regulatory approval, procurement and detailed engineering.

…

Final equipment will be confirmed at time of final project update prior to commencing construction."

PDF page 6:

"Construction of the natural gas power plant is expected to commence in October 2026, or upon receipt of all required regulatory and environmental approvals."

Request:

a) Please confirm whether Synapse has identified the make and model of the natural gas-fired combustion turbines, heat recovery steam generators and diesel generator units it plans to use.

b) If a decision about the equipment has not been made, please comment on the time required between placing a procurement order and delivery of the

units. Please elaborate on how this aligns with an October 2026 construction start date.

c) If a decision about the equipment has been made, please comment on why the noise impact assessment and air quality assessment do not use these models.

d) Please confirm whether the dry cooling system described in PDF page 3 is applicable for all considered equipment or if the final equipment selection may lead to a different system with higher water requirements.

Response:

a) Synapse has identified a preferred equipment supplier and preferred equipment configuration for the combustion turbines, heat recovery steam generators (HRSGs) and diesel generator units. Commercial negotiations and final procurement activities remain ongoing. Final equipment selection will be confirmed prior to construction and included in Synapse's final project update. Environmental and technical assessments submitted with the application were developed using design parameters that are representative of, supplied by, and consistent with, the preferred equipment suppliers currently under evaluation.

b) The October 2026 construction date reflects commencement of site preparation, civil construction, underground utilities and foundation work. Delivery of major equipment is not required in order to start work on these activities. Synapse has engaged with potential equipment suppliers and understands that delivery schedules for major equipment are compatible with the proposed construction schedule. Current indications from the preferred gas turbine supplier suggest that turbine delivery can occur as early as November 2026, subject to final procurement arrangements and permitting timelines.

Synapse will also work with its preferred gas turbine supplier to adjust delivery slots according to the hearing schedule for this proceeding, once it is issued by the Commission.

c) The Project Noise Impact Assessment (NIA) and Air Quality Assessment (AQA) were completed using the performance characteristics of the preferred equipment currently under evaluation by Synapse. Commercial negotiations and procurement activities had not been completed when the assessments were prepared and, as described in the response to (a), remain ongoing. Therefore, the assessments relied on performance-based design criteria rather than identifying a specific manufacturer and model.

Performance data and field test results from the preferred gas turbine manufacturer were utilized as the basis for design for the NIA. Representative measured sound levels for the preferred gas turbine package include:

- Gas turbine enclosure: 85 dB(A) at 1 metre
- Gas turbine exhaust diffuser: 81.3 dB(A) at 1 metre
- Gas turbine air inlet: 78.6 dB(A) at 1 metre

These values are consistent with modern enclosed industrial combustion turbine installations of similar size and capacity and were incorporated into the NIA.

Similarly, the AQA utilized the expected emissions performance of the preferred combustion turbine and emissions control system configuration. The assessment incorporated the anticipated combustion turbine emissions characteristics, stack parameters, and selective catalytic reduction (SCR) performance assumptions associated with the proposed Project facility design. Any final equipment selected for the Project is expected to meet or exceed the emissions performance assumptions used in the assessment.

As part of AUC Information Request responses and to reflect recent Project design work, Synapse is in the process of updating the Project NIA to reflect the current site-specific plant layout and building configuration. This will be submitted on or before June 10th.

d) Confirmed. The dry cooling system described in the application remains applicable to the Project and is not dependent upon the final selection of the HRSG, air-cooled condenser (ACC), or associated equipment suppliers.

The Project has been designed around a dry-cooled combined-cycle configuration utilizing air-cooled condensers and a closed-loop condensate and feedwater system. Accordingly, the final selection of HRSG or cooling equipment manufacturers is not expected to alter the fundamental cooling technology proposed for the facility or result in a material increase in water consumption.

As part of the detailed engineering phase for the Project, Synapse is working collaboratively with HRSG manufacturers, water treatment specialists, and process engineering consultants to further optimize the water balance for the facility. This work includes evaluation of boiler water chemistry requirements, condensate recovery systems, blowdown minimization strategies, sampling system design, and advanced water conservation technologies where technically and economically appropriate.

Synapse is also evaluating approaches to maximize condensate recovery and minimize wastewater generation while maintaining compliance with HRSG manufacturer requirements and industry best practices for safe and reliable operation.

The water consumption values presented in the application represent the current design basis and will be refined during detailed engineering as equipment suppliers finalize water chemistry requirements, blowdown requirements, and operating parameters. Synapse's objective is to minimize make-up water requirements through optimization of advanced condensate recovery and water management systems. While final water consumption will be confirmed during detailed design, Synapse does not anticipate any material increase that would alter the information included in the application.

Synapse-AUC-2026MAY14-002

References: **Exhibit 30732-X0001, Rule 007 - Thermal Power Plant Application, PDF page 14;**

Exhibit 30732-X0016, TP 40 - Municipal Engagement Form - March 20 2026

Issue: **Town of Olds zoning**

Quote: Exhibit 30732-X0001, PDF page 14:

"The project is situated in land zoned for light industrial use. A Development Plan for the site is in late stages of review by the Town of Olds with comments received by Synapse Real Estate Corp from the town of Olds. The town has indicated that no bylaw amendment will be required for the Project.

Town of Olds October 2025 Land Use bylaws identify data centers as discretionary use for light industrial. See section 6.14 of link provided. https://www.olds.ca/media/mvqblbgp/town-of-olds-lub-bylaw-2025-14-signed.pdf."

Exhibit 30732-X0016, PDF page 2:

"Overall comments from the municipality about the project:

This project represents a significant opportunity for our local and regional economy, and the Town of Olds supports the development of data centres within our boundary, provided they can be done safely and comply with all provincial regulations. We look forward to participating in the AUC process to ensure a balance can be achieved between community impacts, economic growth, and environmental responsibility."

Preamble: Data centres are considered in the town of Olds land-use bylaws and listed as a discretionary use within the Light Industrial District. It is unclear how power plants are considered. The Municipal engagement form includes comments from the Town of Olds about the data centre but not the power plant. Section 5.2 of the participant involvement program report briefing discusses commitments made by Synapse to the Town of Olds.

Request: (a) Are power plants a discretionary use within the Light Industrial District? If not, has the Town of Olds indicated if it intends to amend the Olds land-use bylaws to allow for a power plant in the Light Industrial District?

(b) Please provide a summary of consultation with the Town of Olds about the power plant's location within the Light Industrial District and impacts of the power plant on the town.

Response:

(a) Per the statement of intent from the Town of Olds (Exhibit 30732_X1049): "The Project is located within the Town's Light Industrial District (ILD), as designated under Land Use Bylaw 2025-14. The "Data Center" use is listed as a Discretionary Use in the ILD zone, a classification established through a deliberate public process between May and October 2025 that included bylaw amendments, public hearings, and community engagement.

Power plants are addressed within the listed discretionary use "Accessory Use to a Discretionary Use" (in the ILD zone under Bylaw 2025-14). Therefore, no bylaw amendment is required or contemplated, based on the Proponent's statements that the power plant component will only be restricted to self-supply, i.e. consumed solely on the same property by the Proponent. Under the Bylaw, an Accessory Use is defined as a use that is incidental and subordinate to the principal use of the same parcel. The Town's development permit review, and position before the AUC is scoped on that basis.

The Town recognizes that there is dual jurisdiction between the Town and the AUC in relation to the power plant component, with the AUC having paramountcy under section 619 of the Municipal Government Act. The Town is not seeking to replicate the AUC's review through its development permit process, but will work with the proponent to reach as many commitments as possible on issues of municipal concern. The Town's primary focus will be directed at what falls properly within the Town's mandate, including: land use compatibility, impacts at the Town boundary, site design, off site impacts and emergency management planning.

(b) The Town of Olds and Synapse engaged in discussions regarding a potential 1GW data center with attached 1.4GW natural gas power plant in December of 2025. The North East Area Structure Plan was identified as the preferred location within the Town of Olds because its ILD zoning allows for data center development as a discretionary use.

The Town of Olds identified the 9 primary points of concern which Synapse has committed to address. These concerns are outlined below and included in Exhibit 30732-X0013, TP 36.1 page 21.

- "Concern #1 - Aesthetics of facility due to visibility form 27 and 2A

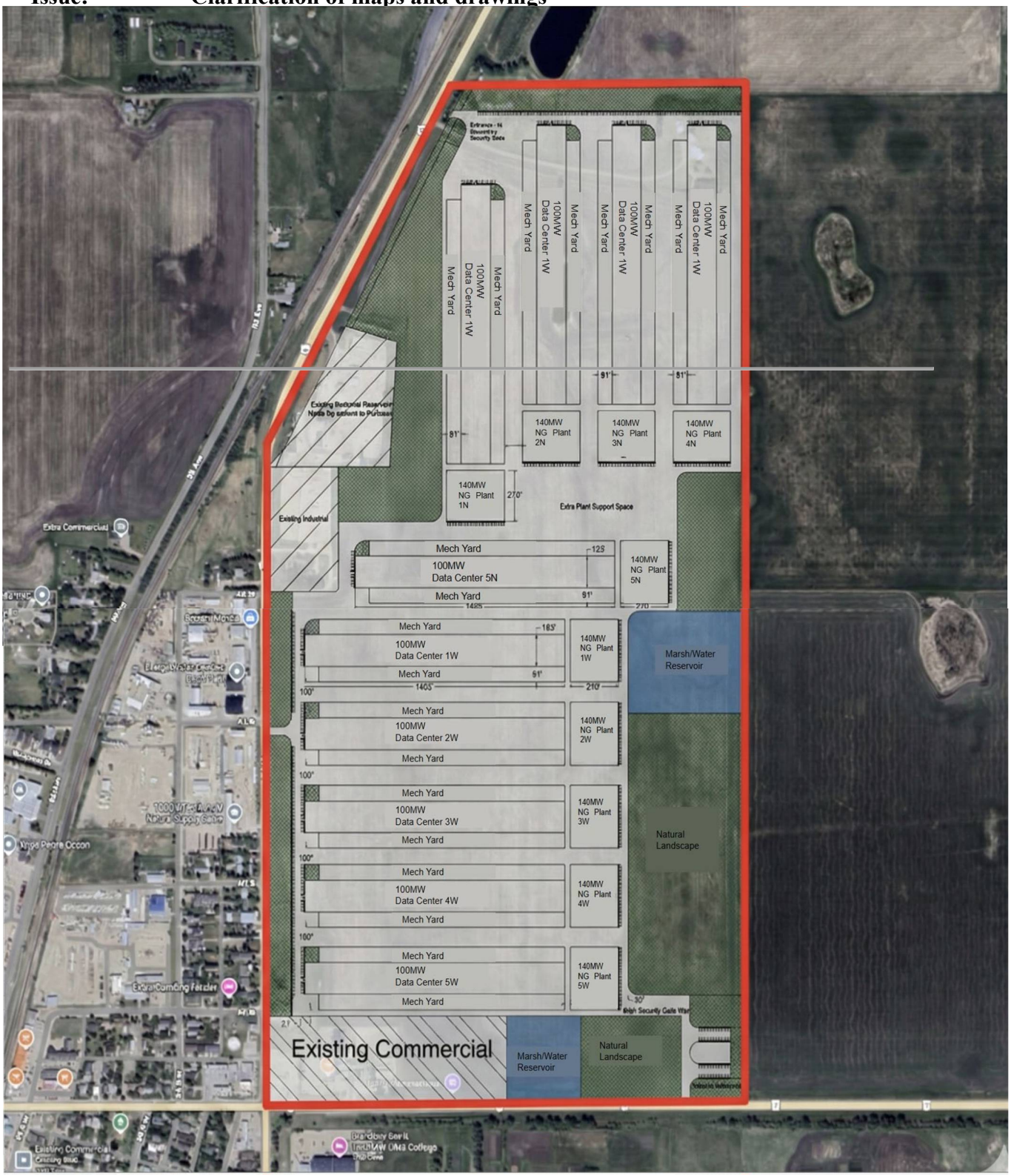
  - Commitment -Install screening berms and aesthetic trees around property to improve aesthetic appearance of property.
- Concern #2 - Facility proximity to road given the size of development
  - Commitment -The power plant and data center be offset by more than the bylaw minimum from highway 2A and highway 27 to provide increased aesthetic buffer
- Concern #3 - Position of natural gas power plant on property
  - Commitment - That the natural gas plants be installed at rear of data center to increase buffer zone from residential
- Concern #4 - Visibility of facility in winter months
  - Commitment - That elevated berms and dense coniferous landscaping be installed to improve aesthetic/natural appeal and dampen noise from the property, specifically as pertained to residential
- Concern #5 - Noise conformance to provincial permitting requirements
  - Commitment - That noise assessments be submitted and that project be built in conformance with AUC and AEPA permitting requirements
- Concern #6 - That efforts be made to exceed AUC noise minimums
  - Commitment - That noise attenuation panels be incorporated into facility design to further dampen any potential noise impact
- Concern #7 - Cumulative noise impact of Data Center and Power Plant
  - Commitment - That the cumulative impact of noise emissions from natural gas electricity plant, generators and chillers be examined as part of the noise study
- Concern #8 - Impact of emergency generator testing procedures on noise levels
  - Commitment - Ensure that emergency generator testing is conducted in a manner that minimizes overall noise transmission
- Concern #9 - Concerned about water use of facility
  - Commitment - That closed loop systems be used for both data center and natural gas power plant"

The Town of Olds recognized the significant economic benefits the Project would bring to residents and indicated that, provided these concerns could be adequately addressed, it considered the Project to be a net positive for the community.

