

JANGARDUP MINERAL SANDS MINE, FLOCCULANT USE

41. Hon Jim Scott to the Minister for Housing and Works representing the Minister for the Environment and Heritage

In relation to Cable Sands use of flocculant in the co-disposal bores at its Jangardup mineral sands mine, *Cable Sands' Hydrological Review*, September 2000 - October 2001, page 26, notes that despite very high levels of hydrocarbon contamination at some of the co-disposal bores the contamination is likely to be grease from drilling rods -

- (1) Is the Minister aware that the hydrocarbon contamination was of the C-15 to C-36 hydrocarbon range consistent with volatile hydrocarbon compounds not greases as is claimed by Cable Sands?
- (2) Is the Minister concerned that hydrocarbon levels of between 21 and 89 mg/L were found in some bores?
- (3) If yes, what action has the Minister taken on this pollution?
- (4) Did the DEP accept Cable Sands position that the hydrocarbon contamination was likely to be grease?
- (5) Will the Minister table any correspondence between DEP officers and Cable Sands on this contamination matter?
- (6) Has the Minister requested the DEP to investigate the causes of this hydrocarbon contamination of the groundwater?
- (7) Has the Minister requested an independent investigation into the causes of this hydrocarbon contamination of the groundwater?
- (8) If yes to either question (4) or (5), will the Minister table a copy of that investigation?
- (9) If not, why not?
- (10) Is the Minister concerned that if similar hydrocarbon contamination occurred at the proposed mine next to Lake Jasper contamination of the wetlands could occur?

Hon TOM STEPHENS replied:

- (1) Diesel typically has a Carbon length between 12 and 18, whilst lubricating oils have a carbon length above 18. Hydrocarbons detected in Bores COD3A and B have a carbon length between 15 to 36, indicating lubricating oils and greases. Accordingly, Cables Sands' reasonably states that the contamination in the bore is most likely being grease from the drilling rods during construction.

Further, it is likely any breakdown products from the use of flocculant in co-disposal activities would first show up within the dredge pond where flocculants are used. Monitoring results do not show this. In addition, Bores COD3A and B are up hydraulic gradient (or upstream) of the dredge pond and groundwater would be flowing from the contaminated bore to the dredge pond, and not the other way around.
- (2) Although the oil and grease level is slightly elevated, the Minister considers that it does not pose an environmental risk. The Department of Environmental Protection believes that the hydrocarbon contamination will break down naturally through soil microbial action.
- (3) The Department of Environmental Protection and Cable Sands will monitor this bore closely over the next 12 months. It is expected the hydrocarbon contamination measured in the bore will gradually decrease as soil microbial action breaks down the contamination. Monitoring results over the following 12 months will be used to confirm this, or revisit the current assumptions.
- (4) Yes, based on the make-up of the hydrocarbon, the bore being up-gradient of the dredge pond and the levels of hydrocarbons in the dredge pond.
- (5) Yes. I now table a letter from the Department of Environmental Protection assessing the 2001 Annual Environmental Reports. [See paper No 191.]
- (6) No, the Minister does not believe an investigation is warranted given the above information.
- (7) No, the Minister does not believe an investigation is warranted given the above information.
- (8) Not applicable.
- (9) As the available information indicates contamination by an activity unrelated to co-disposal, on-going assessment by the Department of Environmental Protection, the breakdown of the material through soil microbial action and a plausible reason for the higher concentration provided by Cable Sands.

- (10) No. The current contamination is not impacting on water quality within the existing dredge pond some 100 metres away, so it is reasonable to believe that a similar bore hole event near Lake Jasper would have no effect on the lake.