



REPORT:

Arrow Energy Surat Gas Project

Input to the Environmental Impact Statement

SURFACE WATER ASSESSMENT

PART B: Water Quality

November 2011

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Executive Summary

This report has been prepared as input to the preparation of the “ARROW ENERGY SURAT GAS PROJECT – Environmental Impact Statement (EIS)”. Surface water aspects of the project have been examined in two parts: Part A: Fluvial geomorphology and hydrology; and Part B: Water quality (this report).

Rich reserves of coal seam gas, an important energy resource, are present in the Walloon Coal Measures of the Surat Basin in Queensland. Coal seam gas extraction is a multi-stage process which includes exploration and appraisal to identify the gas resource, field development to extract gas from the ground and deliver it to processing facilities, facility development to process and compress extracted gas, and transportation of gas to domestic or international markets. The Surat Gas Project will involve the development of coal seam gas extraction and processing facilities across the proposed project development area.

The Surat Gas Project development area is located in the Condamine-Balonne, Moonie and Border Rivers subcatchments which form the upper reaches of the Murray-Darling Basin. The north of the project development area falls within the upper reaches of the Fitzroy Central subcatchment, which flows to the Great Barrier Reef Marine Park. The exact placement of the components of the Surat Gas Project are yet to be determined. As such, a specific assessment of potential water quality impacts within the project development area is not possible.

Water quality in rivers and streams of the project development area was generally of poorer quality than that nominated in national published ecosystem guideline values for the protection of slightly to moderately disturbed ecosystems (ANZECC 2000). However, water quality results were generally comparable to site-specific guideline values derived from project development area reference data obtained from the Department of Environment and Resource Management (DERM) (*i.e.* water quality was comparable to that recorded prior to the Surat Gas Project baseline surveys).

E1 Environmental values

The first stage in the identification of the existing environment and environmental values was to undertake desktop / archival / baseline investigations and targeted field investigations. The results of the baseline investigations including field investigations are presented as Appendix A.

Specific environmental values for watercourses in the project development area are not defined within the Environmental Protection (Water) Policy 2009 (OQCP 2010). Environmental values have therefore been developed from the desktop / archival / baseline investigations and field investigations as follows:

- For slightly to moderately disturbed waters – the biological integrity of an aquatic ecosystem that has effectively unmodified biological indicators, but slightly modified physical, chemical or other indicators or that is adversely affected by human activity to a relatively small but measurable degree.
- For waters that may be used for drinking water – the suitability of the water for supply as drinking water.
- For waters that may be used for agricultural purposes – the suitability of the water for agricultural purposes.

The environmental values presented here may be updated as appropriate in response to the EIS consultation process.

The environmental protection objective for surface waters in the receiving environment of the project development area is to avoid any degradation in water quality, water access, and the physical, chemical and biological characteristics of the creeks and rivers and to maintain their values as an amenity to the local community.

In the absence of water quality objectives identified in Schedule 1 of the Environmental Protection (Water) Policy 2009, and water quality objectives derived through a consultative approach, environmental protection objectives are derived from the water quality guidelines necessary for the maintenance of the environmental values nominated above.

E2 Threatening Processes and Potential impacts

Project activities that have the potential to result in environmental impacts on surface water quality during construction, operation and maintenance, decommissioning and rehabilitation are listed below.

- Watercourse crossings by roads, tracks and pipelines.
- Dams.
- Gas production wells, field compression facilities (FCFs), central gas processing facilities (CGPFs) and integrated processing facilities (IPFs).
- Discharge and storage of hydrotesting water.
- Discharge and storage of coal seam water.
- Infrastructure located on floodplain areas.

Potential impacts on environmental values from these activities during construction, operation, maintenance, decommissioning and rehabilitation are described below.

- Water quality degradation in the receiving environment due to contaminated runoff from active project development areas.
- Water quality degradation, including increased salinity, in the receiving environment due to discharge of untreated (or insufficiently treated) coal seam water from dams holding raw feed water, treated water, brine and/or waste water.
- Water quality degradation in the Murray-Darling basin and Fitzroy Basin due to discharge of untreated (or insufficiently treated) water from dams holding raw feed water, treated water, brine and/or waste water.
- Runoff/discharge may alter the hydrology and aquatic ecology of creeks and rivers in the receiving environment.
- Indirect impacts arising from the beneficial reuse of coal seam gas coal seam waters for agricultural or other purposes.
- Reduction in agricultural water resources due to water contamination.

E3 Proposed avoidance, mitigation and management measures

The following control strategies are proposed to mitigate potential impacts from the Surat Gas Project phases:

- Separate clean water and impacted water from active and rehabilitated or non-disturbed areas.
- Design and implement appropriate sediment detention measures for overland flow from disturbed areas.
- Manage hazardous materials with appropriate bunding and containment (refer to the *Dangerous Goods Safety Management Act 2001, AS 1940 – 2004* The storage and handling of flammable and combustible liquids, and the relevant MSDS for hazardous substances).
- Use undercover storage for hazardous chemicals to minimise the ingress of and potential for contamination of stormwater.
- Minimise the inventory of hazardous materials stored on site.
- Design and construct appropriate storage structures in accordance with statutory requirements for raw feed water, treated water, brine and waste water with sufficient buffer capacity to prevent uncontrolled discharges of untreated water during wet season events (refer to the Coal Seam Gas Water Management Policy (DERM 2010a).
- Where practicable, undertake construction in the dry season for infrastructure and disturbance in or near creeks and rivers.
- Minimise seepage loss from storage structures by constructing dams in accordance with relevant guidelines (e.g. DERM 2010a).
- Maximise beneficial reuse of water.
- Monitoring and maintenance programs, incident reporting, emergency response and corrective actions systems and procedures.

- Should discharge of coal seam waters be planned or required, implement a water treatment regime (water quality and water volume considerations) that maintains the environmental values of the receiving environment.

Project activities should not result in degradation in water quality, that is, the physical, chemical and biological characteristics of creeks and rivers. The following actions are proposed to monitor and assess the performance criterion.

- Monitor water quality in storage structures quarterly and assess against end-of-pipe release limits.
- Monitor receiving environment sites at a schedule that is sufficient to identify trends in water quality which is appropriate for the seasonal and ephemeral conditions of the area, and cognisant of the characteristics of the activity to which the monitoring regime applies and report against site-based water quality standards (reference sites). Analytes identified in well and dam water quality sampling should be included so water quality is known prior to planned or unplanned discharge events.
- Develop site-specific monitoring schedules which address planned and unplanned release management measures, inclusive of, for example, notification protocols for relevant entities. These should be included in Arrow's standard operational procedures.

E4 Residual impact assessment

Even through the implementation of the mitigation measures noted above, there remains a residual risk to downstream water quality resulting from catastrophic events or extreme weather events. A risk evaluation method has been established to reduce identified risks to as low a level as reasonably practicable.

Catastrophic events may lead to dam failures and the release of coal seam waters to waterways, these may occur during times of low flow in the natural environment. Extreme weather events may exceed the design capacity of on-site water storages. These residual risks and can be reduced to as low a reasonably practical by following the assessment method and implementing the construction and operational practices detailed in the EIS and its supporting documents.

E5 Cumulative impact assessment

Cumulative impacts to water quality were considered most likely where multiple coal seam gas projects were planned within the same catchment areas as Surat Gas Project activities. Catastrophic events (*e.g.* dam failure) and extreme weather events (*e.g.* flooding) were considered as the pathways most likely to result in cumulative impacts to receiving waters, given that future projects are expected to have sufficient risk mitigation measures in place thereby reducing the risk of impact from less extreme events. The risk of cumulative impacts under these extreme scenarios was considered to be low.

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Acronyms and Glossary

Acronyms

ADWG	Australian Drinking Water Guidelines
ANZECC 2000	Australian and New Zealand Guidelines for Fresh and Marine Water Quality
Arrow	Arrow Energy
BOM	Bureau of Meteorology
CSG	Coal Seam Gas
DERM	Department of Environment and Resource Management
DO	Dissolved Oxygen
D'stream	Downstream
EA	Environmental Authority
EC	Electrical Conductivity
EIS	Environmental Impact Statement
EP Act	Environmental Protection Act 1994
EPP(Waste)	Environmental Protection (Waste Management) Policy 2000
EPP(Water)	Environmental Protection (Water) Policy 2009
EP Regulation	Environmental Protection Regulation 2008
IPF	Integrated Production Facility
L	Litre
mg	Milligram (1 thousandth of a gram)
mg/L	Milligrams per litre
NTU	Nephelometric Turbidity Units, provides a measure of turbidity
QWQG	Queensland Water Quality Guidelines
SP	Sustainable Planning (in reference to the Act or Regulation)
SP Act	Sustainable Planning Act 2009
SP Regulation	Sustainable Planning Regulation 2009
U'stream	Upstream
µm	Micrometer (1 millionth of a metre)
µS/cm	Micro-Siemens per centimetre (1 ten thousandth of a S/m)

Glossary

Coal Seam Water	Underground water taken from or interfered with from a coal seam gas well during the course of or resulting from carrying out petroleum activities. Water from petroleum activities is also known as associated water.
Dissolved Oxygen	A measure of the amount of oxygen dissolved in water, measured as % saturation.
Electrical Conductivity	A measure of the amount of total dissolved salts in water, measured in units of S/m or µS/cm.
Endemism	Occurring naturally in a specific area.

Eutrophication	Excessive plant growth in water bodies resulting from inputs of nutrients which can deplete dissolved oxygen and cause other organisms to die.
Trigger value	A nominated concentration for a surface water quality parameter of interest, where an exceedance of this value prompts further investigation to assess the risk to the environmental values.
Turbidity	A measure of the cloudiness or haziness of water, measured in units of NTU.

1 Introduction

1.1 Objectives of the assessment

This report has been prepared as input to the preparation of the “ARROW ENERGY SURAT GAS PROJECT – Environmental Impact Statement (EIS)”. Surface water aspects of the project have been examined in two parts:

- Part A: Fluvial geomorphology and hydrology and
- Part B: Surface water quality (this report).

For surface water quality this report provides:

- Legislative context and standards.
- Method of assessment, existing environment and environmental values.
- Relevant project activities and impact assessment.
- Proposed avoidance, mitigation and management measures.
- Residual impact assessment.
- Surface water quality constraints on project activities.
- References.
- Appendices.

Related aspects of the EIS are covered in other reports. These include groundwater, riparian vegetation, aquatic and terrestrial ecology, visual and recreational amenity, and cultural significance. This report focuses solely upon surface water quality.

1.2 Project Description

Project Proponent

Arrow Energy Pty Ltd (Arrow) is an integrated energy company with interests in coal seam gas field developments, pipeline infrastructure, electricity generation and a proposed liquefied natural gas (LNG) projects.

Arrow has interests in more than 65,000 km² of petroleum tenures, mostly within Queensland’s Surat and Bowen basins. Elsewhere in Queensland, the company has interests in the Clarence-Moreton, Coastal Tertiary, Ipswich, Styx and Nagoorin Graben basins.

Arrow's petroleum tenures are located close to Queensland’s three key energy markets; Townsville, Gladstone and Brisbane. The Moranbah Gas Project in the Bowen Basin and the Tipton West, Daandine, Kogan North and Stratheden projects in the Surat Basin near Dalby comprise Arrow’s existing coal seam gas production operations. These existing operations currently account for approximately 20% of Queensland’s overall domestic gas production.

Arrow supplies gas to the Daandine, Braemar 1 and 2, Townsville and Swanbank E power stations which participate in the National Electricity Market. With Arrow’s ownership of Braemar 2 and the commercial arrangements in place for Daandine and Townsville power stations Arrow has access to up to 600 MW of power generation capacity.

Arrow and its equity partner AGL Energy have access rights to the North Queensland Pipeline which supplies gas to Townsville from the Moranbah Gas Project. They also hold the pipeline licence for the proposed Central Queensland Gas Pipeline between Moranbah and Gladstone.

Arrow is currently proposing to develop the Arrow LNG Project, which is made up of the following aspects:

- Arrow LNG Plant – The proposed development of an LNG Plant on Curtis Island near Gladstone, and associated infrastructure, including the gas pipeline crossing of Port Curtis.
- Surat Gas Project – The upstream gas field development in the Surat Basin, subject of this assessment.
- Arrow Surat Pipeline Project – (Formerly the Surat Gladstone Pipeline), the 450 km transmission pipeline connects Arrow’s Surat Basin coal seam gas developments to Gladstone.
- Bowen Gas Project – The upstream gas field development in the Bowen Basin.
- Arrow Bowen Pipeline – The transmission pipeline which connects Arrow’s Bowen Basin coal seam gas developments to Gladstone.

