QUEENSLAND FLOODS
COMMISSION OF INQUIRY

STATEMENT OF ANDREW STUART BRIER

WITH RESPECT TO THE DAWSON MINE

I, **ANDREW STUART BRIER** of c/- 400 George Street Brisbane in the State of Queensland, General Manager Strategic Implementation, Coal & CSG Operations, Regional Service Delivery, Operations and Environmental Regulator, Department of Environment and Resource Management (DERM), solemnly and sincerely affirm and declare:

Requirement from Queensland Floods Commission of Inquiry

1. I have seen a copy of a letter dated 13 September 2011, which is attachment **ASB-01**, from the Commissioner, Queensland Floods Commission of Inquiry to me requiring a written statement under oath or affirmation, and which details the topics my statement should cover.

2. Between 2010 and 2011 my roles were as follows:
   - 25/12/2009 to 05/08/2010 - Regional Manager GABSI & Major Projects
   - 06/08/2010 to 02/01/2011 - Regional Manager CSG Activities
   - 03/01/2011 to 20/02/2011 - Director LNG Enforcement Unit
   - 21/02/2011 onwards - General Manager Coal & CSG Operations

Role

3. I am currently the General Manager Strategic Implementation, Coal and Coal Seam Gas Operations within the Regional Service Delivery Division in DERM of Environment and Resource Management. I have held this position since 21 February 2011 although I was involved in the management of flood related issues surrounding coal mines from the 10 January 2011 onwards.

Item 1: Department of Environment and Resource Management's activities in respect of each mine's flood preparedness in advance of the 2010/2011 wet season, including whether any particular activities were undertaken as a response to the forecast of an above-average rainfall wet season.

4. As a regulator DERM's compliance activities are designed to strategically review the performance of individual regulated entities on the basis of perceived risk.

5. DERM undertook pre wet season compliance programs to evaluate water management preparedness ahead of the 2010/2011 wet season. This primarily involved evaluating past wet season performance and preparedness ahead of the next wet season in terms of having available dam storage capacity to meet the minimum design storage allowance required on the 1 November of any year.

6. Environmental authorities include requirements for companies to prepare Water Management Plans that outline the overall mine water management strategy for their site. The environmental authorities require an annual review of these plans to ensure learnings from past wet season performance are incorporated into forward plans and preparations for future wet seasons.

7. Environmental authorities for mine sites also include dam structural design, construction and operation requirements that are commensurate with flood risks given a mines location, including:
    a. certified hazard assessment required for all dams;
    b. must be designed to prevent floodwaters from entering the dam, wall failure and overtopping up to and including a specified flood event based on AEP;
    c. certified design plans, high risk dams reviewed by DERM technical experts;
    d. having a marked "mandatory reporting level" above which DERM must be notified immediately, and actions put in place to prevent or minimise environmental harm;
    e. ensuring that dams are inspected by a suitably qualified and experienced person;
    f. undertaking reviews annually about the effectiveness of the dam during the preceding wet season and modifying the water management system accordingly;
    g. monitoring of water quality within the dam prior to the wet season;
    h. maintaining a register of dams and relevant information.

8. Officers of DERM carried out a pre wet season compliance inspection of the Dawson Central and North and Dawson South Mines on 9 November 2010 (**ASB-D01-01** to **ASB-D01-05**). At this time the mine advised that they were prepared for the 2010-2011 wet season and did not expect to have any non-compliant discharges of mine affected water to the environment.

9. The mine also advised that water management remained an ongoing issue for the Dawson Central and North and Dawson South Mines given the size of the site and the configuration of the current water management infrastructure, which captures water that falls within the mine area.

10. DERM was informed that excess water would be pumped across the Central and North portions of the site via the "backbone" water distribution system to locations with available storage capacity including unused open cut and underground pits during the 2010 – 2011 wet season if required. Water management options at Dawson South appeared limited but they did not anticipate that they would exceed available storage capacity.

