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Dams Safety Review
NSW Trade and Investment
GPO Box 5477
Sydney NSW 2001

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To Whom It May Concern:

RE: Review of the Dam Safety Act 1978 and Dams Safety Committee

State Water broadly agrees with the intent of the recommendations of the report and highlights that a number of these recommendations are already covered by the present operation of the Dams Safety Committee. We restate our key points with respect to the opportunity for improvement in the existing arrangements, namely that consideration of economics should be explicitly included in the DSC's remit; and the DSC could provide clear guidance on the acceptable definition of 'good practice' which is an essential engineering component of evaluating the ALARP principle. Specific comments are offered below.

Dam regulators role in determining risk management strategies (Recommendations 1 and 2)

It is, without question, the role of the dam-owner to assess the various options available to manage the risks from a dam. The notion that the Dams Safety Committee (DSC) has been responsible for a "singular focus of dam engineering solutions" is misinformed. The DSC has not been involved in developing management strategies, except in extreme circumstances of imminent risk. The Dams Safety Committee has of course been a body of experts, and as a consequence has been able to make its own judgements as to the truth and appropriateness (or otherwise) of any dam owner's course of action.

Composition of the dam safety regulator (Recommendation 3)

It is State Water's opinion that the review has fundamentally misdiagnosed the purported conflict of interest with respect to the membership of the Dams Safety Committee. Firstly, we are aware of the DSC's robust and consistently applied process of relevant members declaring their conflict of interest whenever discussions relate to specific dams. Secondly, State Water offers the observation that many dam owners would agree with the Government's concern regarding a forecast of over-investment in dam safety in the long-term. Given this is a stated driver of the review, it would suggest that dam owners have not captured the

regulator nor been able to have undue influence. Thirdly, State Water offers the observation that the beneficiaries of continued dam upgrades are not the dam owners, but rather the wider dam industry including technical specialists and consultants such as Public Works. While this is not an accusation of wrong doing on the part of the industry participants, we note there are no drivers to support reduction in future dam safety investment, particularly if they carry any fiduciary risk. If the proposed regulator is not to rely on dam owners for dam engineering expertise, it must employ suitably qualified dam engineers who have no external interests in dam upgrades. This is problematic for any advisory panel arrangement which may be relied on to provide industry expertise. In this respect State Water notes the findings of KPMG's survey which indicated non-dam owners were more supportive of enhancing the powers of the Dams Safety Committee to enforce action by dam owners – non-dam owners apparently believe there has been insufficient dam safety investment. State Water notes that being "independent from the businesses it regulates" is not a Better Regulation Principle, nor does it contribute to the objective of achieving more efficient outcomes. State Water reiterates we do not support the statement that the current members of the DSC have a conflict of interest or that conflicts of interests that arise from time to time are not appropriately managed.

With respect to the need for a broader range of skills in the dam safety regulator, State Water believes it is necessary to point out that the current committee already has several experts in engineering risk assessment in its membership, notably the current chair. It is acknowledge that it has not been the practice for the committee to have expertise in economics, however, we would argue that this is a function of the Committee's remit and therefore a limitation of the *Dam Safety Act 1978*.

Funding of the dam safety regulator (Recommendation 4)

KPMG report does not give due regard to the impact of their proposed significant change in the cost of regulation. Given the expanded expertise envisaged in the report and the transfer of existing costs from Government to dam-owners, State Water is concerned that the future cost of being regulated could be of the same order as the current cost of dam safety management. State Water notes that the report highlights a number of areas where a dam safety regulator could make more extensive contributions (eg recommendations 10, 11, 12, 13, 14). The report also explicitly states that it should be dam owners' responsibility to pay for the cost of regulation since they are the 'risk creators'. Other 'risk creators' such as developers and mining companies, whose activities create the externalities for owners of existing dams, have not been targeted as 'risk creators' who should fund the regulator for such activities.

State Water highlights the exceptionally cost effective model on which the Dams Safety Committee has historically operated. This artefact runs contrary to the KPMG statements that the DSC has been "hands-on" (p3) and that hands-on regulation

increases the cost to government (p19). One of these statements must be untrue, and potentially both are. With respect to the DSC being “hands-on” State Water sees no evidence in our own experience. It has been entirely up to State Water to put forward to the DSC what the Corporation believes to be the appropriate course of action and what solutions (engineering or otherwise) are most suitable. The DSC’s expertise allows it to make assessments of the dam owner’s proposals on their individual merits, taking account of all the circumstances relevant to their remit. In State Water’s assessment this does not constitute a hands-on regulator.

