



Memorandum

TO: The Honorable Satpal Sidhu, Whatcom County Executive
The Honorable Whatcom County Council

FROM: Joshua Fleischmann, Planner

THROUGH: Mark Personius, Director

DATE: June 15, 2021

SUBJECT: PLN2019-00010 - Surface Mining Pipeline Buffer

This memo is intended to provide background on a docketed amendment for surface mining near gas or petroleum transmission pipelines. We request your consideration of proposed amendments to the zoning code related to the docketed proposal, which states:

Amend the Whatcom County Comprehensive Plan and Whatcom County Code to determine the minimum safe distance to allow surface mining to be conducted from a petroleum pipeline to ensure a pipeline will not become exposed or rupture during an earthquake event and contaminate an aquifer. Determination should be based on independent sources where possible and assume a magnitude 9.0 or greater earthquake could occur.

In response to the proposal, staff reached out to multiple jurisdictions and pipeline operators in an attempt to find out if there is a minimum safe distance presently in use. The result of the inquiry is that there is not.

BP's response was the most thorough, stating:

"...we gathered a cross-functional team that included representatives from BP Operations and Maintenance, Engineering, Damage Prevention and Right of Way. The team ultimately concluded that the safe distance between surface mining and pipelines is case specific. There are too many variables - including the type of surface mining, location of the earthquake's epicenter, soil conditions, and topography - that preclude us from providing a universal answer that is scientifically supportable. Indeed, it is difficult to predict with certainty how a 9.0+ earthquake would affect any infrastructure including roads, power lines, and pipelines."¹

In response, without examples of minimum standards, the following language was drafted by PDS staff to be an additional Conditional Use Permit approval criterion for surface mining subject to the surface mining act:

WCC 20.73.153(9)

¹ Horn, Marc, District Operations Manager, BP USPL, "Horn Letter to Fleischmann 05.30.2019"

When mineral extraction is proposed within 500 feet of a gas or petroleum transmission pipeline, a site specific geotechnical analysis of potential impacts to the pipeline is required. The analysis shall show that mining will not result in an increased likelihood of the pipeline becoming exposed or rupturing during an earthquake, and shall consider various seismic scenarios with a 2 percent probability of exceedance in 50 years on both proximal crustal faults and at the Cascadia Subduction Zone.

In the proposed code language (above), "2 percent probability of exceedance in 50 years" is an industry standard for seismic designs that must consider large-magnitude, low-frequency seismic events. It is the common design standards for developments like essential or emergency facilities. By considering seismic events with this low recurrence potential, both on local crustal faults and at the Cascadia Subduction Zone, the required assessment essentially addresses a worst case scenario²

The Surface Mining Advisory Committee (SMAC) voted unanimously in support of forwarding this language to the Planning Commission for their review and recommendation to the County Council.

The Planning Commission held a public hearing on June 10th. As a result of public comment, additional language was proposed in WCC 20.81.030.A, requiring that transmission pipeline operators are provided 15 days to provide comments to Whatcom County on surface mining applications within 500 feet of the centerline of a pipeline corridor.

Additionally, the Planning Commission forwarded the following Comprehensive Plan policy amendment, as included in Exhibit A, for consideration by the County Council.

Policy 8L-9

Through a site specific geotechnical analysis of potential impacts, ensure mineral extraction within 500 feet of gas or petroleum transmission pipelines will not result in an increased likelihood of the pipeline becoming exposed or rupturing during an earthquake.

Final approval of Comprehensive Plan Policy 8L-9 would occur as part of concurrent review of comprehensive plan amendments from 2021.

I look forward to discussing the merits of this recommendation with you.

² Wiser, Andy. "Earthquake Frequency." Received by Joshua Fleischmann, 6 Jun. 2019.