Item 2: the water management sections of the environmental authority applicable at the mine during the 2010/2011 wet season, including:

a) **Any concerns held by him or the Department of Environment and Resource Management (DERM) regarding its terms and the ability of the mine operator to comply with it**
b) **Any terms that the mine operator has indicated it is unable to comply with, or breached**
c) **Any terms that had to be amended from the Fitzroy model conditions because the model terms were unsuitable for this mine site**
d) **Any terms that he or DERM consider do not adequately promote environmental protection and dam safety**

a) Any concerns held by him or the Department of Environment and Resource Management (DERM) regarding its terms and the ability of the mine operator to comply with it

11. The Dawson mine was included in a list of mines to be inspected prior to the 2010-2011 wet season (**ASB-D01-01**). This list was developed following an assessment of all coal mines in the region and the risk of a non-compliant discharge from each site on the receiving environment. The Dawson Mine was defined as a low-medium risk site.

12. DERM identified three issues at Dawson South and four issues at Dawson Central and North. However, the issues were not anticipated to prevent Dawson Mine from complying with the water management conditions (**ASB-D02-01** and **ASB-D02-02**) during the upcoming wet season. Dawson mine was provided an opportunity during a phone conversation with DERM in December 2010 to submit a voluntary Transitional Environmental Program (TEP) to reduce the risk of non-compliant discharges and to develop a detailed release strategy that would provide the best outcome for the environment and community downstream of the mine. Dawson Mine submitted a response to DERM's concerns in letters dated 28 January 2011 (**ASB-D02-03** and **ASB-D02-04**).

13. Neither Dawson Central and North or Dawson South Mines took the opportunity to submit a TEP at this time, but advised DERM they had adequate contingencies in place should they receive significant rainfall during the wet season.

b) Any terms that the mine operator has indicated it is unable to comply with, or breached

14. Dawson Mine advised DERM on 28 December 2010 through verbal communications that it would not be able to comply with the water management conditions due to significant rainfall events during late December 2010. According to the mine, rainfall had resulted in uncontrolled release from authorised release locations, and exceeded the capacity of the on-site water management system to manage mine affected water through discharges to the environment.

c) Any terms that had to be amended from the Fitzroy model conditions because the model terms were unsuitable for this mine site

15. Dawson Mines operate under the full suite of 'Model Water Conditions for Coal Mines in the Fitzroy Basin' (**ASB-D02-01** and **ASB-D02-02**) that were developed after the 2008 flooding in Central Queensland. These conditions were applied to the EA in late 2009.

16. There have not been any amendments to the Dawson Mine EA water conditions since this time.

d) Any terms that he or DERM consider do not adequately promote environmental protection and dam safety

17. To the best of my knowledge, I do not consider the water management conditions at Dawson Mines contains terms that do not adequately promote environmental protection and dam safety.

Item 3: any transitional environmental program (TEP) issued or refused or any emergency direction (ED) given or considered regarding either mine during the period 1 October 2010 to 30 July 2011 related to water management, and for each, the following:

a) **Information received from the mine operator**
b) **Any relevant dam safety issues**
c) **Relevant correspondence with the mine operator and other stakeholders**
d) **Whether and, if so, how DERM consulted with stakeholders**
e) **What considerations DERM took into account in making the decision**
f) **Whether, and if so, how DERM balanced environmental considerations and economic consequences of mines being non-operational**
g) **Whether, and if so how, DERM took account of downstream effects, including cumulative effects**
h) **The terms of the TEP issued or ED given**
i) **What actions were taken by DERM to advise emergency management personnel, including local and regional disaster management groups and local residents downstream of the dam about the TEP and any discharges or effects**
j) **Reasons for the decision given to the mine operator**
k) **Any breaches of the TEP or ED by the mine operator and DERM's response**

a) Information received from the mine operator

18. There were a number of dealings related to mine releases authorised by a Transitional Environmental Program (TEP) at Dawson mines between the dates specified. Due to the time constraints placed on submission of this statement and the large amount of correspondence received by DERM in relation to TEPs over the specific period there is a possibility that there are other items of correspondence or information that DERM has received in relation to this mine that have not been attached to this statement. This being said, the information

provided is the best available data that could be provided at the time of submission.

