



Queensland Murray-Darling Committee Inc. Submission on the Nathan Dam and Pipelines Project EIS

5 June 2012

Submission to:

The Coordinator-General
C/- EIS project manager - Nathan Dam and Pipelines Project
Significant Projects Coordination
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This submission is presented by the Chief Executive Officer, Geoff Penton, on behalf of the Queensland Murray-Darling Committee Inc. (QMDC). QMDC is a regional natural resource management (NRM) group that supports communities in the Queensland Murray-Darling Basin (QMDB) to sustainably manage their natural resources.

1.0 Background

QMDC's internal policy, *Policy for the Queensland Murray-Darling Basin - Mining and energy industry impacts on natural resources in the Queensland Murray-Darling Revised Final Draft 2011* (the QMDC Mining and Energy policy) provides a framework for QMDC's submission on the Nathan Dam and Pipelines Project Environmental Impact Statement. The policy was drafted by QMDC in consultation with the communities, organisations and stakeholders QMDC is working with in the region. Its purpose is twofold:

- to address the impacts of the mining and energy industry on the QMDB's natural resources; and
- to provide a framework for best practice and policy decision-making, risk management and responses to the specific and cumulative impacts of the industry on the QMDB's natural resources.

QMDC has made numerous submissions to relevant government agencies on draft TOR, EIS, EA applications and proposed CSG water management policies and procedures.



QMDC seeks the protection of natural resource assets and the development of policy and legislation that is informed by local and regional NRM knowledge and best available science. These natural assets are identified by the Regional NRM Plan as being at risk to the impacts caused by mining activities.

QMDC is actively working with DERM and the mining and energy industry, and has been doing so for the last four years, to reach agreement on actions needed to improve operational procedures and policy.

2.0 General Comments

QMDC is concerned that the Nathan Dam and Pipelines Project (the Project) is being held out as a long term solution for CSG water in the region. The Project because it is customer driven and must provide commercial returns presents with a number of key challenges that should not be ignored in the quest for profit.

- CSG water is only being gathered for the pipelines from one company, QGC, exposing it to risks associated with the business viability of one company.
- CSG water as a waste product is being transported from one region to another.
- The Project relies on “hooking” farmers as customers at the first instance when pipelines completed but drops them at the completion of the Dam because it is recognised they will not be able to afford the water in the second instance (\$5,000 - \$6,000 per ML).
- Sunwater must guarantee that every drop of CSG water taken from QGC must be used before it reaches the Dawson River.

Collectively these issues highlight the precarious nature of the Project in that it cannot accurately and confidently guarantee supply volumes of water, nor total consumption of the CSG water; it is unlikely to be able to meet customers’ expectations with regards to reliability and costs; and the integrity of the resource (water quality, ethical governance, best NRM planning practices etc).

Principles promoting a high-quality stewardship of the Great Artesian Basin (GAB) must promote practices relating to the exercise of water “rights” by Sunwater, CSG and petroleum projects which will ensure high-quality stewardship of GAB resources; minimise disturbances to GAB resources; and protect GAB resources for future human and environmental purposes

QMDC does not support the construction of the Pipelines and recommends that the Project be refused to proceed because:

- CSG water must not be transported out of the QMDB region and into another;
- CSG water from this region should be made available for beneficial use within this region; and
- the CSG associated water and byproducts are not being treated as close as possible to the source and thereby the Project does not fulfil current waste management lifecycle policy objectives.

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3.0 Scientific certainty & precautionary principle

Options for disposal of coal seam gas recycled water release into any water source (including to a watercourse, lake, dams, weirs or aquifers or town drinking water supply) must be based on scientific certainty addressing e.g. issues such as impacts resulting from bioaccumulation of chemicals and contamination.

