



The Confederated Tribes of the Colville Reservation

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Monday, June 29, 2026

Attn: Brook Beeler, Eastern Region Director

Washington Department of Ecology

4601 North Monroe Street, Suite 202

Spokane, WA 99205-1295

Submitted Online via: <https://go.ecology.wa.gov/CommentKeyMill>

RE: Colville Tribe Comments on the Draft Supplemental Environmental Impact Statement (SEIS) for the Key Mill Tailings Storage Facility – Filtered Tailings Stack Height Raise (Publication 26-06-014)

Dear Director Beeler,

The Confederated Tribes of the Colville Reservation (Colville Tribes) appreciate the opportunity to review and submit comments on the Draft Supplemental Environmental Impact Statement (SEIS) for the proposed Key Mill Tailings Storage Facility (TSF) expansion. The Colville Tribes maintain legally protected tribal rights and deep ancestral and cultural ties to the impacted area. Operating in our capacity as an Executive Order Tribe and a natural resource trustee, we hold serious concerns regarding the environmental, structural, and cultural threats posed by this proposed 75-foot stack height increase.

Overall, the Colville Tribes find that the current Draft SEIS does not sufficiently assess reasonably foreseeable risks and underplays the probability of significant adverse impacts. The Washington State Department of Ecology (Ecology) must require additional rigorous technical analyses before finalizing this document or moving forward with permit modifications.

Our specific technical and cultural concerns are detailed below:

1. Omission of Protected Tribal Rights and Special Status of the North Half

The Draft SEIS notes the proximity of the Colville Reservation 18 miles to the south, but it entirely fails to acknowledge the special legal and cultural status that the **North Half** holds for the Colville Tribes.

The project site sits directly within a watershed critical to our traditional territory. Ecology must fully evaluate how the expanded operational footprint and potential failure risks intersect with our protected tribal rights, including historical and ongoing gathering, hunting, and fishing rights.

2. Unaddressed Seismic Liquefaction Risks

The SEIS indicates that the existing conventional tailings are already below minimum safety standards regarding liquefaction risks during large seismic events.

Despite this known vulnerability, the SEIS provides no stability analysis evaluating the structural impacts of adding a massive 5.5 million-ton load directly on top of these unstable tailings.

Ecology must require a comprehensive stability analysis demonstrating that the dam can meet minimum safety factors under the additional stress of a 75-foot vertical raise.

3. Vulnerability to Static Liquefaction and Lack of Modeling

Piling dense, filtered tailings on top of saturated, conventional slurry tailings creates highly unpredictable pore pressure scenarios. Globally, upstream-constructed TSFs over saturated tailings are inherently vulnerable to static liquefaction, which has driven historic, catastrophic failures (e.g., Mount Polley and Brumadinho).

The SEIS lacks critical predictive metrics, including consolidation modeling, pore pressure dissipation curves, settlement predictions, and a static liquefaction triggering analysis.

Ecology must require a full static liquefaction triggering analysis (utilizing established methodologies such as Olson & Stark) and advanced consolidation modeling to prove that the proposed wick drains are mechanically sufficient to prevent undrained shear failure during loading.

As documented by independent geophysics and hydrology expert Dr. Steven H. Emerman (Malach Consulting, 2026), the Draft SEIS relies on an assumed peak undrained strength ratio of 0.32 for the existing conventional slurry tailings. This value is higher than standard industry metrics (which typically range from 0.2 to 0.3) and completely ignores conservative modeling standards (such as the 20th–30th percentile recommendations by Jefferies & Been). By overestimating the foundation's shear strength, Ecology's stability analyses are fundamentally flawed and dangerous.

4. Aging Infrastructure and Groundwater Compliance Violations

Section 3.3.1.2 explicitly acknowledges increasing pollutant trends and recent permit limit exceedances for Total Dissolved Solids (TDS) at compliance well TP-3 (spanning 2019 through 2022).

Raising the facility's height will inevitably increase hydraulic head pressure, potentially worsening this groundwater seepage.

The SEIS relies on the claim that the risk of a liner system failure does not increase with the project. However, this fails to account for the facility's extended active operational life (an additional 9–12 years) acting upon underlying infrastructure that is already close to 40 years old. Liners and drains age, crack, and clog. As page 74 of the SEIS notes, freeze-thaw cycles cause a loss of structural integrity through cracking and seepage.