Respective responsibilities of the dam-owner and the regulator (Recommendation 5)

We are under no misapprehension about the legal and potential criminal liability we carry as dam owners. The challenge of our task is the lack of standards (or position of authoritative body) by which to measure the safety status of our dams and support an application of benefit-cost approach to further dam safety investment. The lack of an endpoint defined in economic/risk and engineering terms results in continued dam safety investment, pursuing ever diminishing benefits at ever increasing costs. This will continue until ‘engineering standards-based’ criteria published by ANCOLD are met – ANCOLD guidelines explicitly exclude risk assessment as an appropriate basis of determining the safety status of a dam (*Guidelines on Risk Assessment 2003* Section S11). Only an expert engineering body which represents the interests of the public rather than industry can provide a robust engineering standard which incorporates the economic and risk criteria. An economic regulator can not provide this function, nor can a dam owner set a normative standard.

Further observations regarding dam safety guidelines and standards

State Water has and maintains a staged risk reduction program relying on the “progressive improvement” principles under the DSC’s *Risk Management Policy Framework (2006)* namely:

- Short Term or Interim: up to two years, initial easily-attainable risk reduction, e.g. dam break early warning systems, minor interim structural works.
- Medium Term: three to 10 years, significant risk reduction as soon as reasonably practicable, aim to achieve risk reduction to below the Limit of Tolerability (Individual & Societal).
- Long-term: 11 to 20 years, full deterministic compliance (e.g. PMF) and risks below the Limit of Tolerability subject to ALARP and taking account of the DSC’s Broadly Acceptable objective for risk.

The actual time frame would vary from dam to dam and from owner to owner, depending on such factors as the level of risk, the risk profile of the owner’s portfolio of dams and the complexity of needed planning. In all cases, safety improvements should be implemented as soon as reasonably practicable, having

regard to relevant circumstances. In State Water's case, the particular circumstances include our extensive portfolio of 'non-compliant' dams and the resources available to undertake rectification. This degree of flexibility is only possible within the framework of a regulator which has extensive engineering expertise of its own where case by case judgements are possible at a detailed level. State Water notes the unique nature of the Dams Safety Committee *Risk Management Policy Framework* when compared with more common prescriptive regulation. State Water's only concern with the Risk Management Policy Framework is that it does not go far enough in explicitly opening the justification of ALARP as an appropriate long-term safety endpoint.

State Water notes with interest the conclusion of appendix D of KPMG's report which states that the NSW Dams Safety Committee's societal risk criteria are "too lax" (p115). We also note the recommendation to converge to the Department of Planning criterion (p114) which is significantly more stringent, particularly for very large dams in urban areas such as Sydney Catchment Authority's Warragamba Dam. State Water also notes the discussion currently occurring within the industry body ANCOLD to change their definition of intolerable to something closer to the current Dams Safety Committee guidelines. The best information available suggests that all State Water dams meet, or will soon meet, all of these societal risk criteria and are therefore subject to the ALARP test. In our assessment, the key issue in determining if future dam safety works are required is the definition of 'good practice' within the determination of ALARP.

State Water has undertaken a preliminary examination of the Victorian regulatory model and the relevant guidelines. State Water believes that the explicit statement of what the regulator accepts as 'good practice' (which the Victorian guidelines provide) is a positive improvement over both the DSC's and ANCOLD's guidelines. However, we note that the majority of State Water dams do not meet Victorian dam safety regulators guidelines. Rectification works to meet the Victorian guidelines would be in the order of hundreds of millions of dollars above State Water's immediate program.

We also note that while the Victorian model does allow for phasing of works and the avoidance of 'price shocks', it does not explicitly support the long timeframes incorporated in to the NSW DSC *Risk Management Policy Framework for Dam Safety 2006*. State Water Corporation's legacy dam safety issues are government funded by decision of IPART and as such do not result in 'price shocks' – these are therefore not a consideration in the phasing of State Water's program. The NSW DSC policy explicitly allows for a prioritised portfolio approach to the management of non-compliant dams by a dam owner over an extended period of time. State Water has leveraged the timelines allowed under the NSW Dams Safety Committee risk policy to ensure adequate investigations, research and modelling occur instead of rushing to the implementation of construction solutions. Without these long time-

horizons State Water's upgrade program would have more than doubled in annual expenditure. A likely outcome of any overhaul of the Dam Safety Committee is that State Water's dam safety expenditure will increase significantly, unless the best elements of the current NSW model are retained.

It is our assessment that the objectives of any revised dam safety regulator would best be achieved by modification of the existing arrangements such that:

- The Dams Safety Committee was given an extended/clarified remit
- A mandate for improvement was provided
- Engineering expertise was maintained

Yours sincerely

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