

April 11, 2025

Sam Herceg  
Los Alamos County  
170 Central Park Square  
Los Alamos, New Mexico

Re: Office Expansion Plan Review  
Los Alamos County  
4744 State Rd. 96  
Abiquiu, NM 87510

Dear Sam Herceg:

This letter will confirm receipt and review of the following document for the proposed office expansion at the above subject location:

- Design Documents

The objective of this project is to complete recommendation 2018-01 from the most recent site survey conducted on April 23<sup>rd</sup>, 2024. That recommendation is the following:

**2018-01 Fire Risk Mitigation of Transformer Exposure**

The step-up transformer contains over 2,000 gallons of combustible oil and exposes the north wall of the powerhouse and the office area within to damage from an oil fire due to only 3 ft spatial separation distance. One of the following solutions should be provided to mitigate a transformer fire and minimize the potential damage to the powerhouse, in accordance with NFPA 850:

1. The transformer should be moved and relocated at least 25 ft away from the powerhouse wall. This will require verifying that concrete pad can handle the weight of the transformer and extending the bus bars from the building to the new transformer location. The existing oil drainage and containment system will need to be modified so that the closest edge of the containment basin is at least 25 ft from the powerhouse wall.
2. A fire barrier wall should be provided between the transformer and the powerhouse. The wall should be constructed of reinforced concrete or masonry with a minimum thickness of eight inches. The wall needs to extend at least one foot above the oil reservoir and two feet beyond the cooling fins and should meet the objectives delineated in Figure 6.1.4.3 of NFPA 850. The construction of the wall also needs to be in accordance with an accepted listing, such as specified in UL fire Resistance-Volume 1A directory with a minimum fire resistance rating of two (2) hours. Wind load should be taken into design consideration.
3. The exterior wall of the exposed powerhouse should be upgraded to a 2-hour fire resistance rating. This can be accomplished by fastening two layers of fire-rated gypsum board to the outside frame of the powerhouse wall and covered by corrugated metal panels. The extent of the fire resistance should be at least 25 ft in both directions from the edge of the transformer. The existing personnel door should be replaced with a 90-minuted fire-rated door assembly. The window in the office area should be protected with a 90-minuted fire-rated automatic shutter, or it can be eliminated altogether.

It was noted that option three was the solution that was selected to remedy the concern.

Per the design document, the project includes the removal of and construction of new interior walls, a first-floor bathroom addition, firewall construction and door replacement, along with a new HVAC system and concrete pad.

The plans show that the door will be replaced with a 2-hour rated model. The existing window will be removed. The exterior wall of the exposed powerhouse will be reinforced to achieve a 2-hour fire rating. The wall will consist of the existing steel sheet metal with flexible sealant to attach the doubled layered 5/8" fire rated gypsum board. The existing insulation and interior siding will remain.

Based on our review, we find the proposed office expansion to be acceptable for property insurance purposes subject to the following comments:

1. Design and install the wall panels in accordance with the latest edition of NFPA 850, *Recommended Practice for Fire Protection for Electric Generating Plants and High Voltage Direct Current Converter Stations*.
2. Final acceptance is contingent upon a satisfactory field review of the completed installation.

Please note this review is for property insurance purposes only and does not relate to life safety. We are retaining a copy of your submitted plans for our files. Please contact me at (857) 303-5117 if you have any questions or comments.

If you should have any questions or comments, please feel free to contact our office.

Best regards,  
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cc: Kathy Perkinson Account Executive/Broke  
Aon

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