Project Overview

Arrow proposes expansion of its coal seam gas operations in the Surat Basin through the Surat Gas Project. The need for the project arises from the growing demand for gas in the domestic market and global demand and the associated expansion of LNG export markets.

The project development area covers approximately 8,600 km² and is located approximately 160 km west of Brisbane in Queensland’s Surat Basin. The project development area extends from the township of Wandoan in the north towards Goondiwindi in the south, in an arc adjacent to Dalby. Townships within or in close proximity to the project development area include (but are not limited to) Wandoan, Chinchilla, Kogan, Dalby, Cecil Plains, Millmerran, Miles and Goondiwindi. Project infrastructure including coal seam gas production wells and production facilities (including both water treatment and power generation facilities where applicable) will be located throughout the project development area but not in towns. Facilities supporting the petroleum development activities such as depots, stores and offices may be located in or adjacent to towns.

The conceptual Surat Gas Project design presented in the environmental impact statement (EIS) is premised upon peak gas production from Arrow’s Surat Basin gas fields of approximately 1,050 TJ/d. The peak gas production comprises 970 TJ/d for LNG production (including a 10% fuel gas requirement for facility operation) and a further 80 TJ/d for supply to the domestic gas market.

A project life of 35 years has been adopted for EIS purposes. Ramp-up to peak production is estimated to take between 4 and 5 years, and is planned to commence in 2014. Following ramp-up, gas production will be sustained at approximately 1,050 TJ/d for at least 20 years, after which production is expected to decline.

Infrastructure for the project is expected to comprise:

- Approximately 7,500 production wells drilled over the life of the project at a rate of approximately 400 wells drilled per year.
- Low pressure gas gathering lines to transport gas from the production wells to production facilities.
- Medium pressure gas pipelines to transport gas between field compression facilities and central gas processing and integrated processing facilities.
- High pressure gas pipelines to transport gas from central gas processing and integrated processing facilities to the sales gas pipeline.
- Water gathering lines (located in a common trench with the gas gathering lines) to transport coal seam water from production wells to transfer, treatment and storage facilities.
- Approximately 18 production facilities across the project development area expected to comprise of 6 of each of the following:
 - Field compression facilities.
 - Central gas processing facilities.
 - Integrated processing facilities.

- A combination of gas powered electricity generation equipment that will be co-located with production facilities and/or electricity transmission infrastructure that may draw electricity from the grid (via third party substations).

Further detail regarding the function of each type of production facility is detailed below.

Field compression facilities will receive gas from production wells and are expected to provide 30 to 60 TJ/d of first stage gas compression. Compressed gas will be transported from field compression facilities in medium pressure gas pipelines to multi-stage compressors at central gas processing facilities and integrated processing facilities where the gas will be further compressed to transmission gas pipeline operating pressure and dehydrated to transmission gas pipeline quality. Coal seam water will bypass field compression facilities.

Central gas processing facilities will receive gas both directly from production wells and field compression facilities. Central gas processing facilities are expected to provide between 30 and 150 TJ/d of gas compression and dehydration. Coal seam water will bypass central gas processing facilities and be pumped to an integrated processing facility for treatment.

Integrated processing facilities will receive gas from production wells and field compression facilities. Integrated processing facilities are expected to provide between 30 and 150 TJ/d of gas compression and dehydration. Coal seam water received at integrated processing facilities is expected to be predominantly treated using reverse osmosis and then balanced to ensure that it is suitable for the intended beneficial use. Coal seam water received from the field, treated water and brine concentrate will be stored in dams adjacent to integrated processing facilities.

It is envisaged that development of the Surat Gas Project will occur in five development regions: Wandoan, Chinchilla, Dalby, Kogan/Millmerran and Goondiwindi. Development of these regions will be staged to optimise production over the life of the project.

Arrow has established a framework to guide the selection of sites for production wells and production facilities and routes for gathering lines and pipelines. The framework will also be used to select sites for associated infrastructure such as access roads and construction camps. Environmental and social constraints to development that have been identified through the EIS process coupled with the application of appropriate environmental management controls will ensure that protection of environmental values (resources) is considered in project planning. This approach will maximise the opportunity to select appropriate site locations that minimise potential environmental and social impacts.

Arrow has identified 18 areas that are nominated for potential facility development to facilitate environmental impact assessment (and modelling). These are based on circles of approximately 12 km radius that signify areas where development of production facilities could potentially occur.

Arrow intends to pursue opportunities in the selection of equipment (including reverse osmosis units, gas powered engines, electrical generators and compressors) and the design of facilities that facilitates the cost effective and efficient scaling of facilities to meet field conditions. This flexibility will enable Arrow to better match infrastructure to coal seam gas production. It will also enable Arrow to investigate the merits of using template design principles for facility development, which may in turn generate further efficiencies as the gas reserves are better understood, design is finalised, or as field development progresses.

2 Legislative Context and standards

The opinions of NRA relate solely and exclusively to environmental management matters, and are based on the technical and practical experience of environmental practitioners. They are not presented as legal advice, nor do they represent decisions from the regulatory agencies charged with the administration of the relevant Acts.

2.1 Relevant legislation

This section focuses solely on legislative aspects that may have relevance to surface water quality. Legislation relevant to all project activities and environmental aspects is extensive and not discussed here.

Coal seam gas fields

Key legislation governing the management of surface water quality in regards to coal seam gas fields includes:

- *Environment Protection Act 1994 (Qld) (EP Act)*. The EP Act provides the principal legislative framework for environmental management and protection 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'. The EP Act establishes a general environmental duty which requires that 'a person must not carry out any activity that causes, or is likely to cause, environmental harm unless the person takes all reasonable and practicable measures to prevent or minimise the harm'.
- *Environmental Protection (Water) Policy 2009 (EPP(Water))*. The policy provides a framework for achieving the object of the EP Act in relation to Queensland waters through:
 - identification of environmental values and management goals for Queensland waters,
 - implementation of surface water quality guidelines and objectives to enhance or protect the environmental values, and
 - monitoring and reporting on the condition of Queensland waters.
- *Environmental Protection Regulation 2008 (EP Regulation)*, the *Environmental Protection (Waste Management) Policy 2000 (EPP(Waste))*, and the *Environmental Protection (Waste Management) Regulation 2000*. These promote the beneficial use of coal seam water from petroleum activities in accordance with the waste management hierarchy in the EPP(Waste) and minimisation of environmental harm.

The above legislation is supported by the Department of Environment and Resource Management's (DERM) Operational Policy: Waste water discharge to Queensland waters (17 December 2007) which summarises and explains the policies that apply when assessing applications that involve discharge of waste water to Queensland waters.

- *Water Act 2000 (Qld)*. The purpose of the Water Act includes providing for the sustainable management of water and other resources and the establishment and operation of water authorities. The Water Act aims 'to advance sustainable management and efficient use of water and other resources by establishing a system for the planning, allocation and use of water'. Under the Water Act, the term watercourse includes seasonally flowing watercourses the definition of which often requires a site inspection by DERM. The Water Act sets out permitting and licencing requirements for taking or interfering with water and other resources. A riverine protection permit is required where the development will destroy vegetation, excavate or place fill in a watercourse. A development permit may be required to take or interfere with water from a watercourse or take or interfere with overland flow

water. An application for allocation of quarry material or development approval may be required for use of material from a watercourse.

- *Fisheries Act 1994* (Qld). The construction of a barrier (temporary or permanent) that may act as a barrier to fish passage requires a development approval.
- *Water Supply (Safety and Reliability) Act 2008* (Qld). A development approval may be required for construction of a referable dam.
- *Sustainable Planning Act 2009* (SP Act). Authorised petroleum activities undertaken on a petroleum authority are exempt from most provisions of the SP Act. However, if petroleum tenure holders wish to construct infrastructure off-tenure, such as pipelines, they will need to comply with the provisions of the SP Act. Operational works for taking, or interfering with, water are assessable development (Schedule 3 of *Sustainable Planning Regulation 2009*).

Guidelines and Policies

Key guidelines and policies relevant to surface water quality management are:

- *Australian and New Zealand Guidelines for Fresh and Marine Water Quality* (ANZECC 2000). These guidelines provide a methodology for assessing water quality through comparison with guidelines derived from local reference values.
- *Queensland Water Quality Guidelines* (QWQG) (DERM 2009). The guidelines provide locally and regionally relevant water quality values for fresh, estuarine and marine waters. Where the QWQG values are more localised than those derived using ANZECC 2000 the QWQG take precedence.
- Coal Seam Gas Water Management Policy (DERM 2010a). The purpose of the policy is to ensure that salt produced through coal seam gas (CSG) activities does not contaminate the environment and to encourage the beneficial use of treated CSG water.

Some additional considerations include:

- The *Petroleum and Gas (Production and Safety) Act 2004*, *Petroleum Act 1923*, *Water Act 2000* and *Water Supply (Safety and Reliability) Act 2008* establish the regime for the taking, use and on-supply of coal seam water and impose obligations for monitoring and making good any impacts the extraction of coal seam water has on existing bores licensed under the *Water Act 2000*. The EP Act deals with the regulation of environmental impacts arising from the use or disposal of coal seam water (as identified above).
- The *Water Resources (Fitzroy Basin) Plan 1999*, *Water Resources (Moonie) Plan 2003* and *Water Resources (Condamine and Balonne) Plan 2004* and their respective Resource Operations Plans may be of relevance to the Surat Gas Project. The purpose of these plans is to provide a framework for managing water. In the case of the Moonie and Condamine and Balonne Water Resource Plans this includes reversing, where practicable, degradation that has occurred to natural ecosystems including stressed rivers. At the time of preparing this review a draft *Water Resources (Fitzroy Basin) Plan 2010* has been released but had not yet been finalised.
- The Condamine-Balonne, Moonie and Border River catchments are part of the Murray-Darling system. The *Murray-Darling Basin Agreement* was signed in 1992. This is given legislative status by the *Water Act 2007* (Commonwealth). The agreement was ratified by identical legislation that has been enacted by the parliaments of all the signatory governments. In terms of salinity management, the Queensland Government has obligations in the implementation of the *Basin Salinity Management Strategy 2001-2015*. According to the strategy, both salinity and water quality outcomes will be delivered within the framework of integrated catchment management and the *National Action Plan (NAP) for Salinity and Water Quality*. Meanwhile, Queensland has committed itself to accountabilities and responsibilities for implementing the strategy. A Murray Darling Basin Plan is currently being prepared to improve ecological health, water quality and water management arrangements for the Basin. Under the *Water Act 2007* (Commonwealth) The Plan will be

required to include long-term average sustainable diversion limits which will restrict the amount of water that can be taken for consumption so as not to compromise key ecosystem functions, key environmental assets, the productive base of the water resource and key environmental outcomes for the water resource. This may be of relevance with respect to surface water quality management in parts of the project development area.

- The Healthy Headwaters Coal Seam Gas Feasibility Study is being managed by the DERM and is intended to analyse the opportunities for, and the risks and practicability of, using coal seam gas (CSG) water to address water sustainability and adjustment issues in the Queensland section of the Murray–Darling Basin. The study commenced in mid 2009 and is due to finish in 2012. The outcomes of this study may be of relevance with respect to surface water quality management in parts of the project development area.
- Where a riverine protection permit is not required, activities in water courses should be undertaken in accordance with the *Guideline – activities in a watercourse, lake or spring associated with mining operations* (DERM 2010b), unless otherwise authorised by the administering authority.
- The rehabilitation and decommissioning of the coal seam gas fields will be undertaken progressively over the life of the project and will be in accordance with the *Petroleum and Gas (Production and Safety) Act 2004*, *Petroleum Act 1923*, *EP Act*, *Environmental Protection (Waste Management) Policy 2000*, the *Draft Guidelines for the Assessment and Management of Contaminated Land in Queensland 1998* and *DERM Guideline 18 Rehabilitation requirements for mining projects (7 June 2007)*.

Pipelines

The *Petroleum and Gas (Production and Safety) Act 2004* is key legislation which applies to the construction of any water or petroleum pipelines, as well as that described above.

Rehabilitation and decommissioning of pipelines will be undertaken in accordance with relevant regulatory requirements, Australian Standards and industry guidelines including the *Petroleum and Gas (Production and Safety) Act 2004*, *EP Act*, Australian Pipeline Industry Association *Code of Environmental Practice – onshore pipelines 2009*; and the Australian Petroleum Production and Exploration Association *Code of Environmental Practice 2008*.

2.2 Approvals relevant to surface water

The approvals relevant to water quality were determined in consultation with the relevant regulatory authorities. Table 1 presents a list of approvals considered relevant to the project.

