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The Secretary
Senate Rural and Regional Affairs and Transport
Parliament House
Canberra ACT 2600

4th April, 2007

Dear Sir/Madam,

**Re: Inquiry into Additional Water Supplies for South East Queensland -
Traveston Crossing Dam Information**

Purpose

The purpose of this letter is to provide information for the Senate Inquiry. Specifically, on the issue of geological testing and reports, and related information which has not been provided despite numerous requests.

Summary

A critical part of the proposed Traveston Crossing Dam is the construction and effective operation of the dam wall as means of holding back waters from the Mary River basin. To date, the Qld Govt has failed to provide sufficient information on geological and geotechnical conditions throughout the dam area. I have been trying to get information regarding these issues since the announcement was made. In mid-February Ms Anna Bligh was reported as having said that the proposed location was "an excellent location" for a dam wall and that drilling would be finished in a couple of weeks. If the Queensland government indeed have nothing to hide, why can I not get a copy of the report from the geologist who gave Ms Bligh that information.

Previous geological surveys are available. Indeed, the initial dam wall orientation has been considered and dismissed by several governments since the 1950's. The following was included in the Cooloola Shire Council's early submission to the Qld Govt regarding geology:

"17. Geotechnical

Council geology records (supplied by the Department of Natural Resources Mines and Water) show that the geological formations under and around the Mary River between Traveston Crossing and Imbil are from the Amamoor Beds (of the Devonian / Carboniferous era). These formations are described as old, internally discontinuous (fault-bounded),

moderately to strongly deformed, folded and in parts have undergone considerable alteration, superimposed by block-faulting. The strata generally dip at high angles of inclination and have been exposed to numerous intrusions.

In the area immediately beside the proposed dam wall records show significant and persistent faulting running along the river basin and perpendicular to it. The overlying soil is soft, friable and permeable, so water percolation into a fault would be a risk of some concern.

Council is concerned that a large water storage dam on the Mary River, as has been suggested, would be affected by these geological characteristics and could significantly affect the surrounding area adjacent to the dam. Permanent surface water pressure may considerably change the groundwater hydrology in the basin. Potential effects may include the creation of low-lying wetlands downstream of the wall and in neighbouring low lying areas where there are roads, houses and currently good quality agricultural land.

Council is also aware that the western flank of the proposed inundation area is a slip-prone red soil. It is conceivable that the stability of adjacent hills would have to be reviewed.

It is acknowledged that with sufficient engineering, difficult sites can be managed. However this comes at a cost, which is likely to make the proposed dam uncompetitive with other options.

In May 2006 DNRM released drilling logs from initial boreholes (still available at http://www.nrw.qld.gov.au/water/water_infrastructure/pdf/mary/borehole_report_1.pdf). The logs (60 pages of graphically representations of the material recovered by the drilling rig) are characterised by the following descriptions:

- Holes drilled in 1976
 - From the surface to a depth of 12m to 21m (across the river flat)
 - “Sandy CLAY - Low to medium plasticity, dark brown, fine to coarse sand, with some fine gravel, wet” and “NO RECOVERY - Possibly due to presence of no-cohesive material” and “Clayey Sandy GRAVEL Fine to coarse, subangular to angular, brown, low to medium plasticity clay fines, wet”
- Holes drill in May 2006 recovered deeper material
 - In the upper deposits (presumably from millennia of flood deposits)
 - “Gravelly SAND Fine to medium, brown, medium to coarse subrounded gravel, medium dense.” and “Sandy SILT/Silty SAND Low plasticity, brown, fine sand, stiff to very stiff/medium dense.”
 - Below about 21m the logs show
 - “MUDSTONE Fine grained, grey with white calcite veining, slightly weathered to fresh, medium to low strength, fractured with extremely low strength/crushed zones.” Opposite this description, results of strength testing are shown as 20-30 defects per metre. Mudstone is

inter-layered with extremely low strength SILTSTONE. Although the scale for strength shows a column for Very High and Extremely High Strength, no results are shown in these columns.

Interpreting the drilling logs released by the DNRM is traditionally the role of an experienced geologist (usually the one overseeing the drilling). However, the words used in the logs and the strength and defect results shown do not appear to indicate the "BEDROCK!" so loudly proclaimed by the (now retired) Minister for Water, Henry Palaszczuk. Each page of the logs includes a disclaimer that the logs must be read with the accompanying notes. These accompanying notes have never been publicly released.