19. Dawson Central and North Mine received verbal advice via phone conversation with Mark Evans, acting Regional Manager, Environmental Services, Central West Region, DERM to discharge from authorised and unauthorised locations on 27 December 2010. This was done in order to provide an expedited approval for what was considered to be a low risk release to avoid potential issues future non compliant releases, and water ponding to elevated levels around mine infrastructure and potentially impacting site safety for mine personnel.

20. Dawson South Mine submitted a draft TEP on 4 January 2011 (**ASB-D03-19**) the TEP was assessed and approved by the department on 13 January 2011 (**ASB-D03-07**) to discharge mine affected water with increased concentrations of salinity (EC) to the receiving environment if increased natural flow in the Dawson River was also present.

21. Dawson Central mine submitted a draft TEP to the department on 4 January 2011 (**ASB-D03-17**). Following the submission of this document there was significant consultation between Dawson Mine and the department, resulting in a combined draft TEP for the Dawson Central and North mine being submitted on 7 February 2011 (**ASB-D03-18**). The draft TEP was assessed and accepted with conditions on 18 February 2011 (**ASB-D03-08**) to discharge mine affected water from authorised discharge locations at elevated EC concentrations and regional receiving water flow rates.

22. Dawson Central and North mine received verbal approval via a phone conversation on 14 January 2011 to discharge non-mine affected water from an unauthorised discharge location to minimise impact to mining operations. It was determined that the release of non-mine affected water would not have an impact on the receiving environment.

23. Dawson Central and North mine submitted a draft TEP to DERM on 16 May 2011, the draft TEP was submitted to extend the TEP (MAN11600) approved on 18 February 2011. The draft was assessed by DERM and refused as it did not include demonstrated actions, or a discussion of impacts to local waterways (**ASB-D03-11**).

b) Any relevant dam safety issues

24. There were no dam safety issues identified.

c) Relevant correspondence with the mine operator and other stakeholders

25. Dawson mine provided information on 4 March 2011 regarding contact with downstream users of Kianga Creek (**ASB-D03-09**) after the TEP for Dawson Central and North was approved on 18 February 2011.

26. DERM conducted a phone conversation with a landowner who did not support on-going discharge of poor quality water from the Dawson Mine. The landholder

was informed of the TEP process and the requirements for the Dawson Mine to monitor water quality and flow rate in Kianga Creek and the Dawson River and that water would only be authorised to be released if it met specific water quality parameters. The landholder was satisfied with this proposed course of action and that the mine could release mine affected water.

27. There was a significant level of correspondence with many mines in relation to TEPs assessed as a result of the 10/11 wet season within the dates specified. This correspondence is held in a number of regional offices and in the email accounts of a significant number of DERM staff. It is estimated that there are several thousand correspondence items across all mines within this period of time and, as such, DERM was unable to search all the potential sources of correspondence within the timeframe allowed for submission of this statement. I was not comfortable with attaching correspondence items to this statement at this time due to the potential for errors, omissions or inaccuracies due to the high number of documents that would need to be searched in a short period of time. If the Commission wishes copies of particular items of correspondence then I am more than willing to provide these if requested. Additionally, if the Commission wishes copies of all correspondence these can be provided if time is allowed.

d) Whether and, if so, how DERM consulted with stakeholders

28. DERM consulted with the Fitzroy Water Quality Advisory Group (FWQAG) on three occasions during the dates specified. This consultation was not specific to Dawson and related to all mines that were discharging into the Fitzroy Basin at the time and formed part of the agenda at meetings of the FWQAG held in Rockhampton on 16 December 2010, 4 February 2011 and 7 April 2011.

29. The FWQAG is made up of a number of stakeholders including the mining industry, community groups, conservation groups, local government and DERM. One of the key roles of the group is to provide advice to State Government agencies relating to water quality management in the Fitzroy River Basin.

30. DERM also consulted with Qld Health regarding mine water discharges. However the Dawson Mine releases would not have been individually referred to as the discussions were based around whole of catchment water quality issues. The Dawson Mine discharges would only have been discussed if there were specific water quality issues downstream of the mine.