Table 2-1. Approvals relevant to surface water

Approval Source	Responsible Authority	Relevant Aspect of Project
EP Act (Qld) and <i>Environmental Protection Regulation 2008</i> Petroleum activities (EP Regulation, Section 23 and Schedule 5)	DERM	An environmental authority is required to carry out an environmentally relevant activity which includes petroleum activities. The environmental authority will also authorise other environmentally relevant activities to be carried out in the area of a petroleum authority granted under the <i>Petroleum and Gas (Production and Safety) Act 2004</i> . If any environmentally relevant activities are undertaken on areas other than those subject to a petroleum authority, then a development approval under the SP Act

Approval Source	Responsible Authority	Relevant Aspect of Project
<p><i>Environmental Protection and Biodiversity Conservation Act 1999 (Commonwealth) (EPBC Act).</i></p> <p>The then Commonwealth Minister for the Environment, Water, Heritage and the Arts (now the Department of Sustainability, Environment, Water, Population and Communities) decided the project constitutes a “controlled action” under relevant controlling provisions of the EPBC Act.</p>	<p>Commonwealth Minister for Sustainability, Environment, Water, Population and Communities.</p>	<p>and a Registration Certificate under the EP Act may be required.</p> <p>A registration certificate may be required</p> <p>Any aspect of the project which is likely to impact on a relevant matter of national environmental significance.</p>
<p><i>Sustainable Planning Act 2009 (Qld) (and other legislation) or local government planning schemes.</i></p>	<p>Department of Infrastructure and Planning.</p>	<p>If an activity is located outside Arrow’s petroleum tenures, a development approval under the SP Act may be required.</p> <p>Schedule 3 of the Sustainable Planning Regulation sets out activities that require development approval.</p> <p>The current intention is that the activities associated with the Surat Gas Project will almost entirely occur on areas subject to relevant petroleum authorities.</p>
<p><i>Water Act 2000 (Qld).</i></p> <p>Development approval for operational work (SP Regulation, Schedule 3, Part 1, Table 4, Item 3(a), (b) and (c)).</p>	<p>DERM</p>	<p>A development approval may be required to:</p> <ul style="list-style-type: none"> • take or interfere with water from a watercourse; or • take or interfere with artesian water; or • take or interfere with overland flow water or subartesian water.
<p><i>Water Act 2000 (Qld).</i></p> <p>Riverine protection permit.</p>	<p>DERM</p>	<p>A riverine protection permit is required to do any or all of the following activities in a watercourse, lake or spring:</p> <ul style="list-style-type: none"> • destroy vegetation; • excavate, and • place fill.
<p><i>Water Act 2000 (Qld).</i></p> <p>Allocation notice for quarry material</p> <p>Development approval for removing quarry material from a watercourse (SP Regulation, Schedule 3, Part 1, Table 5, Item 1).</p>	<p>DERM</p>	<p>Quarry material includes stone, gravel, sand, rock, clay, earth and soil, unless it is removed from a watercourse as waste material.</p>
<p><i>Fisheries Act 1994 (Qld)</i></p> <p>Development approval for a waterway barrier (SP Regulation, Schedule 3, Part 1, Table 4, Item 6).</p>	<p>DERM</p>	<p>A development approval is required for the construction and raising of waterway barrier works (waterway barriers).</p>

Approval Source	Responsible Authority	Relevant Aspect of Project
<p data-bbox="229 241 670 297"><i>Water Supply (Safety and Reliability) Act 2008.</i></p> <p data-bbox="229 309 670 488">Development approval for operational work being the construction of a referable dam as defined under the <i>Water Supply (Safety and Reliability) Act 2008</i>. (SP Regulation, Schedule 3, Part 1, Table 4, Item 4 (a)).</p>	<p data-bbox="670 241 909 264">DERM</p>	<p data-bbox="909 241 1359 488">A development permit for operational work is required for the construction of a referable dam as defined under the <i>Water Supply (Safety and Reliability) Act 2008</i>. This only applies to dams of a certain size and does not include dams that contain hazardous waste.</p>

3 Method of assessment, existing environment and environmental values

3.1 Method of assessment

Identifying baseline conditions and environmental values required desktop studies and targeted field investigations.

This report has considered approaches recommended in the EP Act 1994, the EPP (Water) 2009, the National Water Quality Management Strategy (NWQMS), the QWQG and ANZECC 2000.

The surface water quality assessment involved the following tasks.

- Defining the overall management aim, *ie* determining what is to be protected. This involved collating information on threats and issues, determining waterbody condition, and nominating environmental values for each waterbody.
- A review of surface water quality in the relevant catchments and associated subcatchments. This was based on:
 - the field surveys conducted for this assessment;
 - existing data obtained from the surface water quality database maintained by DERM, and
 - project specific surface water quality data supplied by Arrow.
- Defining appropriate surface water quality guidelines, *i.e.* how a waterbody is measured or assessed to determine if it is fit for the purposes it is used for, or if impacts are environmentally important. This required a review of the guidelines described above and their applicability to site-specific conditions.
- Defining surface water quality objectives, *i.e.* setting measurable and achievable targets. These were derived with reference to the water quality guidelines described above.
- Providing recommendations for surface water quality monitoring and management responses to unacceptable water quality, *i.e.* what should be done if performance is unsatisfactory or objectives are not being met.

The terminology in the published water quality guidelines and how the guidelines are applied to legislative requirements is complicated. This leads to difficulty in understanding the technical complexity associated with water chemistry and its relationship with the abiotic and biotic environments. However the essence of an effective assessment and monitoring program is that it must be an integral part of an overall strategy for managing surface water quality. Concise water quality objectives based on existing threats, water body condition and desired outcomes allow the development of an effective monitoring program to determine if current surface water quality is acceptable for a given end use and/or if environmental obligations are being met.

The results of the baseline investigations including field investigations are presented as Appendix A.

Determining Appropriate Surface Water Quality Guidelines

Water quality monitoring should be seen as a management tool to provide an indication of on-site performance against achievable and measurable objectives or targets. The surface water quality monitoring program recommended in this document is targeted at assessing the efficacy of control strategies, and to providing early warning of potentially deleterious impacts so that timely interventions can be implemented, thereby maintaining the environmental values of relevant receiving waters.

Based on the environmental values nominated for the Surat Gas Project (slightly to moderately disturbed waters, waters that may be used for drinking water and waters that may be used for agricultural purposes) (refer to Section 3.3 and to Appendix A), a set of analytes and guideline values

have been developed / recommended for the receiving environment with recommendations for a future monitoring program presented in Section 8.

Water quality guideline values are a basic tool for assessing potential impacts and issues, however they have limitations and if applied incorrectly may lead to inappropriate decision-making and management. The following is a brief introduction to the use of guidelines.

The main sources of guideline values in Queensland are the QWQG and ANZECC 2000. The published guidelines usually separate out groups of pollutants or water quality indicators according to the following groups.

- Toxicants – heavy metals, metalloids, inorganic pollutants and/or organic pollutants (such as pesticides, PCBs etc) that are directly toxic to biota.
- Stressors – nutrients, turbidity, pH and dissolved oxygen (DO) that are generally not directly toxic to biota.

Some indicators such as ammonia and nitrate can be both stressors and toxicants depending on the concentrations present.

Analytes for the Surat Gas Project have been nominated based on:

- review of water quality data for waters associated with CSG wells;
- review of existing Environmental Authorities (EAs) including water quality criteria for dams and evaporation ponds for CSG wells;
- review of surface water quality data for receiving environment waters, and
- review of project description data and an understanding of the project activities and impacts.

According to both ANZECC 2000 and QWQG, when deriving guideline values for ecosystem protection at a particular site, available data should be used in the following order of preference.

- Available data on local biological effects (ecotoxicological data).
- Local reference data (*ie* from reference sites in very similar condition/setting but that are free of the impact being measured. For example reference data may be gathered from upstream of a potential impact.
- Regional reference data *eg* QWQG guidelines for stressors.
- Australian generic default guidelines *eg* ANZECC 2000.

Therefore, the default guideline values found in ANZECC 2000 should be seen as a 'last resort'. In addition, the EPP Water states that guidelines may be taken from local documents or from ANZECC 2000, but that local guideline information (where available) shall take precedence where there are differences. It is always preferable to use local effects or local reference data where available because:

- the ANZECC 2000 default guideline values are based on data derived nationally or internationally and may not represent local circumstances or conditions
- little of the data (even when generated in Australia) from which default guidelines values have been derived has been produced in southeast Queensland
- the use of default guideline values does not allow the guideline values to be set according to seasonal conditions and therefore have some limitations when used in areas of Australia with marked wet and dry seasons (such as inland Queensland).

Care and professional judgement is required if applying ANZECC 2000 default guideline values.

In reality, adequate data about local biological effects is rarely available and appropriate guideline values should be derived using available data in the following order of preference.

- Local surface water quality reference data (data from a similar reference system or upstream of impacts).
- QWQG default guidelines for stressors.
- ANZECC 2000 default guidelines for stressors and toxicants in water.

Additional sampling to acquire an appropriate data set (n = 18) for nominating site-specific trigger levels will be required should it be decided to apply site-specific data rather than adopting published standards.

Understanding the correct application of guideline values is simpler if the reader is aware of some common mistakes, these include the following.

- Guideline values should not be adopted as compliance limits.
- With respect to aquatic ecosystems, it is clearly stated in ANZECC 2000 and QWQG for the protection of aquatic ecosystems that the guidelines are not intended for assessing discharge water quality, stormwater quality or storm flow events in creeks. They are intended to be applied to ambient flow situations only.

The ANZECC 2000 default guideline values for aquatic ecosystems are based on chronic toxicity data, *ie* on the likely consequences of long term exposure. No default guidelines are provided for critical short-term exposure (acute toxicity). ANZECC 2000 guideline values are referred to as 'trigger values', exceedance of which 'triggers' further investigation and assessment. However, for effective management it is also important to nominate concentrations above which immediate and high level responses may be warranted (*ie* contaminant limits). In the absence of site-specific and species-specific information *e.g.* readily available acute toxicity data, assigning contaminant limits is arbitrary. Contaminant limits may be based on extremes of reference site data, or guideline values for a subordinate environmental value (such as drinking water or primary industries). Site-specific data is required to establish trigger levels, and may also serve to progress the development of contaminant limits.

The interim contaminant release limits nominated for the Surat Gas Project are based on stock water quality guideline values presented in ANZECC 2000. These values have been nominated as criteria for hazardous dams (consistent with existing EAs¹ for the Surat Gas Project development area) and have been selected as contaminant release limits based on discharges occurring from hazardous dams where rainfall exceeds the nominated design event. Where stock water quality guideline values are not available, the Australian drinking water guideline values have been used as contaminant release limits.

3.2 Existing environment

The Surat Gas Project includes a small number of streams in the north of the project development area which are at the headwaters of the Dawson River and which flow northwards into the Fitzroy catchment and discharge to the Great Barrier Reef Marine Park between Rockhampton and Gladstone. These streams contribute less than 1% of the total area of the Dawson River catchment and flow approximately 700 km from the project development area before discharging to the sea.

The Condamine-Balonne, Moonie and Border Rivers form the headwaters of the Murray-Darling Basin. Although the project development area accounts for a small proportion of the total Murray-Darling catchment area, the project development area overlaps approximately 140 km of the

¹ Note that this document was prepared based on Arrow's existing EAs at the time and that while the EAs have been superseded the selection of stock water quality guidelines as criteria for hazardous dams is still considered appropriate.

Condamine River and approximately 70 km of Weir Creek (a subcatchment of the Balonne River), and the Surat Gas Project activities have the potential to impact on water quality in these rivers. The Condamine River flows northwards and then westwards through most of the project development area. The Macintyre River and Border Rivers flow generally westward in the development area.

Streams within the project development area are generally intermittent, with surface waters in many streams receding to disconnected pools and dry beds during the dry season. The changes to water flows across the year are likely to result in shifts in water quality across the seasons, with water quality during storm events differing from that of drying pools (eg reductions in dissolved oxygen in drying pools (DERM 2009)).

There is one wetland of national significance in the project development area. Lake Broadwater, west of Dalby, is a semi-permanent freshwater lake used for recreational purposes (eg skiing, swimming, boating). At the time of the October 2009 and November 2009 surveys Lake Broadwater was dry. Water was present in the lake in March 2010.