Section 4.3.3 presents a false choice by implying that necessary drainage facility upgrades and an emergency spillway will only be installed if the Proposed Project is approved. If these safety elements are required for basic safe operation, their existence must not be held hostage to project approval.

The vertical expansion proposes to load 5.5 million tons of material directly onto an aging, upstream-constructed facility. As noted by Malach Consulting, the inherent structural danger of upstream dams over uncompacted tailings has been recognized by the EPA and international engineering bodies for over 50 years, and this method is now strictly illegal under all circumstances in heavily mined jurisdictions like Brazil, Chile, Ecuador, and Peru due to its catastrophic failure history.

5. Over-Reliance on Unreviewed, Hypothetical Aquatic Assessments

Section 3.3.2 cites a hypothetical Natural Resource Damage Assessment (NRDA) prepared for Ecology. Because the Colville Tribes were not involved as Natural Resource Trustees—nor given the opportunity to review and comment on this document—its findings should not serve as a definitive baseline for aquatic life in the impacted streams.

It is unacceptable that critical biological indicators, such as benthic macroinvertebrates, are entirely dismissed in the SEIS simply because "no data were found" for the study area. Comprehensive biological sampling must be performed.

6. Disingenuous Viewshed Boundaries and Visual Characterizations

Limiting the analyzed viewshed to a 5-mile radius in a highly mountainous area is disingenuous and artificially restricts the scope of visual impacts. All viewpoints analyzed in the wider 2022 and 2025 results should be transparently included.

Categorizing the local visual character into only three types (natural, developed, and roadway) while grouping dispersed private residences into the same category as a massive, industrial tailings pond does not provide a meaningful analysis. Ecology should mandate the addition of a distinct "Industrial" visual category.

7. Inaccurate and Dangerous Minimization of Dam Failure Risks

On page 60, the SEIS states: *"The health and safety risks of dams and tailings impoundments are comparable to those of buildings or structures in the built environment..."* This statement is fundamentally inaccurate and highly alarming.

A building collapse does not unleash a catastrophic, fast-moving wave of millions of gallons of fluidized toxic tailings down a river basin. This facility holds immense potential energy that threatens human life and entire ecosystems downstream. The state's goal must be to make this facility as fail-safe as possible, rather than downplaying the severity of a failure by comparing it to commercial real estate.

Furthermore, technical review by Malach Consulting reveals that the dam breach estimations are artificially minimized and entirely ungrounded in real-world data. The SEIS analysis assumes a

highly unrealistic 3% to 6% release of stored tailings during a breach. Empirical data from global historical tracking databases show that the absolute minimum release ever recorded from a tailings storage facility failure is 9%, the historical average is 45%, and there are multiple documented instances of a 100% total catastrophic release of stored materials.

8. Immediate Localized Threats: Air Quality and River Proximity

During recent public engagement sessions, community members and staff expressed severe concerns regarding windblown dust lifting off the massive un-vegetated tailings pile and directly polluting the air of nearby residents.

The North Fork Sanpoil River runs a mere 150 yards (450 feet) from the tailings pile. The SEIS notes the presence of "setbacks," but local check-ins reveal these are merely open, unprotected spaces with no physical structural barriers or safety berms preventing dust or minor structural slumps from sliding directly into our fishery and watershed infrastructure.

Conclusion and Tribal Request

The Colville Tribes cannot support an environmental review document that relies on incomplete modeling, minimizes severe structural risks, and ignores our historical and legally protected tribal rights in the North Half territory.

The Colville Tribes' technical and structural concerns are heavily reinforced by the independent expert evaluation conducted by Malach Consulting, contained in the attached file **OHA_Memo_Emerman_June19_2026.pdf**, which we formally submit into the administrative record alongside these comments. Before any final SEIS is issued, we formally request that Ecology:

1. Mandate the additional technical static and seismic liquefaction triggering analyses outlined above.
2. Coordinate a comprehensive Natural Resources site visit with our Fish & Wildlife and Environmental Trust staff.
3. Formally schedule a Government-to-Government presentation and consultation with the Colville Business Council to address these outstanding gaps.

Thank you for your attention to these critical matters. We look forward to your prompt response to schedule our government-to-government consultation.

Sincerely,

DocuSigned by:



Jarred-Michael Erickson, Chairman
Confederated Tribes of the Colville Reservation

cc: Colville Business Council
Executive Director
Natural Resource Director
Environmental Trust Program Manager