Grant County PUBLIC UTILITY DISTRICT

Connecting Generations Since 1938

Submitted via Water Quality Permitting Portal – Permit Submittals application

January 12, 2024

Keith Primm - Water Quality Permit
Coordinator Department of Ecology - Central
Regional Office 1250 West Alder Street
Union Gap, WA 98903

RE: **2023 Environmentally Acceptable Lubricants Annual Report for Wanapum and Priest Rapids dams: National Pollutant Discharge Elimination System Permit Nos. WA0991028 and WA0991029 (S10.B)**

Dear Mr. Primm:

Consistent with Section S10.B of the National Pollutant Discharge Elimination System Permit(s) for Wanapum and Priest Rapids dams, Grant County Public Utility District (Grant PUD) submits this letter as its Environmentally Acceptable Lubricants (EAL) Annual Report for 2023. Included below is a list of in-water components that use either conventional or EAL oils/greases for both Wanapum and Priest Rapids dams (Table 1).

Table 1 In-water component/equipment list for Wanapum and Priest Rapids dams.

Component/equipment	Location	Type	EAL or Conventional
Spillway Gate Chains and Gears	Wanapum and Priest Rapids	Pyroshield 5180 Open Gear Grease Pyroshield 5182 Open Gear Grease	Conventional
Bulkhead Gate Wire Ropes	Wanapum and Priest Rapids	Monolec LE 2001 Wire Rope Lubricant Almasol LE 2002 Wire Rope Lubricant	Conventional
Turbine Components	Wanapum and Priest Rapids	Shell Turbo T68 Oil	Conventional
Wanapum Fish Bypass	Wanapum	Mobil EAL 224H series hydraulic oil	EAL
Fish Ladder attraction water pump wicket gates	Wanapum	Panolin Biogrease	EAL
Turbine Wicket Gates	Priest Rapids	76 Red Multiplex EP-1	Conventional
Fish Ladder Gravity Intake Gate Wheels	Priest Rapids	Lubrication Engineers Almaplex 1275 Grease	Conventional
Traveling Screen for Priest Rapids Hatchery Siphon Intake	Priest Rapids	Maxtron EP Lithium Complex Grease	Conventional

Section 5 of the 2022 EAL Report included a summary of Grant PUD's extensive assessments of the technical feasibility of switching the grease and oil lubricants used on components at the dams to EAL. The following determinations on the current technical feasibility of using EALs on the following components is included below:

- Spillway Gate Chain – It is not currently technically feasible to use EALs in submerged applications, such as chains. This assessment was included in Section 3 of the 2022 EAL Report.
- Wicket Gates – Panolin BioGrease EP2 is being used in this application, as explained in Section 4 of the 2022 EAL Report.
- Intake Bulkhead Gate Wire Rope – It is not currently technically feasible to use EALs in submerged applications, such as rope. This assessment is explained in Section 3 of the 2022 EAL Report.
- Columbia River Fish Ladders – Grant PUD uses EAL oil at the Wanapum Dam Fish Bypass.
- Turbines – It is not currently technically feasible to use EALs in turbines, as explained in Section 2 of the 2022 EAL Report.
- Turbine and Generator Bearings – It is not currently technically feasible to use EALs in turbine and generator bearings, as explained in Section 2 of the 2022 EAL Report.

Grant PUD continues to monitor EAL developments via a partnership with The Centre for Energy Advancement through Technological Innovation (CEATI) to continue researching EAL oils and greases for use on its components at the dams. Grant PUD will provide any applicable updates on these research efforts in future EAL reports submitted as part of these Permits.

If you have any questions, please contact me at 509-793-1468 or rhendr1@gcpud.org.

Respectfully,

Ross Hendrick

Ross Hendrick
Senior Manager – Environmental Affairs

CC: Mr. Damon Roberts – Ecology CRO
Mr. Erik Van Doren – Ecology CRO