An expert did review the drilling logs. In June 2006, the ABC reported:

An expert in geomechanics says the proposed Mary River dam, south of Gympie, in south-east Queensland, could lose millions of litres of water through leakage and evaporation.

University of Queensland Associate Professor David Williams says tests on the proposed dam site show about 35 metres of sand and gravel above the rock, which could lead to water leakage.

"If the wall's located on a location where you've got these ... sand and gravel beds going underneath it, of course it could go under the wall, but it may simply go into the ground," he said.

"It's certainly got a problem in terms of evaporation because the storage is fairly flat, so you'd lose a large amount due to evaporation, also lose quite a bit to seepage at this location."

I attended a meeting in the Kandanga Hall in July 2006, where I asked representatives from DNRM for further geological information. I asked about the "accompanying notes". I asked for seismic testing results. I asked about what effect the dam storage would have on the landslip-prone western hills of the Mary Valley. I asked about further drilling programmes, drilling the entire basin, not just the wall and the faulting along and perpendicular to the valley. Despite clearly providing my name and the fact that I wanted specific replies to my questions, I have received no response. Scott Smith (QWI Pty Ltd) promised to ensure that I would receive a reply to my questions, but no such reply has been forthcoming.

Further, my husband Darren Edward attended a meeting with Anna Bligh in Gympie in November 2006, and asked the same questions directly of the Deputy Premier. Referring to a comment by Bligh earlier in the meeting that "all of the geological results will be made publicly available, because you as taxpayers have paid for them and have a right to see them", he said:

"Thankyou Ms Bligh for your 'rock solid' promise (if you'll excuse the pun) to release all of the geological reports. Previously we've had promises from

the Premier and from QWI, but have received nothing, so it's good to have your word too".

At this point Ms Bligh replied "OK, but you'll have to see me afterwards to let me know precisely what documents you are looking for".

Darren replied "*There's no need to wait, I can tell you right now: the bore hole logs have been released on the internet, on the letterhead of a company called Golders. However, each is annotated 'must be read with the accompanying notes'. I want to see the Golders report in its entirety. Also, whether it is part of the same report or a separate report, I want to see the results of the seismic testing".*

"OK, I'll see what I can do" was the reply from the Deputy Premier.

Later in 2006, QWI Pty Ltd released via their website further drilling logs, 140 pages. Together with the drilling logs, QWI wrote a two page introduction. I rang QWI and asked to see the drilling summary report, produced by Golders. When I couldn't get answers from QWI, I enlisted the help of Community Futures Taskforce, as it was from their Newsletter that I was advised that the drilling report was finally available. I was eventually told by QWI that the report did exist but I couldn't have a copy until the drilling was finished. I was also told that the report was "technical" and that QWI did not think releasing it was necessary. (140 pages of logging symbols and graphs are okay for public scrutiny but the explanatory report is "too technical"?)

Early in 2007, Member for Gympie, David Gibson advised that he had finally been provided with the drilling report I had been requesting. I went into David's office to view the document, which turned out to be exactly what QWI have published on their website.

When the "answers" to our questions asked in July 2006 were finally released in 2007 on the internet, my questions in total were answered thus:

"The results of the geotechnical investigations are available on the QWI web site."

I challenge that they are not.

On the 13th February the Sydney Morning Herald quoted Ms Blighs comments about the dam wall stability and effectiveness, as follows:

"With 76 bore holes, we are now in an ideal position to say this is an excellent location, in a foundation sense, to locate the dam wall," Ms Bligh said.

"The drillings include 57 bore holes along and near our preferred dam wall alignment revealing good rock.

"This comprehensively knocks out the uninformed rumours of poor foundations, leaks and underground aquifers. They reconfirm our final alignment."

There was also no concern about any earthquakes damaging the dam or spillway, she said.

Drilling is expected to be complete in a couple of weeks.

The Queensland Government continues to reiterate that it has nothing to hide. I have repeatedly asked to be provided with a copy of the Golders Drilling Summary Report. Further, I wish to be provided with answer to questions that I asked about the geological and geotechnical investigations and planning processes for the proposed Traveston Crossing Dam. If it is indeed "an excellent location", then I wish to be provided with the report from the drilling company that says exactly that.