Present and potential water uses for the catchments in the project development area include agricultural (crop production), pastoral, urban, mining and recreational use. Water is also drawn for drinking water supply from a number of watercourses within the project development area, including the Condamine River, Balonne River, Macintyre Brook and Weir River and adjoining streams such as Charley's Creek, Dogwood Creek and Cattle Creek,











The results of the aquatic ecology survey (Aquateco 2011) show that aquatic ecosystems within the project development area are moderately to highly modified² and are in moderate health. Ecological communities (fish, macroinvertebrates and aquatic flora) were found to be similar at most sites within the study area assessed by Aquateco. Habitat type and quality was also relatively uniform across the study area. No pockets of endemism or habitat of unusual quality of composition were identified. Two fish species of conservation interest, *Gadopsis mamoratus* (freshwater blackfish) and *Mogurnda adspersa* (purple spotted gudgeon) were recorded at a site just outside of the project development area. A third species *Maccullochella peelii peelii* (Murray cod) was not recorded in the survey undertaken by Aquateco but may occur within the project development area as it is known to exist within waterways of the Murray Darling Basin both as a remnant population of wild fish and as a stocked recreational species. *M. peeli peeli* is listed as vulnerable under Commonwealth environmental legislation.











Photos and descriptions of surface waters for the project development area are presented in Table 2.











Surface water quality data collected as part of the baseline investigation for the EIS has been reviewed, along with data maintained by DERM. A summary is presented below (refer to Appendix A for a complete surface water quality assessment).












² Although some waters may demonstrate high levels of disturbance, as identified by the aquatic ecology survey, from agricultural or urban runoff and channel modification, the level of protection nominated for the project development area is consistent with most waters and also considers the quality likely to be desired by stakeholders (ANZECC 2000).













Table 3-1. Surat Gas Project surface water photographs and descriptions











Site ¹	Waterway	Sub-Catchment	Catchment	Landuse	Date Surveyed	Notes ²	Photo – upstream	Photo – downstream
119	Wyaga Creek	Wyaga Creek	Weir River	Agriculture	19 November 2009	Series of isolated, very turbid, opaque pools. Approx 4 m x 15 m. Sample collected upstream of road. Bank erosion upstream. Left bank (facing downstream) dominated by grass with fewer trees than right bank (continuous trees along right bank).		
					18 March 2010	Turbid stream with low flow.		
120	Commonon Creek	Commonon Creek	Weir River	Forest/ Park	19 November 2009	Very turbid pool of water – series of isolated pools. Dried clays on substrate in channel. Bedrock and cobbles in channel. Well vegetated banks.		
					18 March 2010	Turbid stream with low flow. Ferric hydroxide precipitate and natural oily film observed. Sand and bedrock in channel.		
125	Kerimbilla Creek	Commonon Creek	Weir River	Mining/ Industry	19 November 2009	Site dry. No distinct channel/drainage line.		











Site ¹	Waterway	Sub-Catchment	Catchment	Landuse	Date Surveyed	Notes ²	Photo – upstream	Photo – downstream
127	Muri Muri Creek	Muri Muri Creek	Weir River	Agriculture	19 November 2009	Very turbid opaque pool of water 15 m x 5 m (shallow). Orange algae globs and algae film on surface. Large woody debris in channel. Stable banks vegetated with grass and some tall trees.		
					18 March 2010	Turbid stream with low flow. Debris in channel.		
109	Boola Creek	Boola Creek	Macintyre Brook	Agriculture	19 November 2009	Small pools of water on either side of road. Some litter in narrow channel but not in waterbody. Banks covered in grass. Shrubs and trees present along channel.		
					18 March 2010	Turbid water with low flow between pools. Large debris against trees on bank.		
B (Domville)	Back Creek	Leonard (Back Creek) Gully	Condamine River	Mining/ Industry	19 November 2009	No Access – site fenced. Small pools of turbid water on either side of the road. Creek not well defined, grasses growing in channel.		




Site ¹	Waterway	Sub-Catchment	Catchment	Landuse	Date Surveyed	Notes ²	Photo – upstream	Photo – downstream
88	Back Creek	Back Creek	Condamine River	Residential	19 November 2009	Not flowing. Slightly turbid. Floating macrophytes present. Stable banks covered in grass. Trees on banks.		
					18 March 2010	Turbid stream with low flow.		
79	Un-named Creek	Kurrawa Creek	Condamine River	Agriculture	19 November 2009	Very turbid opaque pool of water approx 12 m x 4 m. Algae film on the surface. Large woody debris in channel. Grass growing in channel and on stable banks.		
					18 March 2010	Turbid stream with low flow. Ferric hydroxide precipitate and natural oily film observed. Debris in channel and on banks.		
3	Crawlers Creek	Crawlers Creek	Condamine River	Agriculture	15 October 2009	Small pool of very turbid (opaque) water approx 6 m x 3 m. Narrow channel approx 2m wide. Right bank (facing downstream) eroded downstream of site. Tall trees present on right bank (facing downstream). Tall grasses dominate riparian zone. Debris in channel.		





Site ¹	Waterway	Sub-Catchment	Catchment	Landuse	Date Surveyed	Notes ²	Photo – upstream	Photo – downstream
4	Condamine River	Condamine River (south branch)	Condamine River	Residential	15 October 2009	Water turbid and not flowing. Channel 20 m wide. Steep banks. Reeds and floating macrophytes present. Island and large woody debris in channel. Riparian zone consisted of tall trees, grasses and bare ground.		
					19 November 2009	Less water present than previous sampling occasion. Not flowing, slightly turbid. Litter in channel. Floating macrophytes		
					18 March 2010	Turbid water. Rotting vegetation odour. Floating macrophytes.		
1	Condamine River	Condamine River (north branch)	Condamine River	Agriculture	15 October 2009	Not flowing. Very turbid (opaque) water. Riparian vegetation dominated by grasses upstream of the site and tall trees and grasses downstream. Agricultural area.		
					18 March 2010	Turbid stream, slight flow.		
78	Condamine River	Condamine River (north branch)	Condamine River	Agriculture	19 November 2009	Large pool of turbid water. Channel approx. 4 m wide. Algae upstream of bridge where river is shallower and clearer. Large woody debris in channel. Stable banks vegetated with grasses. Tall trees present on right bank (facing downstream).		











Site ¹	Waterway	Sub-Catchment	Catchment	Landuse	Date Surveyed	Notes ²	Photo – upstream	Photo – downstream
5	Ashall Creek	Ashall Creek	Condamine River	Agriculture	15 October 2009	Site dry. Channel approx. 15 m wide. Grass growing on the creek bed. Tall trees and grasses present on bank.		
6	Oakey Creek	Oakey Creek	Condamine River	Agriculture	14 October 2009	Approx 10 m x 3 m pool of water. Boggy and turbid. Channel approx 5m wide. Steep banks. Large woody debris present in channel. Tall trees and grasses present along the bank.		
					18 November 2009	Similar to previous sample event. Weir approx. 800 m upstream. Waterbody not flowing, slightly turbid. Floating macrophytes.		
					17 March 2010	Turbid, flowing stream. Debris in channel and on banks. Sample collected upstream of bridge.		
A3	Condamine River	Condamine River	Condamine River	Agriculture	15 October 2009	Site dry. Channel approximately 15 m wide. Steep, stable banks. Grass growing on river bed. Grasses and tall trees dominate the riparian zone.		
7	Myall Creek	Myall Creek	Condamine River	Agriculture	14 October 2009	Creek generally dry. Narrow channel approx. 1 m wide. Turbid puddle beyond fence with green algae mat on the surface - unable to access. Tall grasses dominate banks.		

Site ¹	Waterway	Sub-Catchment	Catchment	Landuse	Date Surveyed	Notes ²	Photo – upstream	Photo – downstream
8	Myall Creek	Myall Creek	Condamine River	Residential	14 October 2009	Slightly turbid waterbody approx. 4 m wide. Litter on bank. Reeds and macrophytes present. Riparian zone consisted of tall trees, shrubs and grass and was wider on the left bank (facing downstream). Ducks observed.		
					17 March 2010	Turbid, slowly flowing stream. Banks and part of stream bed with abundant reed growth. Reeds flattened by flow.		
26	Condamine River	Condamine River (north branch)	Condamine River	Agriculture	17 November 2009	Site dry. Channel approx. 6 m wide. Fringing riparian vegetation on banks dominated by trees and grass. Stable banks.		
9	Jimbour Creek	Jimbour Creek	Condamine River	Agriculture	16 October 2009	Site dry. Grass surrounding channel (approx. 2 m wide).		
					17 March 2010	Water flowing. Slightly turbid. Debris collected behind bridge pylon.		







Site ¹	Waterway	Sub-Catchment	Catchment	Landuse	Date Surveyed	Notes ²	Photo – upstream	Photo – downstream
137	Wilkie Creek	Wilkie Creek	Condamine River	Forest/Park	18 November 2009	Turbid pool of water approx 15 m x 4 m. Algae film on surface. Channel approx 15 m wide. Large woody debris present in channel. Steep left bank (facing downstream). Continuous riparian vegetation, with combination of tall trees, shrubs, bare ground and grasses. Island in channel with tall trees.		
					17 March 2010	Tannin stained, slow-flowing stream. Natural oily film on water.		
10	Lake Broadwater (Broadwater Lagoon)	Wilkie Creek	Condamine River	Forest/Park	15 October 2009	Site dry. Lake is a shallow depression with distinct fringing riparian vegetation surrounding the site.		
					17 March 2010	Water level approximately 10 m from lake beach. Plant material (grass seeds) washed up on banks with slight smell of rotting vegetation.		
11	Clayhole Creek	Clayhole Creek	Condamine River	Agriculture	15 October 2009	Muddy, shallow pool of water approx 4 m x 2 m. Algae scum on surface. Channel approx. 20m wide. Gentle sloped banks. Riparian vegetation consists of tall trees, shrubs, grasses and bare areas.		

Site ¹	Waterway	Sub-Catchment	Catchment	Landuse	Date Surveyed	Notes ²	Photo – upstream	Photo – downstream
A4	Wilkie Creek	Wilkie Creek	Condamine River	Agriculture	15 October 2009	Large pool >100 m x 15 m. Opaque water. Large woody debris present. Riparian vegetation consists of tall trees, shrubs, grass and bare ground.		
					17 March 2010	Slow-flowing stream. Foaming water at culvert. Debris in channel and on banks.		
A5	Moramby Creek	Moramby Creek	Condamine River	Forest/Park	15 October 2009	Large very turbid pool approx 30 m x 6 m. Algae scum on the surface. Riparian zone consists of grasses, shrubs, tall trees and bare ground. Upstream of confluence.		
					18 November 2009	Less water than previous sample occasion. Very turbid, opaque pool. Aquatic macroinvertebrates observed. Algae film on surface.		
A7	Wilkie Creek	Wilkie Creek	Condamine River	Agriculture	16 October 2009	Turbid (opaque) large pool of water. Channel approx 10 m wide. Large woody debris and grasses in channel. Banks well vegetated and dominated by grasses and tall trees.		
					17 March 2010	Turbid, slow-flowing stream. Debris in channel and trees. Anoxic odour.		

Site ¹	Waterway	Sub-Catchment	Catchment	Landuse	Date Surveyed	Notes ²	Photo – upstream	Photo – downstream
14	Braemar Creek	Braemar Creek	Condamine River	Agriculture	16 October 2009	Turbid water. Not flowing. Channel approx. 3 m wide. Large woody debris in channel. Stable banks. Left bank (facing downstream) steeper than the right bank. Fringing vegetation was dominated by grasses and tall trees.		
					17 March 2010	Turbid, slow-flowing water. Debris on bank and in channel.		
15C	Jandowae Creek	Cooranga Creek	Condamine River	Agriculture	16 October 2009	Very turbid (opaque) pool of water approx 4 m x 20 m. Riparian vegetation dominated by grasses on the right bank (facing downstream) and tall trees on the left bank.		
16	Cooranga Creek	Cooranga Creek	Condamine River	Residential	16 October 2009	Large opaque pool of water (not flowing). Scum on surface of upstream end of pool. Grass surrounded the channel. Occasional trees present along bank.		
					17 November 2009	More water than the previous sampling occasion. Site flowing, turbid water.		
					17 March 2010	Very turbid, flowing water. Debris and trees. Foaming from flow observed.		

Site ¹	Waterway	Sub-Catchment	Catchment	Landuse	Date Surveyed	Notes ²	Photo – upstream	Photo – downstream
17	Condamine River	Condamine River	Condamine River	Agriculture	16 October 2009	Series of isolated opaque pools (not flowing). Turbid water. Channel approx. 6 m wide. Large woody debris in channel. Steep banks with grasses and trees.		
					17 November 2009	Rapidly flowing, turbid water. Site changed from previous sampling occasion (previously isolated, drying pools).		
					16 March 2010	Very turbid, rapidly flowing water. Lots of sediment deposited on banks. Debris on bank and in channel. Anoxic smell.		
33	Charleys Creek	Charleys Creek	Condamine River	Residential	17 November 2009	Not flowing. Slightly turbid water. Steep right bank (facing downstream) upstream of site. Bedrock in channel. Floating macrophytes and reeds present. Dense shrubs and trees along the right bank and sections of the left bank (facing downstream).		
					16 March 2010	Does not appear to be flowing. Anoxic odour. Construction road works occurring adjacent to sample site.		

