DOBLER ENGINEERING

April 27, 2026

Missoula County Planning
200 West Broadway
Missoula, MT 59802

Re: Special Exception Application, 9314 Bonner Mill Road
Attn: Jennie Dixon, Planner

Dear Jennie,

In response to your letter dated April 17, 2026, wherein you request additional information to supplement our initial application, I am providing the following information. Please note that some of the information requested will take a little longer to assemble, so I am providing it to you as I compile it over the next few days and it will not follow the order in your letter. I apologize for any inconvenience this may cause, but I believe this will facilitate your review. This submittal will address items 3,4,5 and 6.

Please contact me if you have any questions.

Respectfully,

Gordon Dobler

Gordon Dobler, P.E.

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Item 3: Operational Characteristics.

The facility will consist of three basic components, server racks, Computer Room Air Conditioning (CRAC units), and exterior cooling towers. The server racks and CRAC units will be housed inside "clean rooms" constructed inside the main building. The servers and CRAC units are both liquid cooled and connected to the exterior cooling towers via ductile iron piping, and pumps recirculate the cooling fluid through the coolers. Power is fed to the system from transformers, located inside the main building.
Power and fiber wiring, controls, and monitoring equipment will all be contained inside the clean rooms and the main building as will the cooling fluid pumps and motors. This provides protection from the elements and a higher level of security.

Once brought on-line, the servers and cooling systems are never turned off. Redundant systems are in place to provide uninterrupted service and allow for maintenance and/or replacement of any part of the system. Power redundancy will be provided through two separate power feed circuits currently available to the site. Power is automatically switched to the alternate circuit should an outage ever occur. We do not plan to use backup generators.

Since there are few moving parts (only the fluid pumping components), the system requires little maintenance. If there is a failure in the mechanical or electrical components, the system is designed to automatically switch to the backup components, and any repair or replacement activities would take place during normal working hours. Any noise generated from these activities would be consistent with minor construction activities, small delivery trucks, forklifts, hand tools, etc. All such activities, except repairs or replacement of the exterior cooling towers, would take place inside the main building and not impact nearby residential properties. Work on the cooling towers would take place during daytime hours and only the coolers along the south side of the building would be exposed to the residences.

We typically see 10 or less trips per week for all types of visits. We expect that number to be about the same for the Bonner site, after completion of construction. It's important to note that full build out of the site may take two to three years, and that depends on the ultimate amount of power available to the site (possibly up to 100 MW) and the market demand.

Item 4: Water Use and Cooling Equipment

The exterior cooling towers are of two different designs, evaporative and adiabatic (wet and dry towers respectively). Each tower is designed to cool the equivalent of 4 to 5 MW of server power, so the final number of towers will depend on the final amount of power being used. The current power available to the site (29 MW) would need up to ten towers, including redundant towers for backup. The evaporative towers are about 14'W x 26'L x15'H. The dry towers are about 14'W x 40'L x 17'H.

The cooling fluid is a closed loop system that uses a propylene glycol / water mixture that once filled, does not use any water. Only the evaporative towers use water to cool, and they will be served from the existing fire suppression system. This system is separate from the domestic potable water system that serves the nearby residences and will not draw from that system.

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The fire system consists of a 12" well and pump that feed a 500,000-gallon reservoir located off-site, so there is ample capacity. Only the evaporative cooler uses any significant amount of water, about 500 gallons on their initial fill, and are recharged three to four times a year, depending on ambient air quality.

The evaporative coolers are constructed like a car radiator and drip water over the cooling fluid lines. The water is collected in a reservoir at the bottom and recirculated. The reservoir contains heating elements to keep the water from freezing. The cooling tubes are protected from the elements by the cooling fins, so there is no overspray from wind. The water is pumped via a small (7.5 hp) recirculation pump. Water used in the evaporative process is not contaminated and when the units are recharged the water is typically discharged to drywell or swale, depending on local regulations.

The dry coolers use fans to blow air over the cooling fluid tubes. The fans are smaller, two feet diameter, and are located on top of the coolers.

Except for the minimal amount of noise generated from the dry cooler fans and the recirculation pumps and visual aspects, there are no measurable impacts to the nearby residences.

Item 5: Waste Heat and Thermal Effects.

In the past, servers were cooled by traditional HVAC technology which consisted exclusively of large air handlers. The servers we will be using are next generation design with liquid cooling systems. They are designed to use a water/propylene glycol mixture to cool the servers directly, and the CRAC units. They operate at temperatures ranging from 60 to 80 degrees, eliminating the generation of waste heat.

We currently are running this system at a data center in Newport, Washington, using the same components that we will use at the Bonner site. To provide definitive data on the heat generated by these facilities, field measurements were taken at that facility and are provided herein.

The measurements were taken on Monday, April 27, 2026, at 9:00 am in the morning. The ambient air temperature was 47° and the weather was partly cloudy. Measurements were taken with an infrared heat sensor, calibrated and accurate to within one degree+-. Temperature readings were taken on the following elements and photos are referenced for each element. Photos are attached.

Evaporative and adiabatic towers (photos 1-4)
Concrete slabs surrounding the towers. (photos 5-6)
Clean room interior air temperature (photo 8)
Clear room interior slab temperature (photo 7)
Air temperature on intake side of CRAC unit (photo 10)
Air temperature by server rack (photo 9)
Exterior building temperature (photo 11)
Exterior ground temperature around server building (photo 12)
Temperature of sidewalk and surface of adjacent public street. (photos 13-14)

The results confirm that the cooling system keeps the heat signature of the facility at temperatures equal to the normal surrounding air and ground temperatures for the ambient weather conditions.

The conclusion is that the facility does not increase the ambient heat more than that produced by normal improvements such as concrete slabs, asphalt paving, etc., and therefore no mitigation is necessary.

Item 6: Hazardous Materials

There are no hazardous materials used in the proposed facility. The cooling fluid is a water/propylene glycol mixture. Propylene glycol is not classified as a hazardous material under OSHA's Hazard Communication Standard and is considered to have low toxicity. The following authoritative sources are referenced in support of this.

- OSHA Hazard Communication Standard (29 CFR 1910.1200): Propylene glycol is not classified as a hazardous chemical.
- NFPA 704 ratings:
  - Health: 0 (minimal hazard)
  - Flammability: 1 (must be preheated to burn)
  - Reactivity: 0 (stable)
- No UN/NA number and no DOT hazard label is assigned.
  This means it is not regulated as a hazardous material for transportation.
- The FDA classifies propylene glycol as "generally recognized as safe" (GRAS) for food and pharmaceutical use.
- ATSDR notes it can be found at some hazardous waste sites, but the substance itself is low toxicity and only harmful at very high exposures.

Based on the above, we conclude that there are no hazardous material or special mitigation measures required for any of the materials used in the proposed data center.

Figure 1 Cooling towers

Figure 2 Evaporative cooling tower

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Figure 4 Dry cooling tower

Figure 3 Fluid temperature (60 degrees)

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Figure 6 Cooler slab

Figure 5 Cooler slab

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Figure 7 Interior floor slab

Figure 8 Air temperature of clean room

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Figure 10 CRAC air temp

Figure 9 Server Rack air temp

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Figure 11 Exterior building

Figure 12 Exterior ground

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Figure 13 Sidewalk of adjacent street

Figure 14 Adjacent street surface

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