31. The Director of Environmental Health from Qld Health was also placed on the distribution list for the weekly Fitzroy Basin water quality report compiled by DERM (**ASB-D03-22**) in an effort to keep Qld Health informed of the current situation across the Fitzroy Basin.

e) What considerations DERM took into account in making the decision

32. Transitional environmental programs (TEPs) are specific programs that, when complied with, achieve compliance with the *Environmental Protection Act 1994* (EP Act) for an activity by reducing environmental harm, detailing the transition of the activity to an environmental standard or detailing the transition of the

activity to comply with a condition of a development approval, an environmental authority or code of environmental compliance. The requirements for TEPs and the process for assessing and approving them is set out in chapter 7, part 3 of the EP Act (**ASB-D03-e00a**).

33. Draft TEPs may be submitted voluntarily by a mine operator, or DERM may require an operator to submit a draft TEP if it satisfied that an activity or proposed activity is or may cause unlawful environmental harm. In either case, the draft TEP is prepared by the operator. DERM's role is to assess the draft TEP against the requirements of the EP Act and either approve the TEP, approve the TEP with conditions, or refuse to approve the TEP.

34. Section 338 of the EP Act (**ASB-D03-e00b**) provides the framework for considerations that the administering authority must make in deciding whether to approve or refuse a draft TEP or the conditions (if any) of the approval. In making its decision it:
    - must comply with any relevant regulatory requirement and
    - subject to the above, must also consider the following:
        - the standard criteria
        - additional information given in relation to the draft TEP and
        - the views expressed at a conference held in relation to the draft TEP.

35. DERM has produced guidance material to support regional officers and delegated decision makers in assessing draft TEPs. A two part procedural guide; Part 1-Notice requiring a draft TEP (**ASB-D03-e01**) and Part 2-Considering and making a decision about a draft TEP (**ASB-D03-e02**) is attached. Supplementing the guidelines are two correlating assessment report templates Part 1 Assessment Report (**ASB-D03-e03**) to assist officers to record the information considered by DERM when deciding to issue a notice requiring a TEP and Part 2 – Assessment Report (**ASB-D03-e04**) to assist users to evaluate the content of a draft TEP and make a decision to either approve (with or without conditions) or refuse a draft TEP. Prior to the procedural guides and assessment reports coming into effect, a draft Administrative Practice Note (**ASB-D03-e04a**) and a Request for Statutory Approval template (**ASB-D03-e04b**) was utilised by regional officers to assist with the TEP assessment process.

36. The reasons for the decisions are contained within the assessment report and request for statutory approval (**ASB-D03-12**, **ASB-D03-13** and **ASB-D03-14**).

37. DERM assessed potential impacts from Dawson Mine to the Kianga Creek receiving environment and the Dawson River regional water body. Assessment included cumulative impacts such as maintaining a window of opportunity for Baralaba Coal Project downstream to discharge, whilst, maintain appropriate water quality for downstream irrigators and the town water supplies for Baralaba, Woorabinda and Duaringa.

38. If an approved TEP authorises the holder of the TEP to do or not do something, the holder may do or not do that thing despite anything in a regulation, an

environmental protection policy, an environmental authority held by the holder of the TEP, a development approval, a standard condition of a code of environmental compliance for a chapter 4 activity or an accredited environmental risk management plan.

39. Mine operators typically voluntarily submit TEPs to DERM when they are seeking authorisation to discharge water from the mine site in circumstances where the discharge is not authorised by the environmental authority.

40. DERM typically require mine operators to submit a draft TEP when DERM becomes aware that there is a non-compliance or a potential non-compliance at the mine site that will require a significant amount of time and/or investment by the operator to rectify.

41. Once a draft TEP is submitted to DERM there is often a discussion between the environmental officer involved in the matter and the mine operator about the contents of the draft TEP. This is an opportunity for DERM to raise any concerns with the draft document and for the operator to take steps to address those concerns before DERM makes a decision about the draft TEP.

42. DERM has produced guidance material to assist environmental officers in assessing draft TEPs (**ASB-D03-20** and **ASB-D03-21**).