4.0 Recommendations

QMDC recommends the following matters be considered:

4.1 Where the Project makes make associated water available for 'beneficial use', the water must be:

- a. **Subject to risk assessments based on the immediate, future or cumulative impact which may result from its use, taking into account potential contaminants including salt, surface and groundwater interaction, changes to overland flow, and new and existing infrastructure.**
- b. **Subject to existing legislation, including the *Water Act 2000*, *Environmental Protection Act 1994* and other relevant legislation and Water Resource Plans for the relevant catchment and associated Land and Water Management Plans, including mining or energy company-owned land.**

4.2 Associated water (including by-products such as brine) must be:

- a. **Subject to Water Resource Plans and associated legislation regulating changes to overland flow and surface water flow systems.**
- b. **Aggregated only where risk and safety measures are appropriate for the volume of water and storage location within the landscape.**
- c. **Disposed of in a manner whereby 'disposal' is defined against specific criteria and limitations that mitigates the risk and safety associated with the storage, transport, destination, and cumulative and long term impacts of such volumes of water.**
- d. **'Disposed' of within natural systems where it does not impact on the ecological functioning of that system and is subject to other policies within this document, including cumulative impact to that system.**
- e. **'Disposed' of into a natural system only when the water quality parameters are within locally established guidelines or historical baseline, as per other policies within this document, including cumulative impact to the system.**

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- 4.3 By-products from associated water treatment processes, including brine, must be:**
- a. Preferably utilised for a tertiary industrial use that safely manages any contaminants or potential offsite impacts of waste accumulation.**
 - b. Removed from the landscape and managed within a controlled and safe environment, with disposal sites registered with the Environmental Protection Agency.**
 - c. Not permitted to be covered or buried insitu in the landscape from or within evaporation ponds or storage ponds, regardless of whether the pond has clay or impermeable lining.**
- 4.4 Emergency releases of associated water (treated or untreated) must be:**
- a. Fully considered as part of Environmental Management planning and design to ensure mining and energy operations and infrastructure are adequate during emergency events, such as floods, thereby avoiding the need to discharge.**
 - b. Required to meet approved Regional Water Quality Guideline limits.**
 - c. For a 7 day maximum period only or the period of the 'event' e.g. flood event.**
- 4.5 The Project must prevent adverse impacts to the region's natural resources, community, and economy from mining and energy industry activity by promoting as part of responsible business practice:**
- a. Environmental – the environmental impact, direct or indirect, of a company's operations, products or services including those of its suppliers or subcontractors.**
 - b. Community/social – the impact of a company's projects, products, services or investments on the community at a local and global level.**
 - c. Workplace practices – including respectful, treatment of employees in matters related to recruitment and selection, diversity and equal opportunity, work/life balance, professional development and progression, managing redundancies and full entitlement to employment rights.**
 - d. Marketplace and business conduct – responsible behaviour in developing, purchasing, selling and marketing products and services.**

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- e. **Ethical governance – from executive level and throughout a company: sharing information and disclosure, transparency; risk management; due diligence; effective codes of conduct and ethics.**

The importance of environmental, social and governance factors requires integrating a broader assessment of risk into decision-making.

4.6 QMDC supports a broad definition of cumulative impacts that requires Sunwater to include an assessment of the successive, incremental and combined impacts of the Project on community, environment and the economy. For this EIS, the term is taken to mean the combined impact of Sunwater’s operations and all associated infrastructure (onsite and offsite) on the QMDB communities and natural resources over time.

More specifically these different types of impact are:

- a. **Spatial extent impacts – those which occur over an area, eg the area of vegetation that has been cleared for the Dam and Pipelines, the amount of land disturbed and rehabilitated.**
- b. **Spatial intensity impacts – when a location is impacted on by the activities of multiple sites, eg where the dust of several upwind construction sites contributes to elevated levels of dust in particular areas.**
- c. **Simple temporal impacts have a specific time of commencement and a measured form over time, eg the amount of land rehabilitated over time as a reflection of the stage of development of the Project life.**
- d. **Offset temporal impacts occur when multiple simple temporal impacts are superimposed upon one-another over time, eg materials moving through rivers.**
- e. **Linked triggered impacts are those that occur when one impact, either by its occurrence or by reaching a threshold level, triggers another impact that would not otherwise have occurred. The second impact is the triggered impact.**