Site ¹	Waterway	Sub-Catchment	Catchment	Landuse	Date Surveyed	Notes ²	Photo – upstream	Photo – downstream
27	Columboola Creek	Columboola Creek	Balonne River	Agriculture	17 November 2009	Very turbid, opaque pool of water (not flowing). Channel approx. 3 m wide. Pylons from old bridge and large woody debris in channel. Upstream pool with algae film on the surface. Stable banks dominated by grass, tall trees present. Grass in channel.		
					16 March 2010	Very turbid, opaque connected pools with low flow.		
15B	L Tree Creek	Balonne River	Balonne River	Mining/ Industry	17 November 2009	Very turbid, opaque water, not flowing. Bank erosion and large woody debris downstream of site. Banks dominated by grasses with trees.		
					16 March 2010	Very turbid, low flow stream. Debris on banks and in channel. Frogs observed.		
20	Dogwood Creek	Dogwood Creek	Balonne River	Forest/ Park	17 November 2009	Turbid opaque, large pool of water (not flowing). Stable banks. Riparian vegetation consists of shrubs, trees and grasses.		
					16 March 2010	Turbid, flowing stream. Natural oily sheen on water surface. Debris in trees and channel.		

Site ¹	Waterway	Sub-Catchment	Catchment	Landuse	Date Surveyed	Notes ²	Photo – upstream	Photo – downstream
140	Rocky Creek	Rocky Creek	Balonne River	Forest/ Park	17 November 2009	Very turbid, shallow pool of water approx 5 m x 10 m. Shallow channel approx. 8 m wide. Algae film on surface. Large woody debris in channel. Cowpats and pugging around waterbody. Trees, shrubs, grass and bare ground on banks.		
0	Weringa Creek	Weringa Creek	Dawson River	Agriculture	17 November 2009	Site Dry. Large woody debris and grasses in the channel. Banks are dominated by grasses with patches of tall trees.		
					16 March 2010	Turbid water. Not flowing. Natural oily film on water surface.		

¹ Site locations are presented in Appendix A.

² Where insufficient water was present for water sample collection, only *in situ* field testing was undertaken (pH, EC, DO and turbidity) (Refer to Appendix A for details of sample collection).

Existing Environment Water Quality

Full water quality results are presented in Attachment E of Appendix A. A summary of the major analytes relevant to the project development area is provided below.

Electrical Conductivity

The Surat Gas Project crosses several catchments which fall within the following Queensland Salinity Zones (DERM 2009).

- Maranoa-Balonne-Border Rivers (moderately low salinity).
 - Balonne River.
 - Moonie River.
 - Weir Creek.
- Fitzroy Central (low to moderate salinity).
 - Dawson River.
- Condamine-Macintyre (moderate to high salinity).
 - Condamine River.
 - Macintyre-Brook.
- Southern Divide (generally very high salinity).
 - Condamine River.

Electrical conductivity (EC) varies widely across the project development area, as seen in the difference in EC percentiles calculated for the different river systems (Appendix A: Table 2). Waters in the Southern Divide zone (westward flowing Condamine River subcatchments between Warwick and Dalby, including Jimbour Creek and Oakey Creek) are described as the most generally saline zone in Queensland and have a nominated guideline value (75th percentile) of 1120 µS/cm, in comparison to the guideline value of 500 µS/cm provided for other sections of the Condamine River catchment (DERM 2009).

EC concentrations vary with stream flow. Highly variable concentrations were recorded in the Condamine River and in the Oakey Creek subcatchment at low stream levels and generally low EC concentrations recorded at high stream levels (based on stream level and water quality data provided by DERM for the Condamine River at Chinchilla and Gowrie Creek within the Oakey Creek subcatchment (DERM 2009)).

Turbidity

Turbidity varies across the project development area and nominated turbidity objectives for the major catchments are above the ANZECC 2000 ecosystem protection guideline value (25 NTU) (Appendix A, Table 2). Turbidity at surface water sites monitored during the baseline survey was recorded above 250 NTU at a number of locations (Appendix A).

Turbidity was generally low during periods of low stream flow in the Condamine River and in the Oakey Creek subcatchment. During periods of high flow, turbidity was more variable and generally higher than low flow periods (based on stream level and water quality data provided by DERM (2009)).

Dissolved Oxygen

Dissolved oxygen (DO) was generally low (less than the ANZECC 2000 lower ecosystem protection guideline value of 90 % saturation) in surface waters of the project development area (refer to Appendix A) and this is likely to reflect the non-permanent nature of many streams in the area. The QWQG (2009) states that low DO can occur naturally in pools with no flow.

DO concentrations were highly variable in the Condamine River and the Oakey Creek subcatchment during periods of low flow, but generally stabilised within recommended QWQG guideline levels with increasing stream flows (based on stream level and water quality data provided by DERM (2009)).

Other Parameters

In addition to the above, the results for other surface water quality parameters that have been monitored in the project development area are generally of poorer quality when compared with the ecosystem protection trigger values nominated in ANZECC 2000. Details are provided below.

- Nutrients recorded in the rivers relevant to the project development area were generally above ANZECC 2000 guideline values nominated to protect surface waters from eutrophication (eg total oxidised nitrogen, ammonia, total nitrogen, total phosphorus).
- Total nitrogen, total phosphorus, fluoride and sulphate showed generally high variability at during periods of low flow, with concentrations stabilising during high flows (based on stream level and water quality data provided by DERM (2009)).
- Several heavy metals, including cobalt, copper, vanadium and zinc, were recorded above ANZECC 2000 ecosystem protection values in a number of creeks and rivers across the project development area.
- Heavy metals (including copper, boron and zinc) in the Condamine River and the Oakey Creek subcatchment were highly variable during periods of low flow but concentrations were generally low and more stable during periods of high flow (based on stream level and water quality data provided by DERM (2009)).

Bed and Banks

Silty substrates and poorly vegetated, unstable banks were observed in the watercourses during the baseline surveys. This may contribute to high suspended solids and elevated turbidity results which were recorded in waterways of the project development area. High suspended solids and turbidity may also result in reduced DO concentrations. Elevated total metal concentrations relative to the dissolved metals fraction may also result from high suspended solids.

Baseline aquatic ecology sediment results

Sediment quality was generally consistent with ANZECC 2000 interim sediment quality guidelines (ISQG) at most aquatic ecology sites across the project development area, with the exception of nickel which exceeded the ISQG-low at the Myall Creek site and the ISQG-high at the Oakey Creek site. These sites generally recorded the highest metal concentrations compared to other aquatic ecology sites during the field survey (Aquateco 2011). Both of these sites are located within the southern divide catchment, which has also been identified as having generally very high salinity. Nutrients were also highest in sediment collected in the Oakey Creek sample (Aquateco 2011).

Baseline aquatic ecology macroinvertebrate results

The aquatic ecosystems identified during aquatic ecology surveys (Aquateco 2011) in the project development area were generally considered to be in moderately good health, although the ecosystems in Myall Creek and Braemer Creek were considered to be in poor health due to oxygen depletion. There was a generally high similarity in the composition of the populations across the project development area, irrespective of drainage basin or catchment land use (Aquateco 2011).

The similarity in populations identified by Aquateco (2011) across the project development area suggests that water quality and site conditions are generally comparable with respect to the maintenance of aquatic communities.

Baseline aquatic ecology survey *in situ* water quality comparison

In situ surface water quality results collected during the aquatic ecology baseline survey (Aquateco 2011) were generally comparable to those collected during the NRA surface water quality baseline surveys, with the exception of three EC results which were recorded above the nominated guideline value from the QWQG of 1120 $\mu\text{S}/\text{cm}$ for the Southern Divide zone. These EC values recorded by Aquateco in the Oakey Creek catchment, which is part of the Southern Divide zone, were comparable to results previously recorded in Oakey Creek catchment (refer to water quality data provided by the Department of Environment and Resource Management (DERM), Attachment A of Appendix A). The

EC recorded in Oakey Creek by NRA was below the nominated guideline value of 1120 $\mu\text{S}/\text{cm}$, and within the range of results for Oakey Creek catchment provided by DERM.

Coal Seam Water Characteristics

A summary of surface water quality monitoring results for Surat Gas Project coal seam waters is presented in Table A1T-1 of Appendix A. The results include elevated electrical conductivity concentrations exceeding relevant QWQG guideline values and existing water quality for the catchments of the project development area. Electrical conductivity in coal seam water has been recorded as high as 30900 $\mu\text{S}/\text{cm}$ compared to a maximum value of 2500 $\mu\text{S}/\text{cm}$ recorded in Oakey Creek in 1994 and the guideline value of 1120 $\mu\text{S}/\text{cm}$ nominated for the Southern Divide zone.

A number of water quality parameters have also been recorded above guideline values in Surat Gas Project coal seam water and include pH (both slightly acidic and alkaline waters encountered), turbidity, sulphate, chloride, ammonia, total petroleum hydrocarbons and heavy metals (Table A1T-1, Appendix A).

3.3 Environmental values to be protected and protection objectives

Environmental Values

Specific environmental values for watercourses in the project development area are not defined in the EPP (Water).

DERM maintains water quality data which includes the major rivers and associated subcatchments of the project development area. This data, and that collected during the field surveys conducted in October 2009, November 2009 and March 2010, was assessed (the assessment is provided in Appendix A) for the purpose of nominating environmental values.

A general comparison of water quality recorded within the project development area with published guideline values for the protection of the nominated environmental values for watercourses are presented below.

- Slightly to moderately disturbed waters – As expected, water quality within the project development area is generally of poorer quality than the ANZECC 2000 guideline values nominated for the protection of slightly to moderately disturbed ecosystems. Although some waters may demonstrate high levels of disturbance from agricultural or urban runoff and channel modification, and as identified by the aquatic ecology survey, the level of protection nominated for the project development area is consistent with most waters and also considers the quality likely to be desired by stakeholders (ANZECC 2000).
- Waters that may be used for drinking water – ADWG guideline values for turbidity have been exceeded at sites in all catchments within the project development area. Electrical conductivity and chloride ADWG guideline values have been frequently exceeded in Jimbour Creek and Oakey Creek, and ammonia ADWG guideline values have been frequently exceeded in Oakey Creek. The heavy metals lead and nickel have exceeded ADWG guideline values at sites in the Condamine River catchment. With the exception of these results, most water quality values recorded at sites within the project development area are below drinking water guideline values.
- Waters that may be used for agricultural purposes – waters within the catchments of the project development area are generally within stock watering guidelines presented in ANZECC 2000.

These environmental values have been used to determine the surface water quality guidelines, water quality objectives³ and control strategies which are used as the basis for the monitoring requirements recommended for the Surat Gas Project.

Environmental Protection Objectives

The environmental protection objectives for waters in the receiving environment of Arrow operations are as follows:

- To maintain the quantity of water in streams and pools so that existing and potential environmental values, including biological integrity, are protected.
- To ensure that the quality and quantity of water emissions does not adversely affect environmental values or the health, welfare and amenity of people and land uses and does meet statutory requirements and acceptable standards.
- To ensure water resources used for public water supply are protected in accordance with the Australian Drinking Water guidelines (NHMRC & NRMMC 2004).
- To maintain the integrity, ecological functions and environmental values of wetlands.
- Protection of the integrity of the downstream marine environment, specifically the Great Barrier Reef Marine Park and World Heritage property.
- Maintenance of sufficient quality of surface waters to protect existing beneficial downstream users of those waters.

In the absence of water quality objectives identified in Schedule 1 of the EPP(Water) and water quality objectives derived through a consultative approach, environmental protection objectives are derived from the water quality guidelines necessary for the maintenance of the environmental values nominated above.

³ Water quality objectives are established by (a) legislation (Schedule 1 Environmental Protection (Water) Policy 2009), or (b) through a consultative mechanism in accordance with the Environmental Protection (Water) Policy 2009 and with reference to the regulatory guideline - *Establishing Draft Environmental Values And Water Quality Objectives* or (c) are the set of water quality guidelines that will protect all environmental values for the water.

4 Relevant project activities and impact assessment

4.1 Activities with potential impacts

Project activities that have the potential to result in environmental impacts on surface water quality during exploration, construction, operation and maintenance, and decommissioning are listed below.