43. In the case of Dawson Mines, DERM considered a number of issues including:
    - The distance of the release points at the mine to the nearest large watercourse;
    - Release of water with salinity (EC) up to 3000uS/cm in dry ephemeral streams such a Kianga Creek;
    - The background water quality parameters in the streams surrounding the mine;
    - Downstream water quality in the Dawson River, being mindful of the DRAFT environmental values and water quality objectives for the Dawson River and the Lower Mackenzie;
    - Water users located downstream of the mine and there requirement for water;
    - The economic impacts of the mine being unable to mine effectively due to inundation; and
    - Impacts of any releases on access to properties.

f) Whether, and if so, how DERM balanced environmental considerations and economic consequences of mines being non-operational

44. The EP Act and subordinate legislation governs the responsibilities of DERM in the environmental regulation of mining activities in Queensland. The objective of the EP Act is to protect Queensland's environment while allowing for development that improves the total quality of life, both now and in the future, in a way that maintains the ecological processes on which life depends. This is referred to as ecologically sustainable development (ESD). Accordingly, DERM is required to balance environmental, economic, social and equity considerations when making decisions.

45. When making any decision under the EP Act, including whether to approve a draft TEP, DERM must consider the "Standard Criteria" (**ASB-D03-f01**) as specified in Schedule 4 of the EP Act. The standard criteria specifically require environmental and economic considerations to be balanced and considered. Part 2- Considering and making a decision about a draft TEP procedural guide (refer to earlier exhibit **ASB-D03-e02**) provides further guidance on some of the principles on evaluating ESD. In addition further direction is provided on other considerations of the standard criteria, relevantly the financial implications for an applicant in complying with a TEP (and any conditions that may have been imposed) and the character, resilience and values of the receiving environment.

46. Furthermore, part 2 and 3 of the *Environmental Protection Regulation 2008* (EP Reg) (**ASB-D03-f02**) stipulate requirements for all environmental management decisions and additional regulatory considerations with respect to imposing conditions relating to a wide ambit of environmental and economic considerations including but not limited to monitoring, and releases to waters or land. Decisions must also consider any relevant Environmental Protection Policies (EPP) such as the *Environmental Protection (Water) Policy 2009* which sets out to achieve the objective of the EP Act with respect to Queensland waters. It does this by identifying environmental values and management goals and providing a framework for making consistent, equitable and informed decisions about Queensland waters.

47. In accordance with the provisions of the EP Act, when making an environmental management decision in relation to a TEP DERM must consider the economic or financial implications of the program and any conditions to be imposed on the holder. This part also requires the financial implications of the holder not being granted a TEP. When assessing the Dawson TEPs and when processing amendments to the approved program DERM did take into consideration the economic and financial implications of the mines inability to extract coal if a release could not be authorised. This was primarily related to the decision to grant a TEP, however in conditioning the TEP, managing unacceptable risks to the environment was the major consideration.

g) Whether, and if so how, DERM took account of downstream effects, including cumulative effects

48. DERM assessed potential impacts of discharges to the Kianga Creek receiving environment and the Dawson River regional water body. Assessment included cumulative impacts such as maintaining a window of opportunity for Baralaba Coal Project downstream to discharge, whilst, maintain appropriate water quality for downstream irrigators and the town water supplies for Baralaba, Woorabinda and Duaringa.

49. DERM also took into account releases from the Baralaba Coal Mine into the system along with background water quality parameters to ensure cumulative impacts were minimised and downstream water users were adequately protected.

50. When assessing and deciding on a draft TEP the assessing officer also seeks advice from other business groups within DERM such as the Aquatic Ecosystem Risk & Decision Support unit who provide specific scientific advice in relation to proposed TEP conditions and guidance as to the downstream impacts of mine affected water releases to the environment.