Synapse-AUC-2026MAY14-003

References: **Exhibit 30732-X0018, TP 6 - Drawings & Maps**

Issue: **Clarification of maps and drawings**



(b) The figure on page 6 is a labeled site layout with nearby residential receptors in the town of Olds indicated.

The figure on page 7 is a screenshot of the KML file shared as part of TP5 with labelling provided and nearby residential receptors in the town of Olds indicated.

(c) Please find attached at **Synapse-AUC-2026MAY14-003 Attachment - Project Area Map** copy of the figure in Exhibit 30732-X0018, TP 6 - Drawings & Map at PDF page 12 with the purple dashes removed.

Synapse-AUC-2026MAY14-004

References: **Exhibit 30732-X0018, TP 6 - Drawings & Maps, PDF pages 7 and 8;**

Exhibit 30732-X0013, TP 36.1 - Synapse Data Center – Project Information Package, PDF pages 6 and 7

Issue: **Clarification of maps and drawings**

Preamble: The figure in Exhibit 30732-X0018, PDF page 8, depicts the location of the emergency backup generators within the mech yard. The figures in Exhibit 30732-X0018, PDF page 7 and Exhibit 30732-X0013, PDF page 6 appear to depict a modular design with each unit block separate. Exhibit 30732-X0013, PDF page 7 appears to depict a single large, enclosed warehouse structure.

Request: (a) Is the mech yard enclosed or open and exposed?

(b) Where is the building entrance, as depicted in Exhibit 30732-X0013, PDF page 7, located in the site layout on PDF page 6?

(c) Please identify where the chillers and exhaust stacks are depicted in Exhibit 30732-X0013, PDF page 7.

(d) Identify whether the data centre and power plant are contained in a single cover structure or a more modular design. If it is the latter, confirm whether more representative drawings have been provided in the consultation material and provide a copy.

(e) If a more representative drawing of the completed project is not part of the consultation material, please submit a drawing or photos of real-world examples.

Response: (a) The mechanical yard is open to the atmosphere and is not enclosed within a building structure.

The mechanical yard is designed with acoustical mitigation features, including sound attenuation walls and equipment layout considerations to assist in meeting the facility's noise design criteria and applicable property-line sound requirements. These structures are intended to reduce off-site noise propagation while maintaining access for equipment operation, maintenance, ventilation, and safety.

The figures referenced in Project application materials represent conceptual design illustrations prepared at different stages of Project development. The final site layout consists of enclosed buildings for the data center and certain

plant equipment, together with outdoor mechanical yard areas that remain open to the atmosphere but incorporate sound attenuation measures as part of the overall facility design. The sound attenuation walls should not be interpreted as building walls or a fully enclosed structure.

(b) The building entrances, along with the location of natural gas power plants, and mechanical yards with chillers are depicted in the image below. The drawing is to scale and is shown on a satellite image at its proposed location in the town of Olds to ensure that the scale of the Project is made clear to residents.

For a higher resolution version of the site layout, see response to Synapse-AUC-2026MAY14-003(a), above.

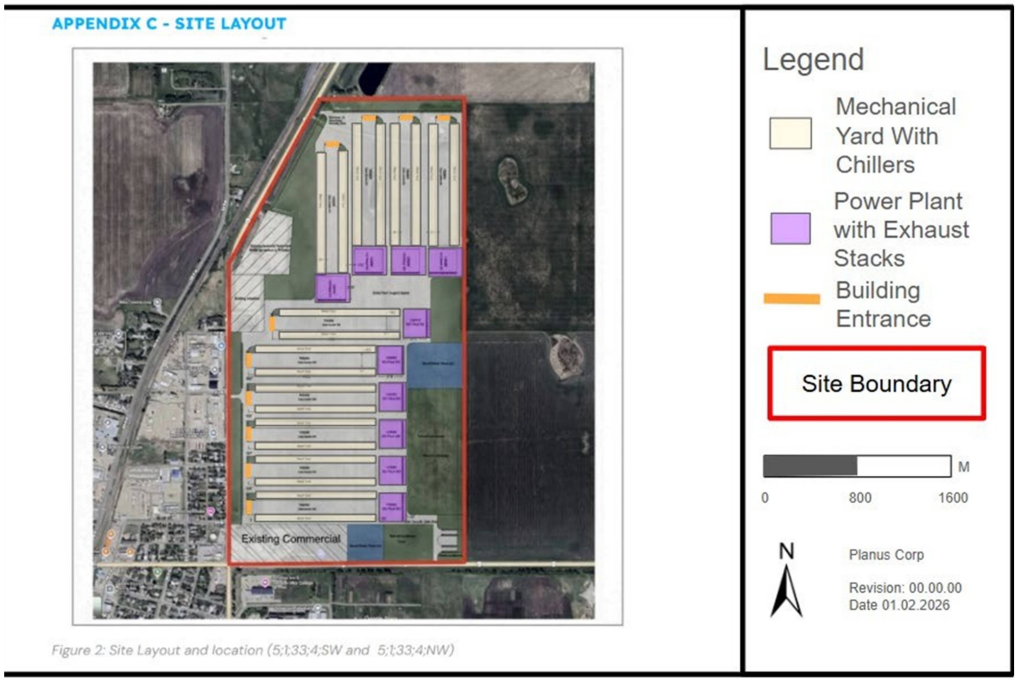


Figure 2: Site Layout and location (5;1;33;4;SW and 5;1;33;4;NW)

(c) The location of the visible chillers is shown in yellow boxes in mechanical yards below.

The location of the power plant and associated stacks is shown in Exhibit 30732-X0013, on PDF page 6. Each stack is ~450m from the front of the building. The exhaust stack is therefore not readily apparent at the scale of the rendering as it is currently designed with a diameter of 6 m. At the time Exhibit 30732-X0013 was prepared, the stack heights had not yet been finalized. The stack heights were, and continue to be, optimized to ensure compliance with the AAAQO while minimizing visual impacts.

A more detailed rendering of the Natural Gas Power Plant was provided in Exhibit 30732-X0020, TP36 on page 39 and 56. This was respectively shown as part of the AUC Participant Information session on February 5th and as part of a presentation to Olds Council on February 23rd. Renderings are also available in multiple videos on Synapse's "We are Listening" website.

(d) The data center and power plant are located in separate covered structures. The exact spacing will be finalized as part of detailed engineering but is expected to be between 20 and 40 ft.

10 substantially identical data centers and power plants are expected to be built as part of the Project. An example rendering is provided in Exhibit 30732-X0013 with a site plan showing the location of all buildings.

Synapse hosted an AUC Participant Information Session on February 5th, 2026, which included a public presentation of the Project. Exhibit 30732-X0020, TP36 -Participant Involvement Program page 39 is a slide from the presentation which shows the natural gas power plant renderings.

Synapse presented to the Olds Council on February 23rd, 2026. The session was streamed live and recorded. Exhibit 30732-X0020, TP36 - Participant Involvement Program page 56 is a slide from the presentation which shows the natural gas power plant renderings.

Synapse second mailout, sent to Occupants and Landowners within the radius described in Synapse-AUC-2026MAY14-012, below, on March 25th and 26th on Exhibit 30732-X0020, TP36 page 71 informs individuals to visit Synapses We Are Listening website for additional information. The website contains multiple videos with additional detailed renderings and project layouts of the facility. Included on the website are videos that discuss:

Our Approach to Noise, Emissions & Water - Learn how we're managing environmental impacts and meeting strict regulations to protect the community and surrounding areas.

Noise Update: Normal & Emergency Operations - Learn about what to expect for noise levels during normal and emergency operations, plus an overview of our upcoming Rule 12 application.

Noise - We follow strict government guidelines to manage noise and help the community understand how compliance is maintained.

Ammonia -Learn how onsite ammonia is safely handled and regulated — just like in farms, ice rinks, and other common facilities.

Good Neighbors to the Night Sky -Learn how our facility is designed with a minimal light footprint and meets or exceeds municipal bylaws.

Traffic Planning -Learn the steps we are taking to ensure safety and minimize disruption on local roads.

Understanding Alberta Ambient Air Quality Objectives - Learn about air quality and how it is regulated by the Province of Alberta to ensure community safety.

Emergency Management -Learn more about how we are designing for emergency preparedness and risk management to minimize the likelihood of incidents and reduce their impact.

(e) Synapse has worked with our architects to generate site renderings which have been included as part of a video/presentation tour that is posted on the Synapse "We are Listening" website.

The two 3D renderings of the site plan below have been posted on the Synapse We are Listening website within the video/presentation. The location of the data center buildings, power plant buildings and mechanical yards have not changed from the original 2D satellite image shared in the original participant involvement brochure.

These renderings are based on current design. Updated drawings shall be provided as detailed engineering progresses.


Synapse

Synapse-AUC-2026MAY14-005

References: **Exhibit 30732-X0001, Rule 007 - Thermal Power Plant Application, PDF page 3;**

Exhibit 30732-X0007, TP 25 - Air Quality Assessment v1.2, PDF page 34;

Exhibit 30732-X0011, TP 31 - Noise Impact Assessment, PDF page 35

Issue: **Diesel backup generators**

Quote: Exhibit 30732-X0001, PDF page 3:

"The estimated heat rate of each plant within the Project is 7.48 GJ/MWh [gigajoules/megawatt hour].

The estimated electrical efficiency of the Project is 48.1%.

The heat rate and efficiency values presented above are representative of the Project in combined-cycle configuration. During initial simple-cycle operation, heat rate and efficiency will be lower, consistent with typical simple-cycle gas turbine performance."

Exhibit 30732-X0007, PDF page 34:

"However, the probability of Modelling Case 4 (i.e., all 10 natural gas-fired power plants shutdown simultaneously) occurring is highly unlikely. Based on correspondence with facilities that are contracted to supply fuel gas to this facility, this event can potentially occur for a maximum of 1% of the time during any year (i.e., ≤87.6 hours per year). If this event does occur, Synapse will shut down the facility before the total annual duration of this upset emission case extends past 87.6 hours in any year."

Exhibit 30732-X0011, PDF page 35:

"The worst-case scenario for proposed facility operations is identified as an event that natural gas supply is fully interrupted due to a natural disaster, pipe rupture, supply/demand issues etc. Synapse identifies the likelihood of this event occurring is once in 5+ years. In such an event, all natural gas power plants are expected to completely lose power in approximately 30 minutes. In the meantime, all back up/emergency generators run simultaneously at 80% load."

Request: (a) What is the estimated heat rate and electrical efficiency of the project when running on the backup diesel generators?

(b) How much diesel fuel will be stored on site and where will it be stored? How long can the power plant power the data centre via diesel generation

under 80 per cent load?

(c) How will the data centre operate when using diesel generation (e.g., will it operate normally or start to shut down safely)?

(d) Please elaborate on how Synapse will monitor diesel generation to ensure the total annual duration the power plant is running on the back-up emergency diesel generators is not more than 87.6 hours per year.

Response:

(a) Project-level heat rate and electrical efficiency values for the emergency diesel generators have not been developed, as the emergency generators are not intended to serve as an alternate generation source for normal facility operations.

The heat rate and electrical efficiency values presented in the application apply to the natural gas-fired combined-cycle generating facility and are not applicable to the emergency backup diesel generators.

