

# NEWS RELEASE

## PARKER DAM BUREAU OF RECLAMATION HAS SUCCESS WITH 'VSG' BIODEGRADABLE GREASE

**Background:** A better product was necessary because spent grease from the wicket gate bearings on hydroelectric turbines will end up in the waterways. Traditional mineral oil based greases are not considered to be readily biodegradable or environmentally friendly so an alternative was required. This is VSG which was specifically developed for the bearings on the wicket and control gates of hydroelectric stations. It is considered to be 'readily' biodegradable as well as being mainly canola oil which is a renewal and 'green' resource. In addition, VSG provides excellent corrosion protection for the steel journals and actually stiffens up in contact with water. The result is that the same performance might be achieved with less grease. Lastly, VSG is compatible with most of the current greases and if compatibility is not known, this is checked with a lab test before use.

VSG can be used with the existing lubrication equipment and was first used by Ontario Hydro at the Sir Adam Beck 2 GS in Niagara Falls. This was in February of 1995 and VSG performed very well. It has now been used in over thirty turbines.

**Success at Parker Dam:** Also in 1995, the US Bureau of Reclamation tested their current greases and 'green' alternatives. This was in a working model of a wicket gate and it turned out that VSG did the best. In fact, VSG was better than the current mineral oil based product with a lithium soap thickener so there would be no sacrifice in performance.

The excellent performance of VSG was then proved out in service by the Bureau at the Parker Dam in California. Because of environmental concerns they had changed from a lithium to a food grade aluminium complex grease and then to VSG. Note: A food grade is not necessarily an advantage from an environmental point of view because it does not address biodegradability, aquatic toxicity or even performance. Plus, in many cases the zinc compounds added to make them white are not desirable and the mineral oil base can still form sheens.

VSG has been in service at the Parker Dam for over four years and is performing very well. There have been repeat orders and it is being used in other applications as well.

For tech data, references or any other information on VSG or on lubrication or bearing solutions, contact Utility Service Associates toll free at 888 442 5008 or by fax at 416 466-3807. Please provide information on the grease being used for an evaluation of the benefits with VSG.

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**ECO FLUID CENTER LTD.**

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newsbureau 2/09