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5.3.23

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City Of Puyallup
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Via e-mail:
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Regarding: **Genesee Propane Bulk Plant**
Construction Exemption – Response Letter
External Agency Review

Location: 412 23rd Street, Puyallup, WA

Bulleted items match comments received from Rachael N Brown – Associate Planner.

- Exemption request letter: provide calculations for how you determined that the propane tanks will not move during a lahar event. Please provide evidence that an acceptable engineering method was used for these calculations. Provide sources for physics forces used.

See the section in Blue on sheet 4 “Tank Buoyancy Check”, a portion of the [2] Tank Construction Discussion. The site is not a velocity zone during the Lahar, thus the most conservative design would consider the tank completely submerged and 25% full. If the tank is empty, it is not a hazardous facility. This shows the foundation minimum thickness to resist buoyancy. The physics are simple buoyancy, which is the mass of the object, in this case the tank and foundation, must be greater than the fluid (water displaced). This calculation is very conservative as, the Lahar Depth is likely less than 6’ based on USGS Models.

- Exemption request letter: Provide clarification as to how the propane tanks will be 'surrounded by water' during a lahar event.

See Exemption letter, we have expanded the referenced studies based on the USGS 2021 Lahar Modeling

- Exemption Request Letter: The project appears to propose storage area for smaller propane tanks. Will these tanks be stored while full or empty? These smaller tanks will need to be anchored or stored in such a way as to prevent them from floating away during a lahar event.

The tanks will be stored empty for delivery. There is no required action for them.

- Exemption Request Letter: Provide FEMA, USGS, or other regulatory guidance on Lahar or other equivalent natural disaster physics forces used in calculations.

As shown above the loads to the tanks higher from an earthquake than Lahar flow action. The tank and foundation are designed to WSBCC/IBC standards for seismic loads.

- Exemption Request Letter: Per PMC 21.06.1260 (a) one of the findings for approval of a hazardous facility construction exemption is "That the critical facility has a satisfactory critical alert notification system in place which coordinates with local and regional emergency monitoring systems". Please provide Letters of acknowledgement from the Pierce County Department of Emergency Management and/or Washington State Emergency Management Division regarding coordination of the on-site emergency notification system with one or both of these agencies.

We have reached out to Joshua Atkins, with Pierce County emergency services. The Exemption Request includes language and understand that the facility alert system will need to be inspected by the county at the time of construction.

- Exemption Request Letter: Provide a written evacuation plan which is coordinated with the City of Puyallup adopted emergency evacuation plan to provide a route from the site to the City's adopted evacuation routes. The City Emergency Manager will review this plan to ensure conformance with City standards.

An evacuation plan is attached.

If you have further questions, please do not hesitate to reach out.



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cc: file