

'Providing Tribological Solutions'

NEWS RELEASE

BC HYDRO HAS SUCCESS WITH VSG 'THE GREEN GREASE' VEGGIE OIL BASED AND READILY BIODEGRADABLE*

Application: Clowhom GS is in BC's lower mainland and is a 40 MW station on the Clowhom River. This river feeds into the Salmon Inlet and hence the Pacific Ocean. Clowhom GS is used as a peaking station and the head in Clowhom Lake ranges from 144 to 210 ft. They wanted to use a more environmentally friendly grease and chose VSG. This was in 1996 and BC personnel report that VSG 'The Green Grease' continues to work "great".

In addition, the amount of grease being used has been reduced twice! First they went from once daily to twice weekly and then to once a week. For this head some recommendations are every 4 hours which is 42 times a week rather than just once with VSG! Not only is VSG 'readily biodegradable' but regreasing might be significantly reduced without affecting performance.

Background: VSG was developed specifically for the bearings on the wicket gates of hydroelectric power stations. This was so operators could continue to use the time tested bronze bearings. A big advantage of VSG is that being mainly canola oil VSG is 'readily biodegradable', while mineral oil based greases are not. Plus, VSG has other environmental advantages because there is no added lead or chlorine, it has good water resistance without barium or lithium based thickeners and it has extreme pressure (EP) performance without zinc based additives. In addition, the canola oil in VSG is a natural, renewable product that can be part of sustainable development programs.

VSG is made in Canada and while many vegetable oil based greases suffer from poor pumpability at low temperatures, VSG does not. As proof, VSG meets the cold weather requirements of both the Ontario Power Generation and Hydro-Québec specifications and VSG remains the only 'green' grease approved by these utilities.

In addition, VSG is compatible with most of the current greases and it being used being used in both automatic and manual greasing systems as well for lignum vitae main bearings on a Kaplan turbine.

VSG is also being used in other applications including stop logs and wire ropes.

* Based on >81% biodegradability according to CEC test protocol.