

Nondalton Tribal Council Comments – Pebble Project Preliminary Draft EIS Section 4.15 - Geohazards

Agency	Comment Number	Section, Paragraph, and Page #	Relevant Text/Subject	Comment	Response
Nondalton Tribal Council	1	Section 4.15	General	<p>To conduct a substantive and meaningful review of this section, the review of Appendix K Section K4.15 is required. Appendix K4.15 in turn references several additional documents which need to be reviewed. For example, PLP 2018d, PLP 2018-RFI 006, 006a, PLP 2018-RFI 010, Knight Piésold 2018a, and PLP 2018-RFI 008f is a partial list of documents referenced. The list that the reviewer would actually need to construct to represent the document needs for this entire section is much longer. In addition, none of the tables or figures for Appendix K4.15 were included in the preliminary draft environmental impact statement (EIS) for review.</p> <p>Substantive and meaningful review and comment on this section requires a high-level of expertise and diligence, and with all information available, it would require a minimum of 40 hours of dedicated time. This review is a critical component of the EIS analysis; therefore, prior to the production of the public draft EIS, an allowance of time should be given to cooperating agencies to obtain and review all referenced information and conduct an independent analysis.</p>	<p>We concur that there are a number of documents provided during the data gaps and RFI processes that provided the information necessary to complete the impact analysis. These are available for review on the Pebble EIS website (www.pebbleprojecteis.com). Appendix K4.15 tables and figures were included in the PDEIS submitted to the USACE, and are currently available in the DEIS.</p> <p>We concur that technical knowledge is helpful in understanding this subject matter in Section 4.15, Geohazards. The overall intent of Appendix K4.15 is to present more technical material in the appendix, with an understandable summary in the Chapter 4 section. Section 4.15, Geohazards of the DEIS will be reviewed for opportunities to improve understanding for the general public. The USACE extended the review time for cooperating agencies reviewing individual PDEIS sections to December 21, 2018 (for those sections assigned to cooperating agencies with special expertise in that topic).</p>

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Nondalton Tribal Council	2	Section 4.15	General	This section appears to have an inappropriate focus on damage to project facilities, which are only of importance to the extent that this may impact elements of the environment. Any impacts to elements of the environment related to geohazards as a result of damage to project infrastructure should be discussed in this section and not spread around among other sections so that a reader has to move back and forth between sections to read about all the impacts from a large earthquake or other geohazard of concern. For example, it is not appropriate to discuss the environmental impacts of embankment failure due to an earthquake in the Spill Risk section. Spills are caused by human error, while embankment failure not caused by design flaws would be due to geohazards and should be discussed here.	<p>In keeping with the current state-of-practice regarding NEPA analysis, mine project EISs generally assess the safety and stability of project facilities by disclosing regulatory requirements, design criteria, and safety factors. Section 4.15 is intended to serve this function by describing potential impacts of geohazards on project components that could affect the environment, with a review of proposed design and engineering practices that would mitigate such effects. Where appropriate, cross-references to other resource sections have been added that describe more fully the resulting environmental impacts.</p> <p>The outline of the EIS was developed based on scoping comments with USACE input. The USACE further directed that the EIS be streamlined and that sections not be unnecessarily duplicative. The intent of Section 4.27, Spill Risk is to present the resulting effects of unintended spill incidents that are not part of the applicant's proposed plan. The EIS-phase Failure Modes and Effects Analysis (FMEA) (AECOM 2018I) considered the probability of embankment failures due to both geohazards and design flaws, and is discussed in both Sections 4.15, Geohazards and 4.27, Spill Risk.</p>
Nondalton Tribal Council	3	Section 4.15	General	Missing from the bullet items appears to be a discussion of damage to the underwater natural gas pipeline due to movement of boulders on the seafloor. This has occurred with existing oil and gas infrastructure in Cook Inlet.	A discussion of impacts and design elements that minimize the potential for damage to the pipeline from boulders on the seafloor is included in Section 4.15.2.4 under "Coastal Hazards." The bullet items on the first page of Section 4.15 are intended to be a general list of effects addressed in the section, not a complete discussion. Parenthetical reference to boulders as an example will be added to the 4 th bullet describing coastal hazards to pipeline landfalls.

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Nondalton Tribal Council	4	Section 4.15	General	Any discussion of mitigation, particularly that which is not already described in the permit application as being part of the project design, should be offered by the project applicant in Appendix M, Mitigation, rather than being discussed in this section, where it would be purely hypothetical.	Mitigation measures described in Section 4.15 include applicant-proposed measures described in the permit application (project description), RFIs, or EIS-Phase FMEA documents; and typical state-of-industry engineering practices or BMPs that are assumed in the analysis. Some general geohazard-related measures are included in Chapter 5, Mitigation, Table 5-2: “Applicant’s Proposed Mitigation Incorporated into the Project.” The table was intended to present PLP’s most substantive measures (from RFI 071a), and was not intended to contain excessive design detail that would not be informative to the public nor useful to the decision maker. Where appropriate, additional details regarding these types of mitigation measures are included in DEIS Section 4.15 in order to adequately describe safeguards against potential geohazard-induced risks to the environment. These will be revisited after the public comment period and added to Chapter 5 as appropriate. Also, additional measures suggested by cooperating agencies and the public will be added to Appendix M after the DEIS comment period, as appropriate.