4.7 The cumulative impacts of the Project within the Queensland Murray-Darling Basin are managed by:

- a. **Participating in multiple planning with key community organisations, state and local government to identify appropriate areas within the landscape, community and economy of the region for the Project.**



- b. Safeguarding natural resource and community assets and values from associated infrastructure. QMDC is concerned about the impact of the network of associated infrastructure, for example, pipelines, power-lines, roads, telecommunication towers etc. The first option should be the utilisation of common easements for associated infrastructure. Easements should:**

 - i. avoid remnant vegetation, where infrastructure is at a safe height above ground or safe depth below ground;**
 - ii. avoid risky soil types that are highly erodible; and**
 - iii. abide by floodplain management guidelines.**
 - c. Notifying local governments and communities of proposed developments in a timely and publically accessible manner. Involving local governments in all stages of planning and providing adequate notification and support to plan for and manage the impact of significant developments and associated developments on the resources and services of the local government and the wider community.**
 - d. Setting within legislation cumulative upper and lower limits for changes to natural resource asset condition (including accounting for modelled climate change and variability) and function in defined zones and timeframes to protect the integrity, health and value of the asset, and productive capacity, of those zones. Exceeding such limits would not be permitted under any circumstance, and would be an offence to do so.**
 - e. Ensuring monitoring requirements and management are consistent (including units of measure), within the defined asset, and across Sunwater's operations and that they report against site, total and cumulative thresholds.**
 - f. Conducting independent monitoring of water (surface and groundwater); vegetation and biodiversity; land and soils and air to ensure transparency and accountability to the community.**
- 4.8 A code of conduct for community engagement and disclosure of information is developed addressing:**
- a. Community expectations for a more enduring and direct role in the planning, decision-making and implementation of natural resource policies and activities as they relate to mining and energy industry impacts.**



- b. Timely and adequate notification of proposed developments, particularly to local governments and communities where the development and associated developments have the potential to impact on the planning and resourcing of supporting infrastructure, services and land use e.g. Industrial and residential zoning, refuse management, sewerage management, roads, infrastructure, services (health, police, schools), airports, and emergency services.**
- c. Engagement that is timely, meaningful and relevant and conducted appropriately for each stakeholder.**
- d. Public notification of and access to approved Environmental Authorities or Licenses and consultation with regards to any proposed changes to Environmental Authorities.**
- e. Timely and public disclosure of monitoring requirements, and subsequent results for the condition and trend of natural resource assets including site, total and cumulative impacts as they relate to the mining and energy industry.**
- f. Notification to landholders of all chemicals stored and used on the Project sites. Further contingency planning is needed across industries for risks associated with direct contamination to livestock, food and fibre crops; failure to comply to declaration of chemicals and withholding periods by landholders; compensation for lost sales and any industry impact.**
- g. Public notification of breach of conditions and public access to complaints registers.**

4.9 Sunwater should minimise the risk and potential impact to the natural resources, community and economy of the region by:

- a. Sunwater providing adequate financial assurance for implementation of short and long term rehabilitation/remediation plans, safeguarding against risk associated with collapse/abandonment of companies and/or the industry.**
- b. Contributing to the increased costs to local governments for management of infrastructure, resources and services, for example sewage treatment, waste management, domestic water treatment etc as a direct result of the Project's development.**
- c. Undertaking planning and studies to address the unique issues of smaller rural and residential holdings and the compounded impact to communities and natural resource values of the area.**

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d. A pre-determined percentage of the financial assurance received from Sunwater is invested in natural resource management within the originating region.