51. The Dawson Mines TEPs included a condition that required them to cease releases if directed to do so by DERM. This was required to ensure that DERM could direct mines to cease discharging if monitoring demonstrated potential issues with the cumulative effects of multiple mine releases.

h) The terms of the TEP issued or ED given

52. Refer to (a) in Item 3 for terms of TEPs issued and verbal advice from DERM.

i) What actions were taken by DERM to advise emergency management personnel, including local and regional disaster management groups and local residents downstream of the dam about the TEP and any discharges or effects

53. Due to the limited rate of release, eg. less than 300 litres per second, and the fact that the release was unlikely to cause any significant issues to downstream landholders or the environment, DERM did not consider it was necessary to brief local and regional disaster management groups about the release.

j) Reasons for the decision given to the mine operator

54. The reasons for the decisions are contained within the request for statutory approval (**ASB-D03-12**).

k) Any breaches of the TEP or ED by the mine operator and DERM's response

55. Breaches occurred in relation to TEP MAN11600 for Dawson Central and North and MAN11500 for Dawson South on several occasions. The breaches included discharge from an authorised location, monitoring at an unauthorised location, exceeding downstream release limits, and reporting issues of timeliness and detail. Warning letters were issued to Dawson Central and North and Dawson South on 1 July 2011 (**ASB-D03-15** and **ASB-D03-16**). These breaches were not considered serious enough to warrant further action as it was determined that environmental harm had not occurred as a result.

Item 4: the effects on the environment, drinking water quality and public health downstream of each of the mine sites (as far as the Great Barrier Reef Marine Park) as a result of discharges of water under a TEP or ED.

56. The potential effects of releases of water from mine sites are assessed prior to the grant of environmental authorities or transitional environmental programs. In applying to receive approval to discharge to a surface water, applicants must prepare information to support the application which identifies the environmental

values, water quality objectives and management intent (that is, the goals to be achieved in terms of meeting water quality objectives and protecting environmental values) of the surface water. This framework is provided in the *Environmental Protection (Water) Policy 2009* (EPP Water) (**ASB-D04-01**). Applications must be able to demonstrate that the management intent for the receiving water will be met despite the discharge occurring.

57. All applications for environmental authorities and TEPs submitted for the approval of discharge to surface waters must be assessed by DERM against the requirements of the EP Act which includes the EPP Water, including an impact assessment to ensure that environmental values of any surface water will be protected. In conducting these regulatory assessments, DERM has developed a number of decision support tools including the guideline "Protecting Environmental Values from CSG Water Discharged to Surface Waters" (2010, **ASB-D04-02**) Conditions for Coal Mines in the Fitzroy Basin – Approach to Discharge Licensing (June 2010) and the Operational Policy "Waste water discharge to Queensland Waters" (2007, **ASB-D04-03**) and associated procedural information (**ASB-D04-04** and **ASB-D04-05**). DERM has also prepared an "Interim Decision Support Matrix Release of water produced in association with Coal Seam Gas activities to surface waterways" (2010, **ASB-D04-06**) which informs assessments and resultant authority conditions

58. The approach used by DERM throughout the 2010-2011 wet season aimed to be consistent with state/national water quality guidelines e.g. The Queensland Water Quality Guidelines (2006), ANZECC/ARMCANZ Guidelines for Fresh and Marine Water Quality 2000, the Australian Drinking Water Quality Guidelines and the October 2010 released Draft for Consultation – Establishing Environmental Values, Water Quality Guidelines and Water Quality Objectives for Fitzroy Basin Waters. .

59. Controls and limitations are placed on authorities as conditions such as limits upon the volumes discharged, timing of discharge and required dilution and mixing zones for discharges. Conditions also include comprehensive contaminant monitoring programs for discharge quality which is supplemented by detailed receiving environment monitoring programs.

60. Releases of water from a dam at a mine site can be authorised by the conditions of an environmental authority or via specific permission under a transitional environmental program. Regardless of the statutory instrument, for releases of water from a dam at a mine site to be authorised, the assessment procedure described above would apply.

61. The EP Act and the subordinate EPP Water provides for drinking water values for Queensland waters. Accordingly, the protection of these values must be demonstrated prior to any authority being granted authorising a contaminant release to surface waters. Conditions of the environmental authority or TEP will provide quality limits and environmental monitoring to ensure that discharge quality is sufficient to protect drinking water values.

62. During the 10/11 wet season, DERM staff liaised with Queensland Health on a regular basis to ensure that any authorised or un-authorised discharges from mine sites were managed to ensure the protection of drinking water quality.