The emergency backup diesel generators are not part of the Project's normal power generation configuration and are not intended to supply the full data center or power plant electrical load during extended operation. Their purpose is to protect sensitive real property (GPU and CPU server hardware) and the sensitive intellectual property (IP) stored on that hardware.

As described in the Noise Impact Assessment and Air Quality Assessment, operation of the emergency diesel generators represents a temporary emergency condition only. In view of the thresholds in AUC Rule 012 and the *Alberta Ambient Air Quality Objectives*, in the event of an interruption to the natural gas supply requiring diesel generation that would exceed emission and/or noise limits >1% of a calendar year (87.6 hours), the facility would be safely shut down, unless otherwise permitted by regulatory authorities.

(b) Typically enough diesel fuel is stored to supply 24 to 48 hours of operation at the anticipated operating load. At approximately 80% load, diesel storage will vary from 17,000L/unit (~24 hours) to 34,000L/unit (~48 hours). This represents a site total of 10.2 M to 20.4 M litres of fuel.

Diesel will be stored in generator belly fuel tanks. The belly fuel tanks are double walled with vacuum leak detection. They are expected to be manufactured with heavy gauge steel and powder coated. They are equipped with spill containers at each fill connection that are fixed to the tank and equipped with a manual valve drain into the primary tank. Tanks will also be equipped with vents that will relieve excessive internal pressure caused by exposure to fires. The venting devices will be installed and maintained in accordance with the National Fire Protection Association (NFPA) code NFPA 30, *Flammable and Combustible Liquids Code*.

(c) As described in part (a) above, the emergency backup diesel generators are not intended to serve as a long-term replacement for the natural gas-fired generating facility. Rather, they are provided as part of the mission-critical data center design to support critical infrastructure, protect sensitive real property (GPU and CPU server hardware) and the sensitive intellectual property (IP) stored on that hardware, and facilitate safe facility operation during abnormal or emergency conditions.

In the event of a complete loss of power generation, uninterruptible power supply (UPS) systems will provide immediate ride-through power to critical systems while the facility transitions to non routine upset or emergency operating mode. Additional detail on UPS system function is provided in Synapse-AUC-2026MAY14-010, below. The power generation facility is designed using fail-safe principles, allowing the natural gas-fired generating units to safely shut down and isolate during emergency conditions.

Following a loss of generation, the emergency diesel generators may operate for a limited duration, within the operating limits prescribed by regulatory requirements, to support critical facility functions and provide operators with an opportunity to restore normal power generation. If natural gas-fired generation can be re-established within the regulatory permitted period, the facility will transition back to normal operations and the emergency generators will be cycled down.

If normal generation cannot be restored within the permitted emergency operating period, the data center will be transitioned to a controlled shutdown state and the facility will enter a blackout condition. Once the cause of the outage has been resolved, designated emergency diesel generators will provide black-start capability to restore power to essential plant systems and facilitate the restart of the natural gas-fired generating units.

(d) All mechanical and electrical systems in the data center are monitored by a centralized building monitoring system. Emergency runtime hours for each unit will be recorded, and alarm will be set to ensure they do not exceed allowed site runtime limits.

Synapse-AUC-2026MAY14-006

References: **Exhibit 30732-X0007, TP 25 - Air Quality Assessment v1.2, PDF page 18**

Issue: **Non-routine operations**

Quote: "As indicated in Table 8, the maximum predicted ground-level one-hour PM2.5 [particulate matter <2.5 microns in diameter] concentrations associated with Modelling Case 4 do not comply with the applicable Alberta Ambient Air Quality Guideline (AAAQG). However, the concentrations do comply with Section 3.1.2.2 Non-routine Operations of the *Guidance for Interpreting Regulatory Air Quality Modelling Assessments* (AEPA [Alberta Environment and Protected Areas] 2025) as follows:

- The upset occurs less than 1% of a given averaging time. For hourly AAAQOs [Alberta Ambient Air Quality Objectives], this would provide an allowance of 87.6 hours in a calendar year. For 24-hour average AAAQOs, this would provide an allowance of four 24-hour periods in a calendar year.
- The modelled exceedances for this event are less than 1.5 x the AAAQO for any substances predicted to exceed an AAAQO.
- The upset is not impacting a sensitive receptor as defined in the 2021 Alberta AQMG [Air Quality Model Guideline], (i.e., sensitive receptor concentrations are <1.0 x [AAAQO]). This requirement is intended as a precaution while still allowing for operational flexibility to manage an upset."

Request: (a) Define the conditions under which diesel operation qualifies as:

- an "emergency"
- a "non-routine upset condition"

(b) Identify specific triggers (e.g., gas pressure thresholds, supply interruption criteria) or control system logic which would switch operation over to diesel generation.

(c) Confirm whether diesel operation would occur under:

- partially constrained gas supply
- economic dispatch considerations

- planned outages

(d) Demonstrate how compliance with the AAAQOs would be maintained if annual diesel operations exceed one per cent of the averaging time and an emergency or non-routine upset condition occurs.

Response:

(a) The Project application and associated reports variously use the terms "emergency", "upset", and "non-routine upset" depending on the context of the relevant statement.

The Project Air Quality Assessment uses the term "upset" as defined in the Alberta *Air Quality Model Guideline* (AQMG), which refers to "upsets" as events that occur outside of stable normal operating conditions, which should not occur very often, and could produce significantly more emissions than normal stable operations (see Section 4.2). The AQMG does not provide a definition for "emergency", but contains references to "emergency/upset" operating conditions, suggesting that the terms have the same meaning for the purposes of the AAAQOs (see Appendices A and B). The Air Quality Assessment discusses upset conditions or operations in the context of the need for total emergency backup generation, expected to occur less than 1% of the hours in a calendar year.

Synapse notes that AUC Rule 012 uses the term "emergency" for unplanned events requiring immediate action to prevent loss of life or property, and states that events occurring more than four times a year are not considered unplanned.

(b) Emergency diesel generation would not be used for normal dispatch, economic operation, planned gas turbine outages, or routine maintenance. Diesel generation would only be initiated during abnormal, emergency, or non-routine upset conditions where the natural gas-fired power plant or a portion of the internal electrical distribution system is unable to supply the required critical data center load.

The specific control logic, pressure thresholds, permissive, and trip setpoints will be finalized during detailed engineering, commissioning, and control system integration. However, the general initiating conditions expected to result in transfer to UPS support and subsequent emergency diesel generator operation include:

1. Complete loss of natural gas supply to the facility, including catastrophic pipeline failure, upstream emergency shutdown, loss

of all contracted gas supply, or closure of the plant inlet emergency shutdown valve.

2. Partial loss or restriction of natural gas supply, including low gas pressure, insufficient gas flow, fuel gas blockage, loss of one or more gas suppliers, or fuel gas conditioning failure, where the available gas supply is insufficient to maintain the required number of gas turbine generators online.

3. Unit-specific gas turbine trip or emergency shutdown, including turbine protective trip, fuel gas skid trip, combustion system trip, generator trip, transformer trip, or balance-of-plant trip resulting in loss of generation capacity.

4. Internal electrical distribution failure, including switchgear, feeder, transformer, bus, breaker, relay, or protection system operation that results in loss of power to one or more data center blocks.

5. A rapid load increase or transient electrical event where the required load cannot be supplied by the operating gas turbines within their available startup or ramp-rate capability, resulting in a temporary requirement for UPS support and emergency generation for the affected load block.

6. Loss of plant control power, station service, auxiliary power, or other essential systems required to maintain safe and reliable power plant operation.

Under these conditions, the data center lithium-ion UPS systems would provide immediate ride-through power to critical loads while the control system initiates emergency operating logic. Emergency diesel generators would then start automatically and energize the affected emergency power buses or load blocks required to maintain critical data centre functions.

For a complete loss of natural gas supply or total loss of the natural gas-fired generating facility, the emergency generators would operate for a limited duration of time in accordance with applicable regulatory guidelines. For partial supply interruptions, individual unit trips, or localized electrical distribution failures, only the corresponding emergency generators required to support the affected data center blocks would be expected to operate.

The objective of the operation of emergency diesel generators is to provide a limited period for operators to diagnose the initiating event, restore natural gas supply or natural gas power plant generation capability, in order to transfer load back to the natural gas-fired power plant.

Synapse is in the process of procuring reliable gas supply that exceeds normal and peak operating requirements through diversified suppliers and offsite storage in order to minimize the circumstances in which emergency diesel operation could be required.

Synapse is expecting that its future pipeline operating partner will design the project gas supply infrastructure (for example, by building parallel pipelines) to eliminate common pipeline failure risks including:

i. Pipe blockage

ii. Accidental damage

iii. Downtime due to new supplier tie in

iv. Downtime due to major maintenance

v. Near-end-of-life pipe maintenance

(c) Of the three conditions listed, emergency backup diesel generators would only operate due to unexpected loss of natural gas supply to the power plant.

(d) Synapse will operate the Power Plant, including any operation of the backup diesel generators, in compliance with applicable regulatory guidelines and requirements. Specifically, the Power Plant will be operated such that applicable AAAQOs and AUC Rule 012 PSLs will not be exceeded more than 1% of a calendar year.

In the event of partially constrained gas supply or multiple unplanned natural gas power plant failure, subject to regulatory requirements, Synapse could operate the Project Power Plant under non routine upset conditions using a combination of emergency backup diesel generators and natural gas turbines and still remain below applicable the AAAQO and AUC Rule 012 PSLs.

The Power Plant is designed to provide operational flexibility in the selection of which generators operate during non-routine upset events to minimize noise and emissions impact outside of the site boundary. Environmental elements such as wind direction and temperature, as well as

the circumstances of the unplanned failure would impact which emergency backup generators should be run in order to operate below applicable AAAQOs and AUC Rule 012 PSLs.

Field installed noise and/or emissions monitoring will be used during non-routine upset/emergency events to validate model accuracy and ensure regulatory compliance.

Synapse will not operate emergency backup diesel generators in exceedance of applicable regulatory thresholds unless the responsible regulatory authorities otherwise permit.

Synapse-AUC-2026MAY14-007

References: **Exhibit 30732-X0001, Rule 007 - Thermal Power Plant Application, PDF pages 4 and 10**

Issue: **Gas supply**

Quote: PDF page 4:

"Natural gas will be supplied via natural gas pipeline, providing production gas directly from local natural gas producers at 5,200 kPa [kilopascal], and an inlet pressure to site of 4,100 kPa.

…

The new pipeline is currently in development, and the upstream pipeline operator will be responsible for obtaining all required permits and approvals for its construction and operation."

PDF page 10:

"**Direct to Producer Natural Gas Purchasing Model**

Natural gas is expected to be sourced from three local natural gas producers at a premium to the AECO benchmark, this project provides a critical economic floor for the region's energy sector. This localized demand creates a "locked-in" market that shields local producers from the volatility of broader commodity pricing. This may incentivize continued upstream investment and help stabilize operational revenue for regional drillers. By sourcing energy locally, we reduce the industry's reliance on constrained export pipelines. This arrangement transforms the data center into a high-value anchor tenant for the local oil and gas industry, bolstering job security and providing the financial certainty needed for future infrastructure and innovation."

Request:

(a) When fully constructed, what is the daily gas requirement of the data centre?

(b) Please list the local natural gas producers in the area.

(c) What is the available gas capacity at the various upstream gas processing facilities in the area?

(d) Confirm whether Synapse has secured gas supply and if so, from which supplier(s) and is it a long-term contract?

(e) Please elaborate on the available gas supply in the area over the lifetime of the power plant. Does Synapse have plans to contract natural gas from the Integrated Alberta System in the future?

(f) Please elaborate on what Synapse plans to do if the gas supply is

insufficient or interrupted.

Response:

(a) The exact daily gas requirement of the data center will depend on the specific operational requirements of the data center. These details will not likely be known until the required regulatory approvals have been obtained, a definitive daily gas demand cannot be provided at this time.

Natural gas requirements for normal operations are expected to be in the range of 60-70% of output capacity which requires 4,900 e3m3/day (490 e3m3/day per plant), Peak load requires approximately 6,700 e3m3/day (670 e3m3/day per plant) of natural gas.

(b) Major local sources of natural gas include at least three major nearby gas processing facilities.

