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November 15, 2021
File: 227702185

Crook County Court
Crook County Community Development
300 NE 3rd Street, Room 12
Prineville, OR 97754

CROOK COUNTY
NOV 15 2021
PLANNING DEPT

Dear Members of the Court,

Reference: **In Support of Knife River's Comprehensive Plan Amendment request and Conditional Use Permit request, Vanier Property
Record #s 217-21-000436-PLNG & 217-21-000573-PLNG**

Wenck now part of Stantec Consulting Services, Inc. (Stantec) offers the following comments in response to Exhibit 53, which was submitted by Richard Zimmerlee on November 2, 2021. Many of Mr. Zimmerlee's arguments have been heard and addressed in the past and should we repeat ourselves, we apologize to the Crook County Court. We have not seen the Cascade Geoengineering report cited by Mr. Zimmerlee and we would like to reserve the right to address that report, should there be a reason to do so.

Mr. Zimmerlee asserted in his November 2 letter to the Crook County Court that Stantec's hydrogeologic report did not meet Oregon required standards and furthermore speculated such action may be grounds to invalidate Stantec's report. Mr. Zimmerlee was not specific regarding the standards in question, but Stantec would like to make it clear that this hydrogeologic investigation, report and subsequent data evaluation and professional conclusions were prepared under the supervision of Mark Stacy, an Oregon Registered Geologist (G1953). If Mr. Zimmerlee is referencing the 2014 Hydrogeologic Report Guideline of the Oregon State Board of Geologist Examiners, we would like to inform the Court that Stantec has used the standard of care, skill and diligence required by customarily accepted professional hydrogeologic practices including those of the State of Oregon. As one might expect, the purpose of the above referenced guideline is to encourage best practices in the public practice of hydrogeology in Oregon. Part of the disclaimer of this document indicates "The information in this guidance document is not enforceable by any person or entity against the Board." To the best of our knowledge, the March 2021 report, which is included in the Comprehensive Plan Amendment meets the standard of care and without knowing any specifics, we see Mr. Zimmerlee's accusations as pure unfounded speculation.

Specifically, Stantec provided the following in its hydrogeologic report:

1. Detailed well completion and geologic reports for each of the three wells in Appendix A. The completion reports detailed drilling method, screen, casing, annular materials placement, well development, measured depths to water and elevation.
2. Sufficient geologic and hydrogeologic information to assess overall aquifer conditions in the local area, particularly at the east end of the Woodward Property.

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Mr. Zimmerlee appears to have hired Cascade Geoengineering to assess the potential hydrogeologic impacts of mine cell gravel removal and backfilling. Instead of providing their results and a map, he speculates that such mining practices could raise the water table 12 to 15 feet to the north and east of the mining area. Given that Knife River is actually dewatering the cell or the "boxcut", and placing water in a downgradient recharge trench, it's hard to imagine that such action would result in an upgradient water level rise during mining as his use of the word "boxcut" suggests. If he is referring to the post mining or reclamation condition, his analysis is also wrong. Groundwater flows from areas of higher hydraulic head to areas of lower hydraulic head, and therefore, groundwater will flow through and around the reclaimed cells. Zimmerlee continues to reference the concept of a dam and such reference suggests that groundwater flows like surface water as some sort of "underground stream". This is not the case with the local aquifer. As noted in Amber Hudspeth's data collection and testimony, the three monitoring wells, referenced in Stantec's March 2021 report, were completed upgradient of the Woodward property reclamation and none of the wells have seen any significant rise and certainly have not seen a rise of 12 to 15 feet as purported by Mr. Zimmerlee. For example, when Amber measured the depth to water from Well WW1A in February 2021, groundwater was measured at 24.8 feet below top of casing. When Amber measured this same well on October 29, 2021, groundwater was measured at 20.8 feet below top of casing. Amber accompanied Cascade Engineering on November 10, 2021, and she reports that Jim Newton (Cascade Engineering) measured the depth of water at 21.25 feet below top of casing suggesting that water levels of this well have seen fluctuations, which would be considered normal as part of seasonal variations in groundwater.

Mr. Zimmerlee also suggests that the significant flow increase in the drainage between the Vanier and Davis properties is a result of current Knife River mining and reclamation practices. Again, this is pure speculation, and he does not provide how he came up with his flow data nor is it supported by any scientific data collected by Mr. Zimmerlee or his consultant. Based on groundwater elevations and flow directions noted on Figure 3 of the Stantec hydrogeologic report, one might conclude that the water discharging down the drainage is water recharged to the shallow aquifer from the Ochoco Irrigation District Ditch to the east that lies at a higher elevation than the drainage.

Mr. Zimmerlee continues to provide unsupported data on reclamation viability of reclaimed lands. To the best of our knowledge, Mr. Butler never stated that "many soil amendments were necessary over several years to return the farmland (at Lone Pine) to a suitable state." Mr. Butler noted that he added manure to his soils. It is not clear what other amendments Mr. Zimmerlee thinks are necessary. Stantec experience suggests that direct placement of "live topsoil", which we have referred to as "contemporaneous reclamation" will ensure that the nutrients within the topsoil are preserved. Mr. Ben Mundie (DOGAMI) within Exhibit 41 provides three examples within Crook County where mine land reclamation has been successful and two of them were Knife River sites. Knife River was nominated for Outstanding Operator and Outstanding Reclamation at these two sites in 2019. The Crook County Court had the opportunity to see the Butler site.

Finally, Mr. Zimmerlee closes with a list of questions to which we have addressed our thoughts here:

- The inference is that Knife River will raise the water table. This accusation is not technically supported as noted above. Should there be damages to the environment and the mining company does not address and mitigate those damages, DOGAMI will use the reclamation bond to address as needed.

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- The question is water availability. Knife River and each respective landowner have water rights approved by the OWRD.
- Knife River did not modify their permit and did not bury thousands of yards of material in the Woodward Pit.
- Knife River understands earthwork balance. That is part of mine and reclamation planning.

If there are any further questions or if additional clarification is needed, Stantec would like to reserve the right to address them.

Regards,

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