

Geology Audit Response Feedback

For **Question A** regarding characterization of potential hazards from karstic subsidence, Orano's response focuses on the risk of sinkholes. While consideration of sinkholes is important, the site-specific boring logs identify voids and cavities—some of considerable size—beginning only a few feet below ground surface. These features present a broader subsidence risk, such as differential settling, which must be evaluated.

Orano must provide an assessment of subsidence hazards associated with these voids and cavities, and any other feature Orano has identified that could lead to subsidence. This assessment must include the conclusion, the data used and the rationale supporting Orano's conclusions. This assessment is currently lacking.

Orano Response:

Orano has committed to conducting a supplemental geotechnical investigation of the parcel to further characterize the site for hazards associated with karst geology and differential subsidence. The investigation will provide a thorough assessment of subsidence hazards resulting from underlying site lithology. This supplemental investigation will utilize standard ASTM, AASHTO, and applicable methodologies to characterize physical and chemical qualities of site soils.

Based on the findings of the supplemental geotechnical investigation, Orano will commit to addressing structural deficiencies resulting from identified voids and cavities in overburden layers including mitigation using any one of the standard methods including engineering fill, grouting, or other approved geotechnical methods. Alternatively, piles that extend to the bedrock may be used as the foundation thus addressing the issue of settlement or differential settlements.

For **Question B** concerning landslide hazards related to steep slopes and clay-rich overburden on the site, Orano's response addresses soil types, post-construction elevations, and analyses of proposed fill slopes. However, these do not respond to the question, which pertains to landslide hazards associated with existing (unaltered) slopes. Orano ER Section 3.3.3.4, Residuum (pg. 160/532, 3-31), indicates that topsoil thickness ranges from 2 to 6 inches, with overburden ranging from approximately 7 to 54 feet. Soil classification alone is not sufficient to evaluate landslide hazard for these unaltered slopes.

The purpose of this question is to evaluate landslide hazards in areas **that will not be graded, including both onsite and adjacent slopes**. Please provide a response focused specifically on landslide hazards associated with these areas that will not be graded.

Orano Response:

Orano will conduct analytical testing using approved structural and geotechnical methodologies to assess soil stability of the overburden layers that underly site locations where fill and grading are to occur. Analysis will be performed to evaluate soils stability for underlying overburdened layers to include soil friction and cohesion to resist sliding failure.

Investigations will include adjacent slopes to building sites to evaluate slope stability using standard geotechnical methodologies and actual soil properties.

Soils will be evaluated for building foundation for bearing stress using standard geotechnical methodologies and compared against allowable bearing capacity.

Project design will meet minimum geotechnical factors of safety for foundations and slope stability analysis in accordance with ASCE and industry standards.

Landslide risk associated with the underlying Rome Group shale that transects the eastern extent of the site parcel will be mitigated through engineered controls installed in locations where elevations are steep or geotechnical investigations may identify hazards resulting from underlying site lithology.