(c) The available gas capacity is as follows:

	Potential Gas Supply per Supplier		Potential Gas Supply Cumulative	
Potential Supply Volume	Normal Baseline (4,900 E3M3/day)	Peak Load (6,720 E3M3/day)	Normal Baseline (4,900 E3M3/day)	Peak Load (6,720 E3M3/day)
900 E3M3/day	18%	13%	18%	13%
2,830 E3M3/day	58%	42%	76%	56%
2,688 E3M3/day	55%	40%	131%	96%
3,500 E3M3/day	71%	52%	202%	148%
2,000 E3M3/day	41%	30%	243%	177%
Up to 6,720 E3M3/day	137%	100%	380%	277%

(d) Commercial gas supply arrangements are being developed under nondisclosure agreements and remain subject to Project approvals. Accordingly, contractual terms have not yet been finalized; however, the anticipated contract term is approximately 10 to 20 years in duration.

(e) To ensure reliable gas supply over the lifetime of the Project, other options are being explored with a variety of suppliers including:

i. increasing number of additional private suppliers;

ii. working with major local sources to increase natural gas supplier production capacity;

iii. working with major local sources to improve gas plant reliability;

iv. working with major local sources to improve gas plant utilization;

v. connection to non-regulated long and short duration gas storage facilities; and

vi. the use of existing ATCO pipeline through property or supply from other nearby gas utility providers.

Synapse is committed to ensuring reliable gas supply to the facility and supporting central Alberta local natural gas producers and contractors. In the unlikely event the supply diversity and storage options identified above are not determined to provide reliable gas supply to the facility, Synapse will examine connection options into the Integrated Alberta System.

Synapse's commitment to natural gas supply reliability extends beyond natural gas procurement. Parallel natural gas pipelines are expected to be incorporated into the design to eliminate common pipeline failure risks including:

i. Pipe blockage;

ii. Accidental damage;

iii. Downtime due to new supplier tie in;

iv. Downtime due to major maintenance; and

v. Near-end-of-life pipe maintenance.

Synapse has strategically designed its natural gas power plant using smaller form factor simple cycle and HRSG turbines to increase component redundancy and improve natural gas plant reliability.

(f) Synapse is working with major gas plants in the area for base gas requirements and emergency supply with long-term delivery contracts. Alternate long-term suppliers and interruptible gas supply contracts are being evaluated including non-regulated and integrated systems. In the event of unexpected interruption of natural gas supply, the Project would run on emergency diesel generators to no more than its regulatory permitted maximum threshold.

Synapse-AUC-2026MAY14-008

References: **Exhibit 30732-X0001, Rule 007 - Thermal Power Plant Application, PDF page 7**

Issue: **Public benefits**

Quote: "**Employment and Workforce Development**

- Approximately 500 direct long-term operational jobs, including roles in operations, maintenance, security, and facility management. Included in this figure, the Power Plant is expected to create approximately 100 direct long-term operational jobs.
- A structured training and workforce development program will be established in collaboration with local educational institutions to develop skilled labour within the region.
- An additional 500 to 1,000 indirect and induced jobs are anticipated through supporting industries and services.
- Between 1,000 and 2,000 construction jobs are expected during the development phase."

Request: (a) Please provide a breakdown of the 500 direct long-term operational jobs. Are the 100 jobs attributed to the power plant included in the 500-job estimate or in addition to the 500 jobs?

(b) Please elaborate on the 500 to 1,000 indirect jobs estimate

Response: (a) A breakdown of the 500 direct long-term operational jobs is provided in the image, below. The 100 jobs attributed to the power plant are included in the 500-job estimate. Synapse intends to locate its headquarters at the Project site in Olds, Alberta, which will result in greater on-site administrative and management presence than would otherwise be required.

(b) We anticipate the Project will create 500 to 1,000 indirect and induced jobs through supporting industries and services. Hyperscale organizations occupying facilities of this scale have historically hired on a ratio of 1:1 to 2:1 relative to our full time hiring. These positions typically include data center operations roles that oversee the Synapse on-site team, as well as specialized IT and technical personnel responsible for managing and maintaining their equipment and ensuring continuous operations.

Synapse-AUC-2026MAY14-009

References: **Exhibit 30732-X0001, Rule 007 - Thermal Power Plant Application, PDF page 12;**

Exhibit 30732-X0006, TP 19 - Emergency Management Plan A9

Issue: **Emergency response plan**

Quote: Exhibit 30732-X0001, PDF page 12:

"The EMP [emergency management plan] has been circulated to the Town of Olds and local emergency response stakeholders for review and comment and has also undergone peer review with experienced industry professionals to support alignment with regulatory expectations and industry best practices."

Preamble: Risks associated with on-site diesel storage do not seem to be considered in the emergency management plan. The Olds Hospital and Care Centre does not appear to be in the emergency management plan. The hospital is not discussed in the participant involvement program report or included in the mailing list. The emergency management plan lacks detail on evacuation procedures for the public and notification/warning to the public.

Request: (a) If diesel fuel will be stored on site:

(i) Please update the emergency management plan to consider any diesel associated risks.

(ii) Comment on relevant regulations applicable to above-ground storage tanks and how the project will comply with these regulations.

(b) Please confirm whether the Olds Hospital and Care Centre was consulted on the project and on the emergency management plan. Provide a summary of the consultation with the hospital.

(c) Please elaborate on how the public will be warned of emergency situations related to the power plant and evacuation procedures for the public.

Response: (a) Emergency diesel fuel storage systems associated with the Project will be designed, installed, operated, and maintained in accordance with all applicable federal, provincial, and municipal regulatory requirements in effect at the time of construction.

Diesel fuel is classified as a Class II combustible liquid and presents a substantially different hazard profile than highly volatile fuels such as

natural gas, propane, or gasoline. The primary hazards associated with diesel fuel are localized fire and environmental release scenarios.

The Project is not expected to utilize a centralized bulk diesel storage facility. Rather, emergency diesel generators will be equipped with integral, double-walled belly tanks designed and supplied as part of the generator package. These tanks are intended to provide sufficient fuel inventory to support emergency operation of the generators for the duration specified by the equipment manufacturer and project design requirements. Diesel fuel inventories will therefore be distributed amongst multiple generator packages and limited to the quantity required to support emergency operation. Fuel replenishment, if required, will be accomplished through periodic delivery by licensed fuel transport providers.

Applicable requirements are expected to include, but are not limited to:

- National Fire Code - 2023 Alberta Edition;
- National Building Code - 2023 Alberta Edition;
- NFPA 30 – Flammable and Combustible Liquids Code;
- Environmental Protection and Enhancement Act (*EPEA*) requirements related to spill prevention, containment, and environmental protection; and
- Applicable municipal permitting and fire protection requirements.

Detailed engineering will incorporate recognized industry standards and regulatory requirements governing emergency generator fuel systems, including provisions for double-wall containment, spill prevention, overfill protection, emergency isolation, fire protection, inspection, maintenance, and emergency response planning.

Accordingly, Synapse does not anticipate diesel fuel storage to represent an off-site risk. The diesel systems are intended solely to support emergency operations, utilize limited fuel inventories distributed amongst individual generator packages, and will be designed and operated in accordance with applicable codes, standards, and regulatory requirements.

(b) Synapse can confirm Olds Hospital and Care Center has now been consulted on the Project and the Emergency Management Plan (EMP). A copy of the draft Emergency Response Plant(ERP) and EMP has been shared.

Synapse spoke with Olds Hospital and Care Center site manager on May 21st, 2026. It was agreed that coordination would continue through to operations and based on the information provided there was not an urgent requirement to complete the related sections of the EMP.

In response to a request from the hospital, Synapse will coordinate in provisioning of a list of all hazardous inventory stored and consumed on site including supplier data sheets (SDS) and first aid measures recommended by the manufacturer to the hospital. Synapse will also identify specific hazards that are unique to the Project facility (e.g., electrocution, high pressure steam, ammonia inhalation) to verify available resources at Olds Hospital that can be provided as first aid services in the event of harm.

(c) The Synapse EMP is founded on the principle that credible hazards associated with the Project are to be identified through detailed engineering design, Process Hazard Analyses (PHA/HAZOP), Layer of Protection Analysis (LOPA), Qualitative Risk Assessments (QRAs), and risk assessment processes, then mitigated through layered engineering and operational safeguards such that incidents are designed to be contained and managed on-site wherever reasonably practicable. The EMP incorporates a structured Incident Command System (ICS) framework and establishes procedures for escalation, responder coordination, public protection, and municipal interface.

Under emergency conditions, Synapse personnel would initially activate the site ICS structure and implement immediate stabilization, isolation, and protective actions. Where external emergency response support is required, response activities would transition into, or integrate with, a Unified Command structure involving the appropriate responding authorities, including the Town of Olds Fire Department, RCMP, Alberta Health Services EMS, and municipal emergency management personnel, depending on the nature and severity of the incident.

The EMP further establishes that incidents with actual or potential off-site impacts requiring public protective actions would immediately trigger coordination with the Town of Olds Emergency Management Agency and responding authorities. Public notification and community protective measures, including shelter-in-place advisories, evacuation instructions, traffic control, road closures, or other public safety actions, would then be coordinated through the Town of Olds' established emergency management framework and municipal notification systems.

The Town of Olds currently maintains multiple public notification mechanisms, including:

- The Voyent Alert public notification platform;
- Alberta Emergency Alert system access through trained municipal personnel; and
- Direct communication methods where required, including door-to-door notification, telephone communication, emergency responder interface, and other site-specific public notification measures.

These systems and procedures are routinely reviewed and exercised by the municipality due to the existing presence of regional industrial infrastructure, including pipelines, rail infrastructure, gas plants, and other industrial facilities.

Consistent with discussions held between Synapse and the Town of Olds Fire Chief / Director of Protective Services, there is no expectation that minor localized incidents contained entirely within the facility and without risk to public safety would require municipal public notification unless otherwise required by the AUC, another regulatory authority, or internal company policy. However, where an incident escalates to a level involving potential risk to the public, the Unified Command model identified within the Synapse EMP would be implemented in coordination with municipal emergency management authorities and responding agencies to support public protection and emergency communications.

Synapse-AUC-2026MAY14-010

References: **Exhibit 30732-X0001, Rule 007 - Thermal Power Plant Application, PDF page 12;**

Exhibit 30732-X0006, TP 19 - Emergency Management Plan A9, PDF page 15

Issue: **Battery energy storage systems**

Quote: Exhibit 30732-X0001, PDF page 12:

"A separate Operations ERP [emergency response plan] will be developed and implemented prior to commissioning and startup of the facility. This plan will address operational hazards associated with combined-cycle power generation, fuel gas systems, high energy electrical systems, and Battery Energy Storage Systems (BESS), and will align with applicable regulatory, insurance, and industry best practices."

Exhibit 30732-X0006, PDF page 15:

"To support the 1 GW [gigawatt] data center load, the Synapse campuses utilize extensive Lithium-Ion Uninterruptible Power Supply (UPS) and Battery Energy Storage Systems (BESS)."

Request: Please confirm whether a battery energy storage system is being proposed for this project. If it is, file an application with the Commission.

Response: Synapse confirms that a commercial or utility-scale Battery Energy Storage System (BESS) is **not** being proposed as part of the Project. The reference to a "BESS" in the draft Emergency Management Plan (EMP) will be removed in the next revision of the document to ensure it accurately reflects the Project scope.

For clarity, the Project will utilize standard, behind-the-meter Uninterruptible Power Supply (UPS) units equipped with lithium-ion batteries. These UPS units are fundamentally distinct from a BESS in their application, and function:

- Grid Isolation: The UPS units are designed solely for internal backup power and power quality management. They will operate entirely behind-the- meter and will not, under any circumstances, supply or inject power back into the public Alberta Interconnected Electric System (AIES) grid.

- Asset and Data Protection: UPS units protect sensitive real property (GPU and CPU server hardware) and the sensitive intellectual property (IP) stored on that hardware by:

  i. filter power irregularities

  ii. bridge the momentary gap between a power outage and the startup of onsite emergency generators

  iii. provide sufficient time for automatic startup and synchronization of emergency backup generators and, where required, operator intervention to support restoration of critical systems.

- Standard Industry Practice: These units represent standard, mission-critical infrastructure deployed routinely throughout Alberta in sensitive applications such as hospitals, financial institutions, and commercial or industrial data centers.

- Incidental Use: The fully enclosed UPS battery cabinets occupy less than 7% of the total square footage of the Data Center, with (2) 700kwhr clusters located in each 2-hour fire separated room.

