

-----Original Message-----

From: Bahr, Bill [<mailto:bbahr@mt.gov>]

Sent: Friday, July 25, 2008 11:53 AM

To: Vaughan, Warren

Cc: LaVigne, Paul

Subject: Amsterdam-Churchill Development

Warren: I have attached an O&M inspection from 2005. A sizable portion of the inflow, estimated based on population for the District, seems to be unaccounted for in the water balance. That is, the levels in the ponds show about 208 days of hydraulic detention time (volume of cells divided by the daily flow). The report evaluates the evaporation rate for that area and allowable seepage through the lagoon liners at the applicable rate for the original 1977 pond design.

Since the system does not discharge and has not used the treated wastewater from the system to irrigate crops, the influent wastewater that is not held in the ponds may be leaking to ground water. That would be a potential violation of the Montana Water Quality Act.

It would be important for the District to undertake an engineering study to determine actual wastewater flow to the ponds. If the inflows were substantially less than estimated in this report, the water balance might show less leakage. An engineering review would evaluate the collection system for water tightness, the lagoon liners for integrity to prevent leakage to ground water and the capacity for future population to be added to the system.

The District must correct any leaking problems, if the liners have been compromised (Hypalon in cell #1 and Bentonite in cells #2 and #3).

Financing options are available to assist the District with planning and any corrective work. Since the last upgrade was in 1977, there will likely be other related issues, such as, solids deposition in the ponds, as well.

Thanks.

Bill Bahr
WPCSRF Program
MDEQ
406-444-5337