- Watercourse crossings by roads, tracks and pipelines.
- Dams.
- Gas wells, field compression facilities (FCFs) and central gas processing facilities (CGPFs).
- Integrated processing facilities (IPFs), which include water treatment facilities and water storage dams.
- Discharge and storage of hydrotesting water.
- Discharge and storage of treated and untreated coal seam water and brine concentrate.
- Any infrastructure located on floodplain areas.
- Limited use of raw (saline) coal seam water to suppress dust.
- Discharge to watercourses. Approximately 0.5 GL/annum may be discharged to watercourses during high rainfall events, or during times where beneficial users are unable to receive coal seam water as part of Arrow's substitution strategy.
- Irrigation trials using treated coal seam water as a substitute for water drawn from aquifers.
- Reinjection trials using treated coal seam water.

4.2 Potential impacts

Potential impacts on environmental values from these activities during exploration, construction, operation and maintenance, and decommissioning are described below.

Adverse Impacts

- Surface water quality degradation in the receiving environment due to contaminated runoff from active project development areas. Contaminants may include but not be limited to sediments and nutrients (associated with vegetation clearing and construction) and/or hydrocarbon, chemical or other reagent/waste (from accidental spills).
- Surface water quality degradation, including increased salinity, in the receiving environment due to discharge of untreated (or insufficiently treated) coal seam water from dams holding raw feed water, treated water, brine and/or waste water. This may occur as a result of extreme weather events (*e.g.* storms or floods) or catastrophic events (*e.g.* dam failure).
- Surface water quality degradation in the Murray-Darling basin and the Fitzroy Basin due to discharge of untreated (or insufficiently treated) water from dams holding raw feed water, treated water, brine and/or waste water. This may occur as a result of extreme weather events (*e.g.* storms or floods) or catastrophic events (*e.g.* dam failure).
- Runoff/discharge may alter the hydrology and aquatic ecology of creeks and rivers in the receiving environment. This may occur as a result of extreme weather events (*e.g.* storms or floods) or catastrophic events (*e.g.* dam failure).
- Reduction in agricultural water resources due to water contamination. This may occur as a result of extreme weather events (*e.g.* storms or floods) or catastrophic events (*e.g.* dam failure).
- Runoff of saline dust suppression water into receiving waters could impact on water quality and aquatic ecosystems.

Beneficial Uses of Coal Seam Water

A range of beneficial uses have been considered for waste waters associated with the Surat Gas Project in accordance with the relevant Operational Policy (EPA 2007) and are described below.

A shortlist of long term reuse and disposal options was considered during a concept selection process conducted by Arrow. The outcomes of this process are summarised below.

- **Agriculture & Irrigation.** This option includes the use of treated coal seam water for local feedlots or to irrigate a variety of potential crops providing a substitute for existing water entitlements.
- **Reinjection.** Surface storage of coal seam water may be reduced through the direct injection of treated coal seam water into suitable shallow or deep aquifers (assuming trials confirm this option is feasible).
- **Urban, Commercial & Industrial.** Under this option for re-use of coal seam water, potential uses include:
 - **Municipal water supply:** Dalby, Chinchilla, Oakey and Millmerran may be possible beneficial end users. Arrow is currently working cooperatively with Dalby Town Council to make an agreement to supply approximately 6 ML of treated water.
 - **Industrial uses:** including using untreated coal seam water for washing processes in coal mines, and cooling in power stations.
 - **Commercial uses:** including processing/refinement of brine to provide valuable commercial products.
- **Aggregation with other gas producers.** Scoping and feasibility studies have been undertaken collaboratively with other coal seam gas producers to gauge the potential for aggregation of treatment facilities, treated water and brine on a local, regional and broader context, including the following.
 - **Pipeline to the coast.** This option considers the potential to construct a pipeline to transport raw water, or the brine stream, to the coast for disposal or treatment through desalination plants.

Treatment and Release to Waters. Discharges to watercourses are expected where prolonged rainfall or storm events reduce beneficial use offtake volumes and the storage capacity within dams storing treated coal seam water. An allowance has been made for the discharge of up to 0.5 GL per annum of treated coal seam water.

5 Proposed avoidance, mitigation and management measures

This section provides proposed avoidance, mitigation and management measures for each of the environmental values to be protected. Measurable indicators and control strategies demonstrate how the objectives will be achieved.

The following environmental values have been nominated for water quality of surface waters in the project development area.

- Slightly to moderately disturbed waters.
- Waters that may be used for drinking water.
- Waters that may be used for agricultural purposes.

5.1 Protecting surface water quality

Control strategies to mitigate potential impacts to the environmental values nominated above are provided in Table 3 below for each of the project phases: exploration and drilling; construction; operation and maintenance; and decommissioning and rehabilitation

Table 5-1. Control Strategies and Mitigation Measures

Exploration and Drilling Activities

<ul style="list-style-type: none">• Implement best practice erosion and sediment control measures (inclusive of planning, design, construction, performance monitoring and corrective actions) (eg as detailed in the <i>Best Practice Erosion & Sediment Control 2008</i> (International Erosion Control Association (Australasia)). These practices include, among other fundamental measures, limiting site disturbance, management of surface water, weed and pathogen management protocols, soil resource management, rehabilitation and scheduling of activities.
<ul style="list-style-type: none">• Implement good practice to minimise disturbance footprint.
<ul style="list-style-type: none">• Separate clean water (including stormwater) and impacted water from active and rehabilitated or non-disturbed areas.
<ul style="list-style-type: none">• Design and implement appropriate sediment detention measures for overland flow from disturbed areas.
<ul style="list-style-type: none">• Manage hazardous materials (e.g. drilling muds) with appropriate bunding and containment.
<ul style="list-style-type: none">• Manage hazardous materials with appropriate bunding and containment. All flammable and combustible materials (including petroleum product) storage is to be designed, constructed and maintained in accordance with AS 1940 - Storage and Handling of Flammable and Combustible Liquids, and other applicable dangerous goods standards apply as relevant.
<ul style="list-style-type: none">• Design and construct appropriate storage structures in accordance with regulatory guideline requirements for coal seam water with sufficient buffer capacity to prevent uncontrolled discharges of untreated water during wet season events.
<ul style="list-style-type: none">• Minimise seepage loss from storage structures (i.e. design, construct and maintain storage structures in accordance with appropriate engineering specifications) (e.g. see DERM 2010a).
<ul style="list-style-type: none">• Minimise the practice of, and where unavoidable, limit the volumes of saline raw coal seam water used to suppress dust so that water does not pool at the surface, or enter receiving waterways via surface run-off.
<ul style="list-style-type: none">• Incident reporting, emergency response and corrective actions systems and procedures.

Construction (FCFs, FGPFs, IPFs, water storage dams, access tracks, pipelines)

-
- Implement best practice erosion and sediment control measures (inclusive of planning, design, construction, performance monitoring and corrective actions) (eg as detailed in the *Best Practice Erosion & Sediment Control 2008* (International Erosion Control Association (Australasia)). These practices include, among other fundamental measures, limiting site disturbance, management of surface water, weed and pathogen management protocols, soil resource management, rehabilitation and scheduling of activities.
-
- Implement good practice to minimise disturbance footprint.
-
- Where practicable, undertake construction in the dry season for infrastructure and disturbance in or near creeks and rivers.
-
- Separate clean water (including stormwater) and impacted water from active and rehabilitated or non-disturbed areas by installing clean water diversions and appropriate onsite drainage.
-
- Design and implement appropriate sediment detention measures for overland flow from disturbed areas.
-
- Minimise the inventory of hazardous materials stored on site.
-
- Manage hazardous materials with appropriate bunding and containment. All storage areas for flammable and combustible materials (including petroleum product) are to be designed, constructed and maintained in accordance with AS 1940 - Storage and Handling of Flammable and Combustible Liquids, and other applicable dangerous goods standards apply as relevant.
-
- Use undercover storage for hazardous materials.
-
- Limit the volumes of saline raw coal seam water used to suppress dust so that water does not pool at the surface, or entre receiving waterways via surface run-off.
-
- Minimise seepage loss from storage structures (ie design, construct and maintain storage structures in accordance with appropriate engineering specifications) (e.g. see DERM 2010a).
-
- Design and construct appropriate storage structures in accordance with statutory requirements for raw feed water, treated water, brine and waste water with sufficient buffer capacity to prevent uncontrolled discharges of untreated water during wet season events.
-
- Incident reporting, emergency response and corrective actions systems and procedures.
-

Operation and Maintenance (FCFs, FGPFs, IPFs, water storage dams, wells, pipelines)

-
- Implement best practice erosion and sediment control measures (inclusive of planning, design, construction, performance monitoring and corrective actions) (eg as detailed in the *Best Practice Erosion & Sediment Control 2008* (International Erosion Control Association (Australasia)). These practices include, among other fundamental measures, limiting site disturbance, management of surface water, weed and pathogen management protocols, soil resource management, rehabilitation and scheduling of activities.
-
- Separate clean water (including stormwater) and impacted water from active and rehabilitated or non-disturbed areas.
-
- Operate and maintain appropriate sediment detention measures for overland flow from disturbed areas.
-
- Manage hazardous materials with appropriate bunding and containment. All storage areas for flammable and combustible materials (including petroleum product) are to be designed, constructed and maintained in accordance with AS 1940 - Storage and Handling of Flammable and Combustible Liquids, and other applicable dangerous goods standards apply as relevant.
-
- Use undercover storage for hazardous materials.
-

-
- Operate and maintain appropriate storage structures in accordance with statutory requirements for raw feed water, treated water, brine and waste water with sufficient buffer capacity to prevent uncontrolled discharges of untreated water during wet season events. Develop and implement a CSG water management plan (required to be incorporated into the environmental management plan).
-
- Minimise seepage loss from storage structures (ie design, construct and maintain storage structures in accordance with appropriate engineering specifications) (e.g. see DERM 2010a).
-
- Maximise beneficial reuse of water.
-
- Incident reporting, emergency response and corrective actions systems and procedures.
-

Controlled or Unplanned Discharge of Coal Seam Water

- Should discharge be planned or required, the fundamental principles of the hierarchical management of waste disposal will apply (*i.e.* extending from waste avoidance, reuse, recycle, to disposal as the last resort).
 - The progression from one level of the waste management hierarchy to a lower level will have to be demonstrated as necessary on account of the proven impracticability (with reference to technical, environmental, economic and /or social considerations) of the higher option under the circumstances.
 - Under a discharge regime the desired outcome is a water management regime (water quality and water volume considerations) that maintains the environmental values of the receiving environment.
-
- With respect to controlled discharges, Arrow should undertake the following.
 - Prepare a protocol which details the actions and levels of authority for actions that are prerequisite to a controlled discharge.
 - The technical considerations will include, though not be limited to:
 - water balance modelling (predictive and actual) inclusive of quantity and quality (develop hierarchy of discharge with the highest quality water released in preference to lowest quality);
 - water management hierarchy (assess and demonstrate that controlled release is the only practicable alternative).
 - weather forecasting;
 - use stream flow data in conjunction with proposed discharge rates to estimate in-stream dilution and water quality;
 - assess available assimilative capacity of the receiving waters given existing background levels and other potential point source discharges in the catchment, and
 - discharge waters when natural stream flow are adequate for flushing of waste water.
 - monitoring of receiving environment.
 - review of monitoring data, impact assessment, identification of corrective actions and reporting.
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-
- The administrative considerations will include, though not be limited to:
 - Preparation of decision tree complete with roles and responsibilities (including for example, accountability for authorisation of planned discharge and accountability for water balance modelling). Identify any gaps in management with respect to decision making and accountability for the critical components *i.e.* either production of water and its release, and clearly define accountabilities.
 - Negotiation with the Administering Authority and relevant stakeholders (expected to be the downstream water users, the definition of whom will need to be settled in discussion with the Administering Authority).
 - Establish agreed notification and reporting protocols.
-
- With respect to unplanned discharges, Arrow should undertake the following.
 - Prepare a contingency plan which details planned responses to, as far as is practically predictable, the sequence of events that culminate in unplanned discharge. Include an Emergency Response Plan that addresses an unpredictable sequence of events, for example, catastrophic unforeseen failure. These planning documents should address the scope of work detailed in the Planned Discharges above.
-

Decommissioning and Rehabilitation (FCFs, FGPFs, IPFs, water storage dams, wells, pipelines)

-
- Implement best practice erosion and sediment control measures (inclusive of planning, design, construction, performance monitoring and corrective actions) (*eg* as detailed in the *Best Practice Erosion & Sediment Control 2008* (International Erosion Control Association (Australasia)). These practices include, among other fundamental measures, limiting site disturbance, management of surface water, weed and pathogen management protocols, soil resource management, rehabilitation and scheduling of activities.
-
- Separate clean water (including stormwater) and impacted water from active and rehabilitated or non-disturbed areas.
-
- Design and implement appropriate sediment detention measures for overland flow from disturbed areas.
-
- Limit the volumes of saline raw coal seam water used to suppress dust so that water does not pool at the surface, or enter receiving waterways via surface run-off.
-
- Manage hazardous materials with appropriate bunding and containment. All storage areas for flammable and combustible materials (including petroleum product) are to be designed, constructed and maintained in accordance with AS 1940 - Storage and Handling of Flammable and Combustible Liquids, and other applicable dangerous goods standards apply as relevant.
-
- Use undercover storage for hazardous materials.
-
- Incident reporting, emergency response and corrective actions systems and procedures.
-

5.2 Performance criteria and standards

The performance criterion against which project activities can be assessed for their impact on surface water quality is:

- project activities do not result in degradation in surface water quality, that is, the physical, chemical and biological characteristics of creeks and rivers.