The internal UPS units do not constitute a market-participating or grid-connected energy storage resource. The lithium ion batteries are not part of the Power Plant and do not contribute to the cumulative noise of the Power Plant. Accordingly, Synapse respectfully submits that an application under AUC Rule 007 for a battery energy storage system is not required for these components.

Synapse-AUC-2026MAY14-011

References: **Exhibit 30732-X0001, Rule 007 - Thermal Power Plant Application, PDF page 3;**

Exhibit 30732-X0008, TP 26 - Environmental Evaluation, PDF page 5

Issue: **Water volumes**

Quote: Exhibit 30732-X0001, PDF page 3:

"No continuous water consumption is required, as all process water (e.g., blowdown, sampling) is captured, treated, and returned to the closed-loop condensate cycle. The current design basis indicates a total maximum make-up water requirement of approximately 20 m³ [cubic metres]/day across all ten (10) power blocks, attributable primarily to evaporative losses within the boiler feedwater cycle."

Exhibit 30732-X0008, PDF page 5:

"Water supply for the operation of the data centers and infrastructure, including plant usage and use by data centre personnel, is estimated at 60 m3 per day and will be provided through the Town of Olds' water distribution system."

Request: (a) Please clarify the discrepancy in the estimated water usage.

(b) Please confirm the source of the water. Also confirm whether a municipal licence is needed and whether the source will have adequate volume for this project.

Response: (a) There is no discrepancy in estimated water usage. Synapse anticipates a total daily water demand of 60m³, consisting of approximately 20m³ for plant operations and 40m³ for onsite staff.

(b) Synapse currently anticipates two separate water supply streams associated with the Project.

The first water stream consists of municipal potable and service water used to support data center operations, domestic consumption, sanitation facilities, and general site services. Demand for this water stream is anticipated to be up to 60 m^3 per day and is expected to be supplied through the Town of Olds municipal water distribution system. The Town of Olds is a member of the Mountain View Regional Water Services Commission (the "Water Services Commission"), which sources water from the Red Deer River. The Water Services Commission currently holds an annual

water licence exceeding 9 million m³/year and is presently utilizing approximately one-half of its licensed allocation. The Anthony Henday Water Treatment Plant has a treatment capacity of approximately 30,000 m³/day and currently supplies approximately 12,000 m³/day to regional users. Based on available information and discussions completed to date, adequate municipal water capacity is available to support the Project's anticipated municipal water demand.

The second water stream consists of high-purity boiler make-up water required for the combined-cycle power generation facilities. Current design targets indicate a total make-up requirement of approximately 20 m³ per day across all ten power blocks, although this value will be refined through detailed engineering and optimization of the boiler feedwater cycle. Municipal water is not presently intended to serve as the primary source of boiler make-up water because the quality requirements for high-pressure HRSG service necessitate extensive treatment and polishing prior to use.

Instead, Synapse is evaluating the supply of pre-treated demineralized and deionized boiler-quality water from existing industrial partners within Alberta's oil and gas sector. Several facilities in the region currently operate water treatment systems capable of producing high-quality boiler feedwater and are operating below their installed treatment capacity. Boiler make-up water is expected to be delivered periodically by truck and stored onsite within dedicated storage systems to minimize transportation frequency and provide operational flexibility. Final supply arrangements, storage volumes, and water quality specifications will be confirmed during detailed engineering and commercial negotiations with prospective suppliers.

Based on current assessments, Synapse does not anticipate any limitations in securing adequate volumes of either municipal service water or boiler make-up water for the Project.

Synapse-AUC-2026MAY14-012

References: **Exhibit 30732-X0020, TP36 -Participant Involvement Program, PDF page 4;**

Exhibit 30732-X0018, TP 6 - Drawings & Maps, PDF page 1;

Exhibit 30732-X0015, TP 38 - In Appendix A1 Format

Issue: **Consultation**

Quote: Exhibit 30732-X0020, PDF page 4:

"**Personal Notification Radius (801m to 2000 m)**

- Over 1000 residences were identified in this range
- A Project Information Package (see TP 36.1) and AUC Public Involvement Brochure (see TP 36.2) was mailed to all landowners
- Town of Olds social media, local radio interviews, local newspaper articles and televised media coverage of the project would occur as shared in section 3.1

…

Applicant has retained copies of all mailing labels and mailing lists for stakeholders contacted by mail, as listed above in section 2.2, within the personal consultation and personal notification radius."

Preamble: Exhibit 30732-X0018, PDF page 1 depicts the notification radius for the project. The Commission searched some streets within the notification radius and compared them against the mailing list. Some areas of Olds do not appear to be fully included in the mailout (for example there are only five addresses on Vantage Cresent and no addresses on Vermont Close in the mailing list).

Request:

(a) Confirm whether land title searches were conducted and elaborate on how the mailing list for the notification radius was created.

(b) Is the Vista area of Olds within the notification radius of the project?

(c) Was the Vista area of Olds fully notified of the project and if so, provide proof of notification.

(d) Please confirm what additional measures Synapse did to catch gaps or omissions in its notification of the project.

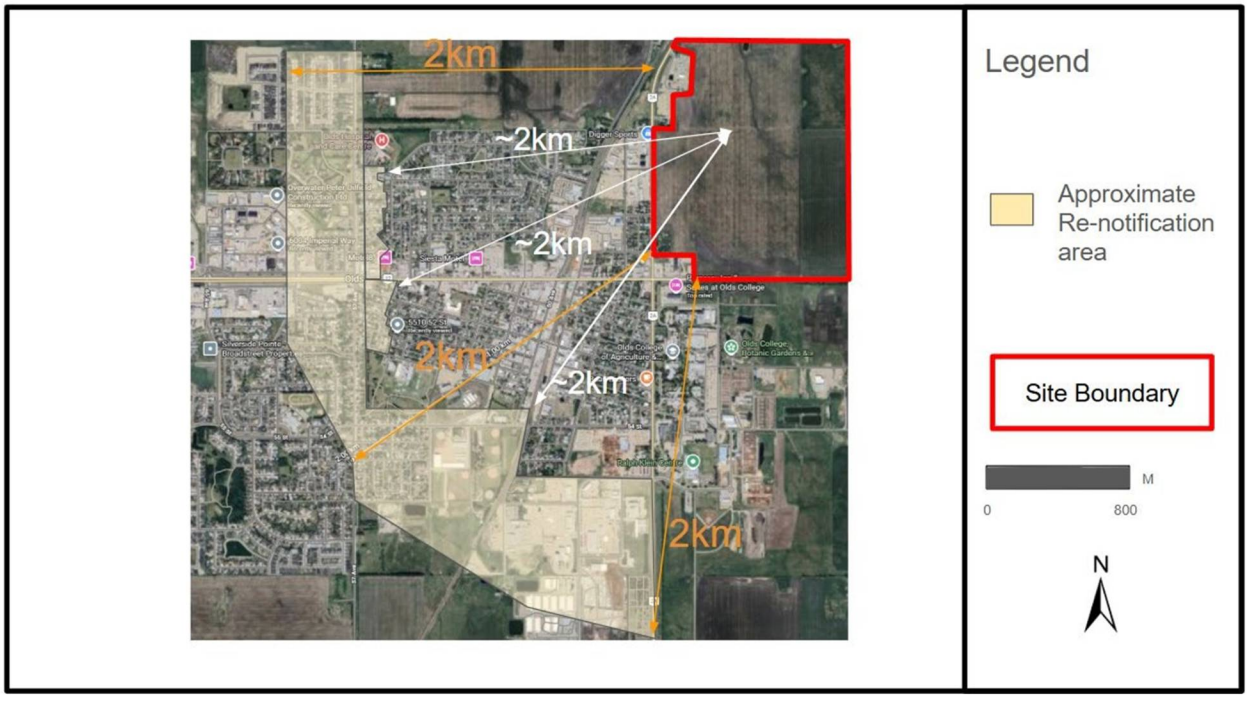
Response:

(a) Synapse relied on public land registry information and engaged with the Town of Olds to help ensure mailing list coverage was as broad and expansive as possible.

(b) The Vista Area is partially within the revised notification radius described in point (c).

(c) Since the creation of the Project mailing list, Synapse undertook a comprehensive review of mail notification provided to landowners within the 801 to 2000 metre notification radius. The review identified that Synapse inadvertently measured the initial notification radius from the centre of the Project Area rather than the Project Area boundary. The result is that many of the landowners located approximately 1600 to 2000 metres from the Project Area boundary (see image below) were not notified by mail. Synapse notes that many of the landowners in this area were otherwise notified about the Project, including via Synapse's broader community notification and engagement efforts described in relation to point (d), below. This is evidenced primarily by the various statements of intent to participate filed by residents in this area.

Some but not all of the Vista area was notified. Synapse will mail the Project Participant Information Package to all landowners within the re-notification boundary zone marked below the week of June 8, 2026. The notification will include all Vista landowners within the re-notication area approximated in the image below.



(d) Synapse used a multipronged approach to the distribution of Project information at the first instance.

In addition to traditional mail notifications, Synapse published Project information on social media and traditional media outlets.

Digital outreach continues to be conducted using geo-targeted advertisements. Ads were originally posted on Facebook and are currently displayed in the Olds section of the website for The Albertan, the local newspaper.

The Town of Olds also shared Project information across its social media platforms.

Traditional media coverage included provincial and national news outlets such as CBC, CTV, and Global, with a strong emphasis placed on local news and radio coverage. Synapse provided multiple media interviews in which it encouraged residents to visit the Synapse website and attend upcoming open houses for additional information.

Following its review of Project mail notifications as described in part (c) above, the week of June 1, 2026, Synapse completed random door to door verifications with 38 residents located approximately 1600 to 2000 metres from the Project Area boundary to determine whether landowners were aware of the Project. 31 homes refused to speak about the data center project. Of the 7 residents who agreed to speak about the project 100% confirmed they were aware of the Project through one or more of the platforms shared above as well as word of mouth.

As noted in part (c), Synapse will complete additional mail notifications the week of June 8, 2026, in order to ensure full notification coverage.

Synapse-AUC-2026MAY14-013

References: **Exhibit 30732-X0020, TP36 -Participant Involvement Program, PDF page 9**

Issue: **Applicant information session**

Quote: "Hosted by Synapse Real Estate Corp. with ~300 attendees. To help answer any detailed questions, the event was attended by four of the Applicant's senior prospective team members. Including representatives for HR [human resources], Data Center Operations/Security, and Natural Gas Power Plant Operations/Engineering(Participant Team). Two Consultants also attended.

ID verification was conducted to ensure attendees were visiting from the town of Olds or surrounding Mountainview County."

Request: (a) What is the rationale for limiting participation to attendees from the town of Olds and surrounding area?

(b) How many participants were denied participation?

Response: (a) Participation was not limited to attendees from the Town of Olds and surrounding area. Due to the number of attendees and size of the venue, attendance was split between two sequential information sessions, with attendance at the first prioritized for local residents. The venue was sized based on attendee turn out at other AUC information sessions.

(b) All participants who remained for the second information session presentation were provided entrance.

Synapse-AUC-2026MAY14-014

References: ***Technology Innovation and Emissions Reduction Regulation***

Issue: **Technology innovation and emissions reduction (TIER)**

Request: (a) Please confirm if the Synapse facility will be a TIER-regulated facility.

(i) If the facility will be TIER-regulated, please describe the compliance obligations for the facility and describe how these obligations will be met.

(ii) If the facility will not be TIER-regulated, will Synapse opt in to the regulation?

Response: (a)

(i) Synapse anticipates that the Project will be a Technology Innovation and Emissions Reduction (TIER) regulated facility during commercial operations. While the Project's final regulatory status will be confirmed during detailed engineering and prior to startup, the anticipated scale of

operations and associated greenhouse gas emissions indicate that the facility will be subject to the requirements of the TIER Regulation.As a TIER-regulated facility, Synapse would be required to comply with applicable greenhouse gas emissions quantification, monitoring, reporting, verification, and compliance requirements established under the TIER Regulation. Compliance obligations may include achievement of prescribed emissions performance benchmarks and the use of eligible compliance mechanisms available under the Regulation, including emissions reductions, emission performance credits, offset credits, or payment into the TIER Fund, as permitted by the applicable regulatory framework. Synapse intends to meet all applicable TIER requirements and will develop the necessary emissions monitoring, reporting, and compliance management systems prior to commencement of commercial operations.

(ii) As indicated above, Synapse anticipates that the Project will qualify as a TIER-regulated facility (large emitter). Should the final determination differ from this expectation, Synapse will evaluate the available compliance and operational options at that time and proceed accordingly.