63. TEPs issued during or as a result of the 10/11 wet season also considered the effects of any mine site release on drinking water and were conditioned to ensure that the discharge was managed in such a way as to ensure the protection of drinking water supplies.

64. DERM has observed that salinity (measured by Electrical Conductivity) in all water courses in the Fitzroy basin has increased following the 2010/2011 wet season. The high rainfall resulted in extensive recharge to the groundwater in the Fitzroy basin which increased contribution of groundwater to base flows in streams high in the catchment. At times, the salinity of this water is quite high (in excess of the EC 2500 micro Siemens per centimetre (uS/cm)). As a consequence, salinity in base flows in the larger streams of the Fitzroy catchment is higher than has been experienced in recent years when there was little or no groundwater contribution to stream flow.

65. DERM does not believe that discharges from mine sites as a result of the 2010/11 wet season have contributed significantly to the currently elevated electrical conductivity of the Fitzroy river system. Discharges from mine sites have been closely monitored in accordance with conditions set on both EAs and TEPs to ensure water quality downstream of mines remains within acceptable limits.

66. This rising salinity is currently causing some minor issues in drinking water supplies in the lower Mackenzie and Fitzroy Rivers. The electrical conductivity (EC) in the Fitzroy Barrage, which supplies drinking water to Rockhampton and the Bedford Weir, which supplies drinking water to Tieri, Middlemount, Blackwater, and Bluff has risen to levels above 600uS/cm. At these levels part of the population are able to detect taste difference to the water normally supplied from these storages.

67. There is no evidence to suggest that any plant or animal species has been adversely impacted by the increased salinity in waterways across the Fitzroy river system.

68. Whilst there have not been major impacts on electricity generation there has been some minor inconvenience and increased costs on electricity generation at the Stanwell power station. An increase in salinity in the raw water supply results in fewer cycles for cooling water. Consequently, to achieve the same levels of electricity generation increased volumes of cooling water sourced from the Fitzroy River are required.

69. DERM has been informed that Stanwell Corporation have been able to handle the increase in salinity in their raw water through a temporary amendment to their Development Approval (DA). The amendment allows Stanwell to use larger volume of below down water at the same time not exceeding their current water quality discharge limits.

70. There is no evidence that rising EC in stream flow in the Fitzroy river system or mine water discharges across the state as a result of the 2010/11 wet season have had any adverse impact on the environment. DERM has investigated a number of breaches of conditions of both EAs and TEPs and has concluded that there is no evidence to suggest that unacceptable environmental harm has resulted from any non compliant release.

71. Where salinity has risen in drinking water supplies in the lower Mackenzie and Fitzroy Barrage, there is some concern in particular for those people who are on low sodium diets and kidney dialysis in Tieri, Middlemount, Blackwater, Bluff and Rockhampton. Bio medical services of the Central Queensland Health Service District have also reported that adjustments have had to be made to dialysis and other equipment as a result of the associated increase in hardness. The only town water supplies potentially impacted by discharges from Dawson Mine are Baralaba Duaringa, Woorabinda, and Rockhampton.

72. DERM believes that the major cause of this increase in salinity and hardness is the increasing contribution of groundwater to stream flows rather than the effects of mine discharges.

Item 5: details of how the new Fitzroy Model Conditions negotiated during 2011, or any other discussions with DERM, will resolve any issue raised above 1, 2, 3, or 4

73. I am informed that the new Fitzroy Model Conditions are likely to provide Dawson Central and North mine with the flexibility to increase discharge of mine affected water when natural regional receiving environment flows are elevated.

74. Dawson South has indicated they are not planning to amend the current EA with the new Fitzroy Model Conditions.

Item 6: an explanation as to whether the new Fitzroy Model Conditions negotiated during 2011 are advantageous or disadvantageous to the mine operator in the management of water at the mine, the downstream environment and safety issues.

75. With regard to the Dawson Central and North Mine, the new Fitzroy Model Conditions may provide the mine operator additional opportunity to discharge mine affected water to the environment through possible amendments to water quality limits and stream flow triggers.

76. Additional discharge of mine affected water may prove advantageous where the Dawson Central and North Mine is storing amounts of excess water on site either in pits where it is impacting on production or in the current water management system where it is impacting on the available storage capacity for mine affected water for the upcoming wet season.