This performance criterion can be assessed by comparison of the results of water quality monitoring (through the program detailed in Section 8) against nominated guideline values (see Appendix A, Table A1T-2) and standards. The following monitoring and reporting schedules are recommended to ensure the performance of project activities against the nominated criterion is adequately assessed.

- Monitor⁴ water quality in storage structures quarterly and assess against end-of-pipe release limits.
- Monitor receiving environment sites at a schedule that is sufficient to identify trends in water quality which is appropriate for the seasonal and ephemeral conditions of the area, and cognisant of the characteristics of the activity to which the monitoring regime applies and report against site-based water quality standards (reference sites). Analytes identified in well and dam water quality sampling should be included so water quality is known prior to planned or unplanned discharge events.
- Develop site-specific monitoring schedules which address planned and unplanned release management measures, inclusive of, for example, notification protocols for relevant entities. These should be included in Arrow's relevant environmental management standard operational procedures (EM SOP).

⁴ Monitoring programs must be reviewed on an annual basis and the program modified as required. This modification may relate to frequency of monitoring, parameters included in analysis, detection limits among other.

6 Residual impact assessment

6.1 Residual Risks

Even through the implementation of the mitigation measures noted above, there remains a residual risk to downstream water quality resulting from catastrophic events or extreme weather events such as storms and floods. For a planned discharge to surface waters, the water management regime that maintains the environmental values of the receiving environment would address risk and therefore would not pose a residual risk.

Catastrophic events may lead to dam failures and the release of coal seam waters directly to waterways; these may occur during times of low flow in the natural environment. Extreme weather events may exceed the design capacity of on-site water storages. These residual risks and can be reduced to as low as reasonably practical by following the assessment method and implementing the construction and operational practices detailed in this section.

6.2 Assessment and Ranking of Risks

The following assessment process will be used for the assessment and ranking of risks associated with project infrastructure as part of the design and planning procedure.

For each project activity that could affect surface water quality the following risk category matrix will be applied (Table 6-1), which is based upon Australian Standards AS 2885.1: Pipelines-Gas and liquid petroleum - Part 1: Design and construction. The Preliminary Hazard and Risk Assessment report included in another section of this EIS addresses the mechanisms of potential dam failure.

Table 6-1. Risk Category Matrix

Likelihood or frequency of occurrence	Consequences				
	1 Trivial	2 Minor	3 Severe	4 Major	5 Catastrophic
Frequent A	Low	Intermediate	High	Extreme	Extreme
Occasional B	Low	Low	Intermediate	High	Extreme
Unlikely C	Negligible	Low	Intermediate	High	High
Remote D	Negligible	Negligible	Low	Intermediate	High
Hypothetical E	Negligible	Negligible	Negligible	Low	Intermediate

Negligible. Review at the next review interval.	Low. Monitor changes and manage risk.	Intermediate. Repeat risk evaluation. If “Intermediate” is confirmed, if possible, reduce risk to negligible or Low. Otherwise re-evaluate risk to ALARP*.	High. Reduce the risk to negligible or low or “Intermediate and ALARP” in not more than a few weeks.	Extreme. Reduce the risk to Negligible or Low or “Intermediate and ALARP” immediately.
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*ALARP – As Low As Reasonably Practical

The following section details the risks to the environmental values nominated for surface water quality and the methods of assessment that will be applied during the design and planning process for project activities.

6.3 Identification of potential environmental risks

The residual risk assessment of catastrophic events and extreme weather events adopts the categorisation of consequence or severity shown in Table 6-2 and likelihood or probability shown in Table 6-3. These should be applied during the assessment of project activities that could result in a residual impact after the application of mitigation measures.

Table 6-2. Potential Environmental Consequence or Severity

Level	Consequence	Environmental risk	Asset damage/ construction time loss	Environmental impact
1	Trivial	Minor localised impact to water quality	No action required or minor on-site rapid rectification or minimal financial loss (< \$10,000)	Minor low level or nil impact
2	Minor	Localised impact on water quality	Minimal rectification or limited financial loss (<\$100,000)	No lasting effects. Low level impact. Limited damage to small area
3	Severe	Impact on water quality and instream ecosystem requiring restoration	Easily rectified or medium financial loss (<\$1,000,000)	Short term (<2yr) damage to localised area <1ha
4	Major	Degradation of water quality and severe impact on ecosystem	Rectification difficult or high financial loss (to \$10,000,000)	Major occurrence but not affecting ecosystem viability. Long term impact
5	Catastrophic	Severe water pollution and impact on downstream ecosystems	Major financial loss requiring extensive long-term rehabilitation and compensation (to \$100,000,000 +)	Viability of ecosystem or species threatened

Table 6-3. Environmental Impact Likelihood or Probability

	Likelihood	Description	Frequency
A	Frequent	Common occurrence	Near 100% chance of occurrence
B	Occasional	Probably will occur in most circumstances	Up to 20% chance
C	Unlikely	Could happen at some time	4% chance
D	Remote	Not likely to occur	1% chance
E	Hypothetical	Theoretically possible	< 0.2% chance

6.4 Residual Risk Assessment

Catastrophic events, such as those that may lead to dam failure and the release of untreated coal seam waters into dry creeks and rivers of the project development area, is considered to be of **low**

risk. While the frequency of occurrence is considered to be **hypothetical**, the consequence is considered **major**.

Extreme weather events, which may lead to the release of untreated coal seam waters to flowing creeks and rivers of the project development area, is considered to be of **low** risk. The frequency of extreme events of sufficient magnitude to cause a release is considered **remote**, with a **severe** consequence.

Chronic impacts from multiple catastrophic events and extreme weather events may result in the accumulation of salts and other contaminants in the receiving environment waters and associated sediments and biota.

Table 6-4 presents the assessment of risk for these scenarios.

Table 6-4. Residual Risk Assessment for Unplanned Events

Event / Activity	Potential Impacts	Unmitigated Risk Assessment			Mitigation Measures	Residual Risk Assessment		
		Consequence	Likelihood	Risk		Consequence	Likelihood	Risk
Catastrophic Events eg dam failure, uncontrolled release	Degradation of environmental values of receiving waters	Major	Unlikely	High	<p>Design and construct appropriate storage structures in accordance with statutory requirements for raw feed water, treated water, brine and waste water with sufficient buffer capacity to prevent uncontrolled discharges of untreated water during wet season events.</p> <p>Third party annual inspection, and production of a written report detailing any corrective actions, of structures by an appropriately qualified engineer.</p> <p>Any identified corrective actions detailed in the Annual Inspection Report, implemented and verified as effective by an appropriately qualified engineer.</p> <p>Implement Emergency Response Plan.</p>	Major	Hypothetical	Low
Extreme Weather	Degradation of environmental values of receiving waters	Severe	Occasional	Intermediate	<p>As for Catastrophic AND</p> <p>Prepare Operational Plans for water storages inclusive of an annual water balance, including a monthly time series for the nominal 'wet season' (November to March).</p> <p>Monitor and report upon storage performance.</p> <p>Implement contingency plan.</p>	Severe	Remote	Low

7 Cumulative Impact Assessment

7.1 Baseline Surface Water Quality Conditions

Water quality in rivers and streams of the project development area were generally of poorer quality than national published ecosystem water quality guideline values nominated for the protection of slightly to moderately disturbed ecosystems (ANZECC 2000). Waters in the project development area showed generally elevated levels of turbidity and suspended solids, nutrients (nitrogen and phosphorus), and total petroleum. However, water quality results were generally comparable to site-specific guideline values derived from surface water data collected from sites within the Surat Gas Project area and maintained by the Department of Environment and Resource Management (*i.e.* water quality was comparable to that recorded prior to the Surat Gas Project baseline surveys).

7.2 Past and Present Impacts

Water quality in the project development area reflects impacts from past and present land uses which include agriculture, industrial activities, transport networks, urbanisation, coal mining and coal seam gas exploration and development. These land uses are most likely to impact on water quality through direct disturbance to the bed and banks of waterways and surface runoff of sediments (turbidity and suspended solids), runoff of agricultural products (nutrients from cattle wastes and fertilisers) and runoff from roads (hydrocarbons and other contaminants).

7.3 Future Impacts

Table 7-1 provides a review of future developments occurring in the vicinity of the project development area. These future developments could result in cumulative impacts on surface water quality values in the region when impacts occur in conjunction with impacts from proposed Surat Gas Project activities. The potential for impacts from future developments to compound impacts from Surat Gas Project developments is dependent on:

- Geographic location of the future development.
- Timing and duration of activities.
- The types of activities performed, or impact pathways.

Only those future developments that share impact zones with the Surat Gas Project (*i.e.* project activities may impact on water quality values and projects occur within the same catchments as the Surat Gas Project) have been considered in the cumulative impact assessment provided in Table 7-1.

Table 7-1. Future Projects – Potential Water Quality Impacts

Proposed project	Location	Timing of Activities	Impact pathway	Potential Impact
Arrow Surat Pipeline	<p>Buried gas pipeline extending from the Kogan area of the Surat Basin to Fisherman’s Landing at Gladstone.</p> <p>The Surat Header Pipeline will connect the Arrow Surat Pipeline to the production facilities that will be located in the southern area of the project development area.</p> <p>Section of pipeline will cross project development area within the Condamine River catchment</p> <p>The Arrow Surat Pipeline has been approved and the Surat Header Pipeline will be assessed under a separate approvals process.</p>	Short term construction activities may result in impacts to surface water quality.	Direct disturbance to local stream beds and banks and local land disturbance resulting in runoff into waterways.	Minor localised increase in turbidity and suspended solids to one or more of the following: Back Creek, Wilkie Creek, Jingi Jingi Creek, Cooranga Creek and the Condamine River (at crossings and downstream reaches).
Australia Pacific LNG Project – CSG fields, gas pipeline	<p>Gas fields in Surat Basin extend from Wallumbilla to Millmerran.</p> <p>Gas pipeline from Darling Downs to Gladstone.</p> <p>Project area occurs adjacent to and generally downstream of the project development area within the catchments of the Condamine River, Weir River, Balonne River and Dawson River.</p>	<p>Ongoing CSG field operations may result in potential significant impacts to water quality for the life of the project.</p> <p>Short term construction activities may result in impacts to surface water quality.</p>	<p>Discharge of treated or untreated coal seam water to waterways</p> <p>Direct disturbance to local stream beds and banks and local land disturbance resulting in runoff into waterways.</p>	<p>Potential significant impact to water quality from planned or unplanned discharge of treated or untreated coal seam water.</p> <p>Minor localised increase in turbidity and suspended solids associated with gas pipeline construction and maintenance.</p>
Bloodwood Creek Queensland – commercial gas production	<p>Power generation plant at Bloodwood Creek 55 km west of Dalby and Chinchilla.</p> <p>On Bloodwood Creek within the Kogan Creek catchment (upstream of the project</p>	Short term construction activities may result in impacts to surface water quality.	Local land disturbance resulting in runoff into waterways.	Minor localised increase in turbidity and suspended solids associated with construction activities.