Synapse-AUC-2026MAY14-015

References: **Exhibit 30732-X0008, TP 26 - Environmental Evaluation, PDF page 5**

Issue: **Duty to reclaim**

Quote: "Reclamation is not envisioned as being a plausible future requirement of the Project lands."

Preamble: The *Environmental Protection and Enhancement Act* describes the duty to reclaim and the specifics of this duty.

Request: (a) Please confirm that it is Synapse's position that reclamation is not required at this facility at any point of the project's lifetime.

(b) If yes, indicate how this position is aligned with the duty to reclaim as described in the *Environmental Protection and Enhancement Act* or if a variance or exemption to this duty is applicable and has been obtained from the relevant regulator

Response: (a) Not confirmed. The statement in the Environmental Evaluation was intended to convey that the anticipated reclamation requirement will be to return the Power Plant lands to a state capable of use for light industrial purposes, reflective of the current zoning of the Project lands (as opposed to reclamation to a natural or agricultural state).

(b) To be clear, Synapse will comply with all requirements to abandon, reclaim, and, if necessary, remediate Project lands at the end of Project life, consistent with all approval requirements and statutory obligations, including in relation to the Power Plant under the *Environmental Protection and Enhancement Act* and the associated *Conservation and Reclamation Regulation* (Alta. Reg. 115/1993). Synapse acknowledges that, as the approval holder, it bears responsibility for ensuring that all lands disturbed by the Project are returned to an equivalent land capability. This includes decommissioning, dismantling, and removal of all infrastructure, equipment, and associated facilities, unless otherwise authorized or directed by applicable regulatory authorities.

AEPA has confirmed to Synapse that the EPEA approval will have a section on decommissioning and land reclamation requirements that will address any future land use capabilities. Synapse will adhere to the requirements in the EPEA approval.

Synapse-AUC-2026MAY14-016

References: **Exhibit 30732-X0001, Rule 007 - Thermal Power Plant Application, PDF pages 20 and 21**

Issue: **Federal impact assessment**

Quote: PDF page 20:

"EIA [environmental impact assessment] confirmation (on March 3rd, 2026) that further assessment of activity is not required"

PDF page 21:

"Synapse is continuing to evaluate its approach to addressing the federal Impact Assessment Act and is actively monitoring the evolving legal framework.

…

In these circumstances, requiring the Company to complete the federal project description process prior to the Commission advancing its review would introduce delay and uncertainty without a corresponding regulatory benefit or legal rationale."

Request:

(a) Please file the "EIA confirmation," clarify which authority issued this confirmation and comment on the recommendations provided within this confirmation.

(b) Please comment if the Impact Assessment Agency of Canada (or other authority) has formally provided an exemption to their assessment process for:

(i) a power plant exceeding 200 MW;

(ii) the data centre; or

(iii) exemption to both activities.

Response:

(a) Please see Synapse-AUC-2026MAY14-016 Attachment – EIA Confirmation Lette**r** for a copy of the letter from Karen Tomashavsky of AEPA dated March 3, 2026, confirming that no environmental impact assessment report is required in respect of the Project.

(b) The Impact Assessment Agency of Canada (IAAC) has not formally provided an exemption to its assessment process at this time.

Further to their Memorandum of Understanding signed on November 27, 2025, Alberta and Canada have signed a Cooperation Agreement on Environmental and Impact Assessment dated April 2, 2026. Among other things, this new Cooperation Agreement acknowledges that, where a project falls primarily within provincial jurisdiction, Canada will recognize Alberta as best placed to undertake an assessment and will rely on Alberta's assessment or regulatory processes to assess the effects of a project, including those that fall within federal jurisdiction.

Synapse is continuing to engage with IAAC regarding its implementation of the Cooperation Agreement and the contents of an initial project description for the Project, including opportunities for IAAC to rely on the filings made in the context of this proceeding (as expressly contemplated by the Cooperation Agreement). A draft review pre-consultation meeting between Synapse and IAAC representatives occurred on June 2, 2026, where Synapse met with IAAC representatives to discuss the need and contents of an initial project description in respect of the Project. Synapse currently anticipates submitting a draft initial project description to IAAC by July 2026.

Synapse-AUC-2026MAY14-017

References: **Exhibit 30732-X0009, TP 28 - Environmental Protection Plan, PDF page 1**

Issue: **Author qualifications**

Preamble: The environmental protection plan (EPP) is prepared for Synapse Real Estate Corp by the CEO of Synapse Real Estate Corp.

Request: Please file a curriculum vitae for the author of the EPP and comment on the qualifications of this author to prepare this document.

Response: Please find the CV of the author, Mr. Jason van Gaal, enclosed as **Synapse-AUC-2026MAY14-017 Attachment – CV Mr. Jason van Gaal.**

The author of this Environmental Protection Plan (EPP) is a Professional Engineer (P.Eng.) with over 15 years of experience in the site selection, design, engineering, and lifecycle operations of hyperscale and modular data centers across Canada.

This comprehensive EPP integrates site-specific environmental considerations with both construction-phase and ongoing operational elements. The document was developed with direct reference to Exhibit 30732-X0008, TP 26, and incorporates existing Alberta-based EPP frameworks, augmented by the author's extensive expertise in data center construction and operations.

The EPP is a living document designed to evolve alongside the project. It proposes a flexible framework that integrates experienced environmental experts directly into the construction and operations teams. Specifically, the following roles will be actively involved during the construction phases to ensure the effective execution of all environmental commitments:

- Environmental Advisor
- Environmental Inspector
- Resource Specialist

The Environmental Evaluation (Exhibit 30732-X0008, TP 26 - Environmental Evaluation) notes that:

"A spill response procedure, erosion and sediment control plan, and a wildlife management plan should be developed and incorporated into the stand-alone

project-specific environmental protection plan required in accordance with TP28 of AUC's Rule 7."

Synapse commits to incorporating these specific plans into the EPP during the construction phase and prior to the commencement of operations. Synapse will also engage environmental experts to support implementation of the EPP during construction.

Finally, in response to this IR and to ensure robust environmental protection, Synapse has retained an independent environmental expert to review and provide recommendations on the EPP. The results of this review will be incorporated into the final EPP and provided to the Commission for information by July 7th, 2026.

Synapse-AUC-2026MAY14-018

References: **Exhibit 30732-X0001, Rule 007 - Thermal Power Plant Application, PDF page 11;**

Exhibit 30732-X0008, TP 26 - Environmental Evaluation, PDF pages 5 and 16;

Exhibit 30732-X0009, TP 28 - Environmental Protection Plan, PDF page 9

Issue: **Wetlands**

Quote: Exhibit 30732-X0001, PDF page 11 and Exhibit 30732-X0008, PDF page 16:

"For some wetlands, this will result in the entire loss of the wetland area, while for some wetlands that straddle the Project boundary, the Project will result in partial loss of wetlands."

Exhibit 30732-X0008, PDF page 5:

"Proposed pedestrian areas around the periphery of the site will provide approximately 4 ha [hectares] of additional open space."

Exhibit 30732-X0009, PDF page 9:

"It is expected all Class D wetlands will be directly impacted by the Project."

Preamble: The *Alberta Wetland Assessment and Impact Report Directive* requests a description of all anticipated impacts on wetlands including information relating to direct and indirect temporary and permanent impacts on wetland area and function. The Commission understands that Synapse's submission discusses direct loss of wetland area, but does not offer comment on direct and indirect impacts to function that may be relevant for partial impacts.

Request: (a) Please comment on how Synapse will maintain wetland function in cases of partial wetland loss.

(b) Is wetland compensation anticipated if complete function cannot be maintained in the remnant wetland areas?

(c) Has the concept of partial wetland loss been discussed with Alberta Environment and Protected Areas?

(d) Describe how wetland areas straddled by the project will interact with the proposed peripheral pedestrian areas.

(e) Please clarify what is meant by Class D wetlands. If this refers to Alberta Wetland Rapid Evaluation Tool (ABWRET) classification:

(i) File the ABWRET scores.

(ii) Indicate if Synapse intends to only directly impact ABWRET Class D wetlands.

Response:

(a) A spring wetland field investigation was completed on May 8, 2026 as contemplated in the Project Environmental Evaluation (Exhibit 30732-X0008, TP 26 - Environmental Evaluation PDF 16). As a result of the field investigation, the preliminary wetland delineations in the Environmental Evaluation have been revised and finalized (see **Synapse-AUC-2026MAY14-018 Attachment – Revised Environmental Evaluation**). Based on final wetland delineations, there are only two wetlands that straddle the Project lands. In both cases, based on the small size of the wetland remnant (i.e., the non-impacted portion) it will not be possible to definitively justify the continued functioning of the remnant. As a result, Synapse will be seeking approval for complete loss of these two wetlands.

(b) As noted above, Synapse will be seeking approval for the complete loss of the two partially impacted wetlands. Wetland compensation (replacement) is required, and will be undertaken, for the full area of both wetlands.

(c) Please refer to part (a) above. The Project *Water Act* application with respect to wetland disturbance will not include any partial wetland impacts.

(d) The proposed peripheral pedestrian areas referred to in the preamble to this request will form part of the Project footprint. These areas were considered when assessing wetland impacts from the Project and included in the wetland field investigation discussed in part (a). As noted above, approval will be sought for full impacts (loss) of partially impacted wetlands.

(e)

(i) The ABWRET-A scores will be included in the Wetland Assessment and Impact Report (WAIR) for the Project which is currently being prepared. Synapse will file the ABWRET-A score information with the Commission once the WAIR is complete. It is anticipated wetlands will be classified predominantly as Class D but has not yet been confirmed.

(ii) As noted above, the Project will directly impact 8 wetlands in the Project footprint and Synapse will be applying for impacts (loss of) both. ABWRET-A values for those wetlands have not yet been assigned. Please refer to part (d)(i) above.

Synapse-AUC-2026MAY14-019

References: **Exhibit 30732-X0007, TP 25 - Air Quality Assessment v1.2, PDF page 1;**

Exhibit 30732-X0006, TP 19 - Emergency Management Plan A9,

PDF page 14

Issue: **Air quality**

Quote: Exhibit 30732-X0007, PDF page 1:

"Planus Corp."

Exhibit 30732-X0006, PDF page 14:

"The EMP incorporates engineered secondary containment systems, vapor suppression procedures, and formal plume dispersion modeling to guide emergency responder approach routes and define hazardous exclusion zones during a loss of containment event."

Request: (a) Please describe who Planus Corp. is and its relationship with Synapse Real Estate Corp.

(b) Please indicate where the formal plume dispersion modelling is filed and comment on the outcomes of this modelling.

Response: (a) Planus was included on the title of the Project Air Quality Assessment in error. The title will be revised to reflect Synapse Real Estate Corp. as part of any subsequent Air Quality Assessment submission. There is no direct relationship between Planas Corp. and Synapse.

(b) Formal plume dispersion modelling has not yet been finalized for the Project. The filed Project Emergency Management Program (EMP) will be refined as Project design advances, as discussed further below. Formal plume dispersion modelling is being contemplated as a potential risk assessment and emergency planning tool that may be utilized during detailed engineering and operational planning, where warranted by the results of formal hazard assessments.

The Project is presently in the preliminary design stage. Synapse's design philosophy is to first minimize hazardous material inventories through substitution, equipment selection, system compartmentalization, inventory management, engineered containment, isolation systems, leak detection, and operational safeguards. For aqueous ammonia systems specifically,

the design objective is to limit stored inventories to the minimum practical quantity required for reliable operation, and to segregate inventories through appropriately designed storage, transfer, and containment systems, and redundant, compartmentalized piping systems, to minimize potential release volumes and reduce exposure risk.

The final aqueous ammonia system design, including storage concentration, storage volume, unloading arrangements, transfer systems, containment provisions, isolation philosophy, detection systems, operating procedures, and emergency response measures, is not yet finalized. These design elements will be developed during detailed engineering and subsequently evaluated through a formal Process Hazard Analysis (PHA) and Layers of Protection Analysis (LOPA) process.

Where the PHA and LOPA identify credible scenarios requiring further evaluation, Synapse will undertake additional consequence assessments, including Quantitative Risk Assessments (QRA), plume dispersion modelling, or other engineering studies as appropriate. These studies will be used to evaluate potential off-site consequences, support emergency response planning, establish exclusion zones where necessary, and confirm the adequacy of engineered and administrative safeguards.