77. The new Fitzroy Model conditions have been developed in an attempt to provide mine operators with additional flexibility to manage mine affected water on site through discharges, whilst maintaining minimal impacts on the receiving environment. The benefits to individual mines from adoption of the new model conditions needs to be determined by the mine through relevant analysis

Item 7: any briefing (written or oral) given to any Minister or Director-General regarding a TEP or ED related to water management or non-compliance with an environmental authority at the mine and the reason for that briefing

78. To the best of my knowledge there were no specific written briefings provided to any Minister or Director General in relation to this mine. A number of general briefings were provided in relation to mines and the 10/11 wet season and these are attached as items **ASB-D07-01** to **ASB-D07-06**. A weekly report on TEPs was provided via email to key departmental and ministerial staff during the time period requested and a copy of the latest report provided prior to 20 July 2011 is attached as item **ASB-D07-07**. It is possible that there were other written briefing material provided during this period but this is the best information DERM staff were able to gather within the timeframe permitted for submission of this statement.

79. There were a significant number of oral briefings provided to the Minister for Climate Change and Sustainability and the Director General of DERM in relation to TEPs during the wet season period of which there are no written records. In general, these were primarily in relation to the mining/CSG industry as a whole and the number of TEPs issued or currently being assessed. Individual mines were discussed at several of these briefings but I am unable to provide an accurate transcript or meeting notes from these briefings.

Item 8: DERM's opinion as to whether the mine operator should be managing water at the Mine other than by storing it in dams or ponds, including by using desalination plants, purification procedures or any other means

80. To the best of my knowledge I believe that the storage of mine affected water at the Dawson Mines in dams, pits, and ponds is an appropriate management strategy and is consistent with the strategies used across the coal mining industry in Central Queensland.

81. The Dawson Mines are required as a condition of the relevant EA (Dawson South) **(ASB-D02-D02)** and water management conditions (Dawson Central and North) **(ASB-D02-01)** to provide adequate storage on site for mine affected water.

Item 9: an explanation of that which is involved in managing water at the Mine other than by storing it in dams or ponds, including by using desalination plants, purification procedures or any other means

82. On-site water management practices should be integrated with mining activities and should provide for the collection, storage and disposal of water on a mine site.

83. A site water management strategy should be developed for the whole mine site based generally on the following principles:
    a. Limiting the extent of site disturbance and limit catchment areas that report to site water management infrastructure;
    b. Recycling water in the process circuit or for other uses, such as dust suppression, as much as possible;
    c. Optimising the volume of water discharged from the site (having regard to the mass and concentration of contaminants expected to reach the receiving waters);
    d. Segregating water by quality or source and reducing contaminant concentrations in water where possible;
    e. Reducing contamination concentration by suitable treatment methods;
    f. Avoiding the accumulation of large volumes of contaminated water on-site;
    g. Applying appropriate risk assessment methods in the sizing and design of works;
    h. Undertake a risk assessment that meets with DERMs requirements when sizing and designing storage dams;
    i. Protecting groundwater resources from contamination;
    j. Designing a system able to accommodate staged development of the mine;
    k. Protecting the mine workings and infrastructure from floodwater inundation.

84. Mine affected water is used at Dawson Central and North for dust suppression and in the coal-washing plant. Mine affected water at Dawson South is also used for dust suppression.

85. The Dawson Mine is required to develop a Water Management Plan that details how the site will achieve best practice water management as detailed above. This plan is required as a condition of its EA to be reviewed twice each year prior to and following the wet season. The water management plan is also required to be made available to DERM when requested.

86. As part of an upcoming compliance inspection of the Dawson Mine, DERM will request a copy of the Water Management Plan be provided prior to officers inspecting the site.

I make this solemn declaration conscientiously believing the same to be true, and by virtue of the provisions of the *Oaths Act 1867*.

Signed . [redacted] .....
Andrew Stuart Brier

Taken and declared before me, at Brisbane this 27th day of September 2011

... [redacted] .....
Solicitor/~~Barrister/Justice of the Peace/Commissioner for Declarations~~