4.10 Responsible business practice principle

4.10.1 CSG water “by-products” must be disposed of in a manner whereby ‘disposal’ is defined against specific criteria and limitations that mitigates the risks associated with the storage, transport, destination, and cumulative and long-term impacts of such volumes of water or “by product”. Specific disposal criteria needs to include but is not limited to the following:

- a. Does not result in a contaminated site**
- b. Does not allow the release of radioactive material into water sources**
- c. Does not create a “stockpile” of by-product to be dealt with once a future solution is found**
- d. Does not permit untreated CSG water emergency disposal**
- e. Is disposed of in manner to streams that allows natural drying and wetting cycles to be achieved**

4.10.2 Risk Assessments are based on the immediate, future and cumulative impacts which may result from CSG water use, taking into account potential contaminants including salt, surface and ground water interaction, changes to overland flow, and new and existing infrastructure.

4.10.3 No beneficial use activity knowingly causes environmental harm

4.10.4 No increase in deep drainage in high salinity risk areas is permitted by avoiding land based disposal (unless it is highly efficient irrigation)in areas that are deemed to have a high salinity risk(see DERM mapping)

4.10.5 Avoiding permanent development or infrastructure that is reliant on future water supply when CSG water runs out so there is no permanent reliance on temporary supply of water by existing or new industry.

4.10.6 It should be a mandatory requirement that Sunwater use a set monitoring and data collection methodology that is independently reviewed and regularly evaluated against community values and regional guidelines on, for example, water quality. Raw data and methodology should be made public per evolving water data transfer protocols as they progress under the Federal Government’s Water Regulations Act. And regional Water Quality Guidelines This should assist in filling gaps in the identified need to have baseline data.

4.10.7 The continued release of an emergency release of CSG recycled water should not be permitted under any Act. An emergency release should have a very limited timeframe of no more than 7 days. If a CSG entity perceives the likelihood of emergency releases their operations should not be allowed to proceed and an environmental authority be declined or revoked.



The cumulative impact of emergency CSG water releases by Sunwater, multiple CSG or other entities must be considered. An emergency release should be within the water quality limits set by any current or future Regional Water Quality Guidelines.

- 4.10.8 Robust community and stakeholder consultation is required so that communities have access to and be involved in discussion and decisions based on scientific and social research both international and local e.g. indirect and direct augmentation of CSG recycled water into water sources under the Water Supply (Safety and Reliability) Act does not put human health at risk.**
- 4.10.9 Public consultation requires statutory timeframes that allow for real time disclosure and consultation.**
- 4.10.10 Strategic and real time monitoring and public access occurs e.g. when CSG water is released into streams or weirs, those streams or weirs are subject to chemical and biological monitoring to assess impacts; and all monitoring data be made available to the public within one month of collection.**
- 4.11 If Construction of Dam and Pipelines is approved the Project must maintain and improve riverine, aquatic, wetland, floodplain and riparian assets and function principle by:**
- a. Appropriate planning and design of activities at the landscape and local level to identify and adequately protect all waterways, floodplain functioning and wetlands, considering values and function, taking into account:**
 - i. in-stream flow regimes**
 - ii. surface water flow systems (eg potential contaminants such as salt, erosion, groundwater interface, barriers to movement of flow and in-stream species risks)**
 - iii. groundwater flow systems**
 - iv. riparian function (eg groundcover, bank stability, habitat, connectivity)**
 - v. wetland and floodplain function.**
 - b. Restricting activities within water quality baseline indicators to be set appropriate to sub-catchment levels, and local and regional threshold limits (when determined).**
 - c. Preventing direct and indirect adverse impacts from beneficial use activities by:**
 - i. Excluding activities from within a defined buffer zone for waterways appropriate to stream order and defined buffer zones upstream from and including wetland; specifically 500m for stream orders 5, 6 & 7; 100m for stream orders 2, 3 & 4.**
 - ii. Ensuring that legislative protection is afforded to Ramsar listed wetlands and feeder streams for 100 kilometres or a safe distance depending on activity upstream.**

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- iii. **Not permitting diversions of number 4, 5, 6, and 7 stream order waterways.**
- iv. **Not permitting and actively preventing off-site movement of soil, salt, contaminants and weeds to riverine, aquatic, wetland, floodplain and riparian areas, either directly or through landscape processes.**
- v. **No adverse impact to surface water flow systems within the floodplains including interaction with groundwater flow systems.**