Any required consequence modelling and associated emergency response provisions will be incorporated into the final site-specific EMP and operational Emergency Response Plans prior to commissioning and operation of the facility.

Similarly, Synapse is proactively reviewing the emergency response considerations associated with lithium-ion UPS systems utilized within the data center.

Synapse-AUC-2026MAY14-020

References: **Exhibit 30732-X0001, Rule 007 - Thermal Power Plant Application, PDF page 19**

Issue: **Reclamation security**

Quote: "Since Synapse anticipates owning the project site before construction begins, Synapse will primarily be responsible for meeting the mandatory conservation and reclamation standards. In the absence of a Reclamation Security Requirement and where a proponent owns the project site, there is no obvious beneficiary. Synapse is willing to post security in the form of a secured line of credit starting at year 15 of operations, in regular intervals until the entire reclamation amount is fully secured at year 25. Synapse commits to consulting with all potential beneficiaries to determine a willing party, including the Town of Olds. In the absence of a willing beneficiary, Synapse commits to setting aside funds for reclamation on the same schedule (i.e., starting in year 15 of operations until fully funded at year 25) to ensure that it can comply with any future Reclamation Security Requirement, and to ensure sufficient funds are available at end-of-life."

Request:

(a) What dollar amount of reclamation security will be in place at year 15 of operation?

(b) Will Synapse commit to posting reclamation security in the first five to 10 years of operation?

(c) Please provide a summary of the discussions with the Town of Olds about being the beneficiary of the reclamation security.

(d) Please comment on how reclamation security will be sufficiently protective if Synapse owns the power plant and project lands.

Response:

(a) Synapse currently anticipates that $145,004,961 of reclamation security will be in place by year 15 of operations.

Based on the current Decommissioning and Reclamation Plan (DRP) prepared by independent experts (Exhibit 30632-X0010 TP 30 - Decommissioning Plan), the estimated reclamation security amount for the Project is $290,009,921 CAD (2026 dollars). This value represents the AACE Class 5 high-range estimate (inclusive of direct costs, indirect costs, and a 30% contingency allowance) identified within the DRP.

Under Synapse's proposed phased reclamation security funding approach, reclamation security will be posted in accordance with the following schedule:

- Year 10: $72,502,480 (25%)
- Year 15: $145,004,961 (50%)
- Year 20: $217,507,441 (75%)
- Year 25: $290,009,921 (100%)

The estimated reclamation security amount will be reviewed and updated periodically to reflect new information as it becomes available, including revisions to the decommissioning liability estimate, inflation, facility modifications, and any changes to applicable regulatory requirements.

(b) Yes, Synapse commits to having 25% of the total estimated reclamation security in place by year 10 unless the Commission otherwise requires.

(c) The Town of Olds reviewed the reclamation security question raised in the AUC's information request and provided the following response:

The Town acknowledges Synapse's commitment to consult with potential beneficiaries, including the Town, regarding the reclamation security instrument. The Town has considered whether it is an appropriate beneficiary and offers the following position.

The Town is open in principle to considering a role as security beneficiary, but has not agreed to accept that role and is not in a position to do so at this time without clarity on several outstanding matters.

In Synapse conversation with the town of Olds, the town had questions summarized as follows:

1. How does the AUC intend to coordinate with the Town in relation to any security held by the Town, including the conditions under which the security could be drawn upon?

2. What enforcement role, if any, would the Town be expected to assume in relation to reclamation obligations arising from the AUC approval? The Town's view is that enforcement of conditions arising from a provincial approval rests with the Province, not the municipality.

3. If the Town were to hold security, would the AUC retain primary enforcement authority over reclamation obligations, with the Town's

role strictly limited to holding the instrument and releasing it at the direction of the AUC or the Province?

The Town indicated they are not aware of a precedent in Alberta for a municipality holding reclamation security of this nature and scale for a provincially regulated power plant on developer-owned land.

Any arrangement whereby the Town holds security would need to clearly limit the Town's role to holding the instrument on behalf of the Province and would require a formal agreement with the AUC setting out the conditions for access and the enforcement mechanism.

The Town indicated they would like the AUC to provide further direction on the intended structure before any commitment is made.

(d) While Synapse intends to identify a third-party beneficiary to hold the reclamation security for the Project, Synapse has committed to a reclamation security framework that is designed to be sufficiently protective regardless of ownership structure. Synapse is committed to consulting with all potential beneficiaries to determine a willing party, including the Town of Olds. In the unlikely event that no third-party beneficiary is identified, Synapse will nonetheless post reclamation security in accordance with the above-mentioned schedule (i.e., commencing at year 10 and fully funded at year 25) to ensure sufficient funds are available at end-of-life.

Synapse-AUC-2026MAY14-021

References: **Exhibit 30732-X0001, Rule 007 - Thermal Power Plant Application, PDF page 22**

Issue: ***Historical Resources Act*** **approval**

Quote: "An approval under the Historical Resources Act has been applied for. The application was submitted on January 23, 2026 (File No. 031591214) and is currently under review with Alberta Arts, Culture and Status of Women (ACSW), with a status of "In Screening.""

Request: (a) Provide an update on the status of the *Historical Resources Act* approval.

(b) Please submit the *Historical Resources Act* approval upon receipt.

Response: (a) *Historical Resource Act* approval for the Project was granted on April 20th, 2026 under approval 4940-26-0016-001.

(b) Please find the *Historical Resource Act* approval enclosed as **Synapse-AUC-2026MAY14-021 Attachment – HRA Clearance**.

Synapse-AUC-2026MAY14-022

References: **Exhibit 30732-X0011, TP 31 - Noise Impact Assessment, PDF page 4**

Issue: **Noise receptors**

Quote: "There are hundreds of receivers located within 1500 m of the subject facility. Twenty eight (28) receivers were modeled to assess compliance, and labeled as R01 to R28 in the NIA [noise impact assessment]… R22 R28 were randomly selected to represent high dwelling density receivers in the town of Olds for practicality reasons. OpenCycle may provide a full receptor list and SPLs [sound pressure levels] or SPLs at specific receptor locations once requested."

Preamble: The NIA models a set of representative residential receptors rather than a comprehensive receptor inventory.

Request: (a) Please confirm whether all potentially affected residential receptors within the Rule 012: *Noise Control* study area have been adequately represented by the modelled receptor set.

(b) Please identify any residential receptors that were screened out of the noise modelling and describe the screening criteria and rationale used to exclude those receptors.

Response: (a) OpenCycle confirms that the modelled receptor set is representative of all potentially affected residential receptors within the AUC Rule 012 study area. All residential receptors identified from publicly available data within

the applicable study area were included in the modelling. The selected receptors reported in the Noise Impact Assessment (NIA) were chosen to represent locations expected to experience the highest sound levels for the purpose of assessing compliance with permissible sound levels (PSLs) under AUC Rule 012. To confirm the accuracy of this assumption and to address adjustments in Project design, OpenCycle is preparing a revised NIA report, which will include a complete receptor inventory. Synapse anticipates filing the revised NIA report by June 10, 2026.

(b) No residential receptors were screened out of the noise modelling. All residential receptors identified from publicly available data were represented in the noise modeling. A complete list of all modelled receptors will be included in the next revision of the NIA.

Synapse-AUC-2026MAY14-023

References: **Exhibit 30732-X0011, TP 31 - Noise Impact Assessment, PDF page 12**

Issue: **Baseline compliance**

Quote: "Reconnaissance conducted by OpenCycle staff using publicly available data in March 2026 confirms that there is no adjacent energy facility in the study area that is emitting significant noise. OpenCycle has not performed a site visit to confirm existence of potential noise emitting adjacent facilities at this stage."

Preamble: The NIA indicates that no baseline facilities were identified based on a desktop review using publicly available information.

Request:

(a) Describe the geographic search radius and information sources reviewed to confirm that no adjacent existing, approved, or proposed energy-related or non-energy-related facilities were identified for cumulative noise assessment purposes under Rule 012.

(b) Confirm whether approved but not yet operating energy-related facilities were considered when establishing the baseline case.

Response:

(a) The geographic search radius reviewed by OpenCycle corresponds with the study area depicted in Figure 1A: Study Area Map at PDF page 13 of the NIA (Exhibit 30732-X0011, TP 31 - Noise Impact Assessment). In accordance with AUC Rule 012, OpenCycle assessed all residential receptors within 1,500 m of the proposed Project boundary and identified potential sound sources within 1500m of all identified residential receptors that could contribute to sound levels at those receptors.

Information sources reviewed for this assessment included publicly available satellite imagery and Alberta Energy Regulator (AER) datasets. A subsequent field review conducted in April 2026 identified an existing natural gas generation facility located approximately 3 km northeast of the proposed Project. This facility was not identified in the preliminary desktop review and will be included in the next revision of the NIA report.

(b) Approved but not yet operating energy-related facilities were not specifically identified during the preliminary assessment and therefore were not included in establishing the baseline case. This has subsequently been confirmed through a review of the AUC Wind and Solar Interactive Map and AUC eFiling records in May 2026, which did not identify any approved but not yet operating energy-related facilities within the study area.

Synapse-AUC-2026MAY14-024

References: **Exhibit 30732-X0011, TP 31 - Noise Impact Assessment, PDF pages 4 and 5**

Issue: **Project sound sources**

Quote: PDF page 4:

"This is a proposed facility that Synapse plans to build ten (10) blocks with data halls and natural gas plants each having:

- One (1) 100 MW Data Center Building with eighty (80) Chillers and sixty (60) Emergency/Back-up Generators
- One (1) 140 MW Natural Gas Plant with auxiliary equipment. Detailed design and equipment data are not currently available, and assumptions are based on a similar NIA found on AUC's E-filing website (Beacon AI Centers – Indus Project NIA, Stantec, Project/File ID: 145400058)"

PDF page 5:

"The Facility SPL is the overall SPL from all the facilities in the study area."

Request: (a) Please provide separate sound source tables for the power plant and for the data centre, including equipment quantities, sound power levels, and operational assumptions used in the modelling.

(b) Provide an updated results table showing predicted sound levels at each assessed receptor, with separate columns indicating noise contributions from the power plant and from the data centre.

Response: (a) Separate sound source tables for the power plant and the data center, including equipment quantities, sound power levels, and operational assumptions used in the modelling are provided below. Table A below shares the initial model assumptions without mitigation measures included in this table.

Table A.1: Source Octave Band Sound Power Levels – Data Centre

Noise Source	Data Source	Linear Octave Band Centre Frequency (dB)									Overall (dBA)	Overall (dBC)
		31.5	63	125	250	500	1000	2000	4000	8000		
Chiller Sides	Manufacturer	90	92	105	100	108	101	98	89	82	107	111
Chiller Top	Manufacturer	90	92	105	100	108	101	98	89	82	107	111
Genset Bldg Wall	Previous Study	106	109	111	104	101	95	91	87	87	102	114
Genset Exhaust Pipe	Previous Study	93	97	99	94	88	86	81	77	78	92	102
Genset Cooler Discharge	Previous Study	93	95	97	91	88	88	81	76	76	92	101
Genset Exhaust Tip	Previous Study	99	96	99	94	87	83	80	76	73	91	103
Genset Air Intake	Previous Study	92	96	99	89	84	80	77	74	75	88	101
Genset Cooler Inlet	Previous Study	90	93	99	89	85	79	75	74	76	88	101
Genset Bldg Door Closed	Previous Study	91	95	99	89	82	80	74	72	74	87	101

Chillers

Table represents Sound Power Level per source.
800 chillers operating year-round and for all the scenarios studied in the NIA.

Back-up/Emergency Generators

Table represents Sound Power Level per source for a self-enclosed generator rated 85 dBA @ 7m.
600 generators as back-up/emergency.
Nighttime Scenario: Not running during nighttime.
Daytime Scenario: One (1) generator at a time tested individually at 100% load for up to 2 hours twice per year as part of regular maintenance and testing, during daytime only.
Worst-case Scenario: all back up/emergency generators run simultaneously at 80% load during nighttime.

Table A.2: Source Octave Band Sound Power Levels – Power Plant

Noise Source	Data Source	Linear Octave Band Centre Frequency (dB)									Overall (dBA)	Overall (dBC)
		31.5	63	125	250	500	1000	2000	4000	8000		
GSU Transformers (12 for each block)	Previous Study	104	106	108	103	101	99	93	88	84	103	112
ACC Steam Duct	Previous Study	95	97	90	85	81	78	94	75	64	96	100
HRSG Stack Exit	Previous Study	103	101	93	83	84	81	85	83	81	90	104
Air Inlet Filter House	Previous Study	100	99	95	81	83	84	78	79	77	88	102
Gas Turbine Enclosure Ventilation Inlet	Previous Study	88	90	91	79	74	73	80	80	76	86	94
ACC Steam Intake	Previous Study	89	88	89	85	82	80	76	69	63	85	94
ACC Steam Outlet	Previous Study	89	88	89	85	82	80	76	69	63	85	94
Gas Turbine Enclosure Ventilation Outlet	Previous Study	100	92	95	87	77	70	75	70	67	84	100
Roof	Previous Study	113	103	96	81	72	63	63	60	58	83	111
Wall	Previous Study	113	103	96	81	72	63	63	60	58	83	111
Generator Bldg Ventilation Outlet	Previous Study	92	86	77	68	67	68	69	74	75	79	91
Generator Bldg Ventilation Inlet	Previous Study	92	86	77	68	67	68	69	74	75	79	91

Power Plant Buildings

10 power plant buildings operating year-round for daytime and nighttime scenarios.
PWLs as below:
GSU Transformers: 12x GSU Transformers/building
ACC Sources: 1x ACC /building
HRSG Stack Exit/Exhaust: 8/building
Air Inlet Filter House: 8/building
Roof & Wall: 1/building
Gas Turbine Enclosure Ventilation Inlet: 20/building
Gas Turbine Enclosure Ventilation Outlet: 20/building
Generator Bldg Ventilation Inlet: 3/building
Generator Bldg Ventilation Outlet: 3/building

Worst-case Scenario: All power plants completely lose power in 30 minutes at nighttime.

(b) Table B shows the predicted sound levels in the form of sound pressure level (SPL), with contribution separated between the power plant and the data center. Table B below shares the initial model assumptions without mitigation measures included in this table.

Table B: Overall Sound Pressure Levels - As Proposed - Nighttime Contributions

Receiver	Approximate Distance & Direction from the Center of the Subject Facility		Power Plant SPL (dBA)	Data Centre SPL (dBA)	Facility Cumulative SPL (dBA)
R01	650 m	SSW	41.9	70.8	70.8
R01-2nd Story	650 m	SSW	46.0	72.4	72.4
R02	400 m	W	41.7	70.0	70.0
R03	1190 m	NNW	34.2	63.8	63.8
R03 - 2nd Story	1190 m	NNW	34.3	64.0	64.0
R04	750 m	SSW	44.4	69.0	69.0
R04 - 2nd Stoy	750 m	SSW	46.7	70.7	70.7
R05	920 m	SSW	40.7	65.7	65.7
R05 - 2nd Story	920 m	SSW	44.1	66.3	66.3
R06	2280 m	N	27.7	55.3	55.3
R06-2nd Story	2280 m	N	27.8	55.5	55.5
R07	2200 m	N	28.0	55.9	55.9
R08	2020 m	NNE	29.3	57.6	57.6
R08-2nd Story	2020 m	NNE	29.4	57.8	57.8
R09	1500 m	NNE	32.8	61.8	61.8
R10	1880 m	NNW	29.6	58.0	58.0
R11	1760 m	N	30.5	59.4	59.4
R12	2100 m	SE	27.3	55.8	55.8
R13	2150 m	SE	27.0	55.5	55.5
R13-2nd Story	2150 m	SE	27.0	55.5	55.5
R14	1410 m	ESE	32.5	60.9	60.9
R15	1240 m	E	34.3	62.2	62.2
R16	1430 m	ENE	32.4	61.0	61.0
R17	1500 m	NE	32.2	61.3	61.3
R18	590 m	NW	40.1	69.4	69.4
R19	660 m	NNW	39.3	68.9	68.9
R20	1010 m	NNW	35.3	64.7	64.7
R21	290 m	W	43.4	72.3	72.3
R22	1260 m	SSW	35.3	61.7	61.7
R23	1510 m	SW	32.5	59.2	59.2
R23-2nd Story	1510 m	SW	32.5	59.3	59.3
R24	1120 m	WSW	34.7	62.1	62.1
R25	760 m	WSW	37.6	65.4	65.4
R26	1640 m	WSW	30.3	57.1	57.1
R27	1870 m	WSW	29.2	55.9	55.9

Table B: Overall Sound Pressure Levels - As Proposed - Nighttime Contributions

R27-2nd Story	1870 m	WSW	29.7	56.7	56.7
R28	1340 m	W	32.6	60.1	60.1
R28-2nd Story	1340 m	W	32.7	60.3	60.3

Synapse-AUC-2026MAY14-025

References: **Exhibit 30732-X0011, TP 31 - Noise Impact Assessment, PDF pages 5, 9 and 27**

Issue: **Noise mitigation and compliance**

Quote: PDF page 5:

"**Worst-Case Operational Scenario**: representing an event of a natural gas supply interruption at nighttime and lose of full natural gas supply for natural gas plants operation. Full load removal from the turbines is expected to take no longer than 30 minutes, and all back-up generators operate simultaneously at 80% load during the full removal of load."

PDF page 9:

"The results of this assessment indicate that, for nighttime operations, the Cumulative SPL is expected to exceed the PSL at all receivers in the study area. The most impacted receiver is R01, located 650 m SSW [south-southwest] from the subject facility center. Additional noise control is required for the subject facility to comply with the AUC Rule 012: Noise Control."

PDF page 27:

"Implementing Noise Control Items 1-4 is required to meet the PSL at all receivers in the study area. OpenCycle recommends careful consideration of specific noise mitigation measures during detailed design, and to also consider potential LFN [low frequency noise] considerations."

Request:

(a) Please confirm that Synapse will implement mitigation measures as modelled in the NIA, or equivalent measures, to ensure project compliance with Rule 012.

(b) Please confirm that Synapse will complete an updated NIA based on the final project design to validate the effectiveness of the implemented mitigation measures and to confirm project compliance with Rule 012 prior to operation.

(c) Describe additional potential mitigation measures that could be implemented in the event compliance cannot be achieved under the worst-case nighttime operating scenario.

Response:

(a) Confirmed. The NIA concluded that implementation of the four "Noise Control Recommendations – Nighttime" items in Appendix F of the Project

Noise Impact Assessment (NIA) (Exhibit 30732-X011, TP 31 - Noise Impact Assessment) is required to achieve compliance with the applicable Permissible Sound Levels (PSLs) at nearby receptors for nighttime operations. Accordingly, Synapse will implement those four recommendations, or equivalent measures demonstrated through detailed engineering to provide the same or improved acoustic performance, to ensure compliance with AUC Rule 012. This will be incorporated into the final facility design and reflected within the final NIA.

Since completion of the original NIA, Synapse has continued to refine the facility layout, equipment arrangement, building envelope, and acoustic design. Final equipment selection and detailed engineering will include review of gas turbine enclosures, intake systems, exhaust systems, cooling equipment, emergency generators, building structures, and sound attenuation features to ensure compliance with Rule 012 and to address potential low-frequency noise considerations identified by the acoustic consultant.

With respect to the emergency operating scenario evaluated in the NIA and the "Extended Noise Control Recommendations – Worst-Case – Nighttime" items in Appendix F of the NIA, the preferred gas turbine manufacturer for the Project specifies that full load removal and transition to emergency operation can be completed within 30 minutes following a loss of natural gas supply. As such, simultaneous operation of the emergency generators represents a temporary emergency condition of limited duration required immediately to prevent the loss of property and not a normal operating state of the facility. As an emergency event of this nature is expected to occur infrequently (and measures will be in place in an effort to avoid it entirely), the PSLs under Rule 012 do not apply and, hence, mitigation measures targeted at this scenario alone are not required.

(b) Confirmed. Synapse continues to pursue the enhanced noise control design objectives identified during project development. In addition to achieving compliance with AUC Rule 012 at all receptors, Synapse has directed its design team and equipment suppliers to evaluate opportunities to further reduce equipment noise emissions through equipment selection, acoustic enclosure design, sound attenuation systems, building configuration, and facility layout optimization.

Where practical and technically feasible, Synapse intends to utilize enhanced acoustic design criteria that exceed minimum regulatory requirements. The final extent of these measures will be confirmed during detailed engineering and reflected in the final NIA. Synapse's objective remains to minimize off-site noise impacts to the extent reasonably

achievable while maintaining compliance with all applicable regulatory requirements.

(c) Substantial mitigation measures have been committed as part of "Noise Control Recommendations - Nighttime" during normal operations. See point (a). These mitigation measures are also expected to contribute to noise mitigation during non routine upset/emergency operations (worst-case nighttime). Mitigation measures during non routine upset/emergency operations are focused on reducing the likelihood and frequency of occurrence, as described in Synapse-AUC-2026MAY14-006 and 007.

Synapse-AUC-2026MAY14-026

References: **Exhibit 30732-X0001, Rule 007 - Thermal Power Plant Application, PDF page 20;**

Rule 012: *Noise Control*, Section 2.10

Issue: **Construction noise**

Quote: Exhibit 30732-X0001, PDF page 20:

"Synapse Real Estate Corp. will comply with the construction noise requirements set out in Section 2.10 of AUC Rule 012: Noise Control.

Construction activities will be planned and managed to minimize noise impacts to nearby receptors. This includes:

- Limiting high-noise construction activities to appropriate daytime hours, where practical;
- Maintaining construction equipment in good working order to reduce unnecessary noise emissions; and
- Implementing reasonable noise control measures where warranted by site conditions.

Synapse will also establish procedures to receive, document, and respond to any noise-related concerns during construction, consistent with the intent of Rule 012."

Request:

(a) Identify the primary noise sources associated with construction of the project, including anticipated high-noise activities.

(b) In addition to the mitigation measures in Section 2.10 of Rule 012, identify any site-specific mitigation measures that could be implemented to minimize noise during high-noise activities.

(c) Please describe communication protocols and procedures with nearby residents for receiving, investigating and responding to noise complaints during construction.

Response:

(a) While detailed construction plans are generally unavailable at this stage of the Project design, certain common noise-generating activities are

expected. The primary noise-generating activities associated with the construction of the power plant likely include:

- **Site preparation and earthworks:** This includes site clearing, grubbing, and the placement and movement of materials using off-road heavy equipment. No blasting is presently contemplated for this Project.

- **Foundation work:** This involves the installation of footings, foundations, and potentially piles. Notably, driven steel piles are unlikely to be required, as they are poorly suited to the site's geology. However, if pile driving becomes necessary, close attention will be paid to the scheduling and duration of this activity due to its high potential for community annoyance.

(b) **Equipment delivery and assembly:** This entails the delivery and installation of equipment and buildings using transport trucks, cranes, welders, and general construction equipment. Additionally, mobile on-site power generation and air compression are utilized to support these construction activities. Synapse is committed to managing construction noise, which includes evaluating the mitigation measures outlined in AUC Rule 012, Section 2.10, as follows:

- **Work Hours and Nighttime Controls:** Construction will primarily occur between the hours of 7:00 am and 10:00 pm. In the event that nighttime construction becomes necessary (e.g., for indoor activities such as wiring or welding), Synapse will assess the potential noise impacts and implement appropriate controls, which includes collaboration with the Town of Olds and notification of residents on scheduling.

- **Community Communication:** Synapse will maintain open communication with nearby residents, proactively advising them of construction schedules and activities that may generate significant noise.

- **Equipment Maintenance:** Synapse will ensure that all contractors properly maintain their equipment and that all internal combustion engines are equipped with functional mufflers.

(c) Synapse will provide residents with dedicated contact information to ensure ongoing communication throughout both the construction and operational phases of the plant. Synapse is committed to responding to all complaints promptly. The specific timelines and operational details of this ongoing

communication process, including the formal complaint management procedure, will be fully developed and shared with residents before construction begins.

Summary report: Litera Compare for Word 11.11.0.158 Document comparison done on 6/5/2026 4:17:14 PM	
Style name: Standard	
Intelligent Table Comparison: Active	
Original filename: Synapse Response to AUC IR No. 1.pdf	
Modified filename: Synapse Response to AUC IR No. 1 - WORD.pdf	
Changes:	
Add	0
~~Delete~~	0
~~Move From~~	0
Move To	0
Table Insert	0
~~Table Delete~~	0
Table moves to	0
~~Table moves from~~	0
Embedded Graphics (Visio, ChemDraw, Images etc.)	0
Embedded Excel	0
Format changes	0
Total Changes:	0