Proposed project	Location	Timing of Activities	Impact pathway	Potential Impact
	development area)			
Cameby Downs – open cut coal mine expansion	<p>Expansion of open cut coal mine, 16 km north of Miles.</p> <p>The coal mine expansion is proposed adjacent to the project development area and in the Columboola Creek catchments which forms part of the Balonne River catchment.</p>	Ongoing operations which may impact on surface water quality.	Local land disturbance resulting in runoff to waterways and discharge of mining coal seam waters.	<p>Localised increase in turbidity and suspended solids associated with construction activities.</p> <p>Potential impacts to water quality associated with discharge of mine coal seam waters (<i>eg</i> electrical conductivity).</p>
CS Energy – Kogan Creek Solar Boost Project	<p>Installation of solar power generation at Kogan Creek Power Station.</p> <p>Within the project development area in the Condamine River catchment.</p>	Short term construction activities may result in impacts to surface water quality.	Local land disturbance resulting in runoff into waterways.	Minor localised increase in turbidity and suspended solids associated with construction activities.
Elimatta Coal Project – open cut mining	<p>Open cut coal mine approximately 35 km west of Wandoan.</p> <p>West of the project development area. Project does not occur within the same subcatchment within the Dawson River catchment as the Surat Gas Project.</p>	Ongoing operations which may impact on surface water quality.	Local land disturbance resulting in runoff to waterways and discharge of mining coal seam waters.	<p>Localised increase in turbidity and suspended solids associated with construction activities.</p> <p>Potential impacts to water quality associated with discharge of mine coal seam waters (<i>eg</i> electrical conductivity).</p>
Emu Swamp Dam Project – water supply dam	<p>Water supply dam proposed for the Severn River near Stanthorpe, Qld.</p> <p>East of the project development area. Project does not occur within the same subcatchment within the Macintyre River catchment as the Surat Gas Project.</p>	Short term construction activities may result in impacts to surface water quality.	Local land disturbance resulting in runoff to waterways and discharge of mining coal seam waters.	<p>Localised increase in turbidity and suspended solids associated with construction activities.</p> <p>Potential disruption to flows which may increase risk of eutrophication in downstream reaches.</p>

Proposed project	Location	Timing of Activities	Impact pathway	Potential Impact
Felton Clean Coal Demonstration Project – open cut coal mine and syngas production	Open cut coal mine 30 km southwest from Toowoomba. Within the Condamine River catchment upstream of the project development area.	Ongoing operations which may impact on surface water quality.	Local land disturbance resulting in runoff to waterways and discharge of mining coal seam waters.	Localised increase in turbidity and suspended solids associated with construction activities. Potential impacts to water quality associated with discharge of mine coal seam waters (<i>eg</i> electrical conductivity).
Gladstone Liquefied Natural Gas (GLNG) – CSG fields, gas pipeline, LNG facility	Gas fields around Roma, Emerald, Injune and Taroom. Gas pipeline from gas fields to Gladstone. North, North-west and East of the project development area. Project does not occur within the same subcatchments within the Dawson River catchment or the Balonne River catchment as the Surat Gas Project.	Ongoing CSG field operations may result in potential significant impacts to water quality for the life of the project. Short term construction activities may result in impacts to surface water quality.	Discharge of treated or untreated coal seam water to waterways Direct disturbance to local stream beds and banks and local land disturbance resulting in runoff into waterways.	Potential significant impact to water quality from planned or unplanned discharge of treated or untreated coal seam water. Minor localised increase in turbidity and suspended solids associated with gas pipeline construction and maintenance.
Nathan Dam and Nathan Pipeline – dam and water pipeline	Dam proposed for the Dawson River, downstream of Taroom. Dam installation to the north of the project development area, downstream within the Dawson River catchment. Water supply pipeline likely to fall within part of the project development area within the Dawson River, Balonne River and Condamine River catchments.	Short term construction activities may result in impacts to surface water quality.	Direct disturbance to local stream beds and banks and local land disturbance resulting in runoff into waterways.	Localised increase in turbidity and suspended solids associated with construction activities. Potential disruption to flows which may increase risk of eutrophication in downstream reaches.

Proposed project	Location	Timing of Activities	Impact pathway	Potential Impact
New Acland Coal Mine – expansion of open cut coal mine	Open cut coal mine approximately 14 km North-west of Oakey and 35 km Northwest of Toowoomba. Upstream of the project development area within the Oakey Creek subcatchment of the Condamine River.	Ongoing operations which may impact on surface water quality.	Local land disturbance resulting in runoff to waterways and discharge of mining coal seam waters.	Localised increase in turbidity and suspended solids associated with construction activities. Potential impacts to water quality associated with discharge of mine coal seam waters (<i>eg</i> electrical conductivity).
Queensland Curtis LNG Project (QCLNG) – CSG fields, gas pipeline, LNG facility	Coal seam gas fields in the Surat Basin with gas pipeline extending from the Surat Basin to Gladstone. Gas fields adjacent to and to the west of the project development area with gas fields upstream of the project development area in part of the Condamine River catchment and downstream of the development area in the Balonne River and lower Condamine River catchments.	Ongoing CSG field operations may result in potential significant impacts to water quality for the life of the project. Short term construction activities may result in impacts to surface water quality.	Discharge of treated or untreated coal seam water to waterways Direct disturbance to local stream beds and banks and local land disturbance resulting in runoff into waterways.	Potential significant impact to water quality from planned or unplanned discharge of treated or untreated coal seam water. Minor localised increase in turbidity and suspended solids associated with gas pipeline construction and maintenance.
Queensland Hunter Gas Pipeline Project – gas pipeline	Gas pipeline from Wallumbilla Gas Hub to Newcastle. West of the project development area within the Balonne River, Condamine River, Moonie River and Macintyre River catchments.	Short term construction activities may result in impacts to surface water quality.	Direct disturbance to local stream beds and banks and local land disturbance resulting in runoff into waterways.	Localised increase in turbidity and suspended solids associated with construction activities.

Proposed project	Location	Timing of Activities	Impact pathway	Potential Impact
Spring Gully Power Station – CSG fields, power stations	<p>Power station and CSG wells approximately 80 km North-east of Roma.</p> <p>Project is west of the Northern end of the project development area and does not occur within the same subcatchments within the Dawson River catchment.</p>	<p>Ongoing CSG field operations may result in potential significant impacts to water quality for the life of the project.</p> <p>Short term construction activities may result in impacts to surface water quality.</p>	<p>Discharge of treated or untreated coal seam water to waterways</p> <p>Direct disturbance to local stream beds and banks and local land disturbance resulting in runoff into waterways.</p>	<p>Potential significant impact to water quality from planned or unplanned discharge of treated or untreated coal seam water.</p> <p>Minor localised increase in turbidity and suspended solids associated with gas pipeline construction and maintenance.</p>
Surat Basin Rail – rail infrastructure	<p>Rail infrastructure connecting Western Railway system near Wandoan to the Moura Railway system near Banana.</p> <p>Rail line may cross northern reach of project development area within the Dawson River catchment.</p>	<p>Short term construction activities may result in impacts to surface water quality.</p>	<p>Direct disturbance to local stream beds and banks and local land disturbance resulting in runoff into waterways.</p>	<p>Localised increase in turbidity and suspended solids associated with construction activities.</p>
Wandoan Coal Project – open cut coal mine	<p>Open cut coal mine 60 km south of Taroom.</p> <p>Project is west of the northern end of the project development area and does not occur within the same subcatchment within the Dawson River catchment.</p>	<p>Ongoing operations which may impact on surface water quality.</p>	<p>Local land disturbance resulting in runoff to waterways and discharge of mining coal seam waters.</p>	<p>Localised increase in turbidity and suspended solids associated with construction activities.</p> <p>Potential impacts to water quality associated with discharge of mine coal seam waters (<i>eg</i> electrical conductivity).</p>

7.4 Cumulative Impact Assessment

Based on the information presented in Table 7-2 and the assumption that all future project activities will be managed with sufficient mitigation measures, cumulative impacts are considered most likely in association with the following projects:

- Australia Pacific LNG Project coal seam gas fields.
- Gladstone Liquefied Natural Gas coal seam gas fields.
- Queensland Curtis LNG Project coal seam gas fields.
- Spring Gully Power Station coal seam gas wells.

The impact rankings applied (*eg* high, medium, low) in Table 7-2 below are based on the matrix used in the residual risk assessment presented in Section 6.4.

Limitations regarding surface water cumulative impacts relate to the difficulty in identifying and quantifying sources of existing impacts. This is due to the connectivity between potential impact sources and downstream waterways as well as variations in the factors affecting the relative contribution (volume of stream flow, volume of material and water transported via runoff into waterways, undocumented or unknown discharge events, traffic use, spills of hazardous substances *etc*).

It has been assumed that each of the future projects reviewed will have sufficient management and mitigation measures in place to prevent significant impacts on surface water quality. However, there are several processes that could result in residual impacts despite the application of base case mitigation measures such as:

- Failures of water storage infrastructures.
- Leaks and spills.
- Climatic events.

Table 7-2. Cumulative Risk Assessment for Unplanned Events

Event / Activity	Potential Cumulative Impacts	Cumulative Risk Assessment		
		Consequence	Likelihood	Risk
<p>Catastrophic Events (eg dam failure, leaks and spills from gas and water pipelines, uncontrolled release of treated or untreated coal seam water)</p>	<p>Degradation of environmental values of receiving waters (Dawson, Condamine, Balonne and Weir Rivers).</p> <p>Catastrophic failure at multiple project sites is extremely unlikely.</p> <p>Catastrophic failure resulting in the release of coal seam waters may increase the concentrations of salts, sediments and other contaminants. The specific contaminants released may include salts, solids, sulphate, chloride, fluoride, ammonia, copper, lead and vanadium (these parameters have been identified in Surat Gas Project untreated coal seam waters and would be expected in untreated coal seam waters from other Coal Seam Gas projects).</p> <p>The volume of contaminants which will accumulate in the receiving environment following a catastrophic event will depend on the volume of water lost and the concentration of contaminants in the water.</p>	Major	Hypothetical	Low
<p>Extreme Weather (eg storms, floods)</p>	<p>Degradation of environmental values of receiving waters (Dawson, Condamine, Balonne and Weir Rivers).</p> <p>Extreme events are likely to affect all projects within the region in a similar manner. Storms and floods will increase the risk of runoff of dirty waters and discharge from onsite water storage dams, although dilution of contaminants would also be expected. Under extreme weather scenarios, sediment loads (due to overland transport of disturbed soils) and salt loads (from coal seam waters) are expected to increase in receiving rivers.</p> <p>With each additional project operating within a catchment the cumulative impact is expected to increase.</p>	Severe	Remote	Low

8 Inspection and Monitoring

A surface water monitoring program is recommended to assist in the environmental management of the Surat Gas Project. The proposed monitoring program includes the following.

- Monitoring sites upstream and downstream of each proposed facility / infrastructure location where these are appropriate to identify impacts.
- Undertaking routine monitoring at a schedule that is sufficient to identify trends in water quality which is appropriate for the seasonal and ephemeral conditions of the area, and cognisant of the characteristics of the activity to which the monitoring regime applies, as well as monitoring after discharge events at a frequency sufficient to detect potential impacts as agreed by the Administering Authority.
- Analysing for parameters listed in Appendix A, Table A1T-2. Note that Appendix A, Table 2 includes parameters that should be analysed and parameters that are optional (*i.e.* the benefit of analysing the optional parameters to assist with environmental management has not been determined and should be based on site-specific conditions, or land use. These optional parameters are underlined in Appendix A, Table A1T-2).
- Sampling should be conducted in accordance with methods prescribed in the most recent edition of the Environmental Protection Agency *Water Quality Sampling Manual*; and carried out on samples that are representative of the discharge.
- Water quality data should be assessed against the contaminant interim trigger value in Appendix A, Table A1T-2. To identify the relevant contaminant interim trigger value, select the lowest guideline value (aquatic ecosystems or drinking water) and compare this value to the site specific guideline value calculated for the relevant catchment. The contaminant interim trigger value is the highest value of the two.
- If the quality of receiving waters are found to exceed any of the contaminant interim trigger values from Appendix A, Table A1T-2, an investigation should be conducted. Due to the method of trigger limit calculation (*ie* 80th percentile), it is expected that 20% of surface water results would exceed the trigger limit. For example, investigation may be triggered following three consecutive exceedances.
- Monitoring programs must be reviewed on an annual basis and modified as required. Modifications may relate to frequency of monitoring, parameters included in analysis, detection limits *etc.*

9 References

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Appendix A
Surat Gas Project – Surface Water Quality Assessment

A1 Introduction

NRA Environmental Consultants (NRA) was commissioned by Alluvium Consulting to undertake an assessment of surface water quality for the Arrow Energy (Arrow) Surat Gas Project.

The water quality assessment documented below provides supporting information for the water quality section of the Environmental Impact Statement (EIS) for the Surat Gas Project.

The water quality assessment included the following tasks.

- Catchment review to identify subcatchments relevant to the project development area.
- Review of applicable Environmental Authorities⁵ (EAs).
- Review of existing water quality data collected from current Arrow operations in the Dalby area, specifically data collected from coal seam water produced from wells and stored in water treatment dams.
- Identify relevant analytes and appropriate analyte detection limits.
- Review of existing water quality data for rivers and creeks in the project development area and associated subcatchments (maintained and supplied by the State of Queensland (Department of Environment and Resource Management) [2009]).
- Water quality field survey.
- Comparison of existing water quality against published guideline values to assist with the nomination of environmental values and water quality guidelines for the EIS.

⁵ Note that this document was prepared based on Arrow's existing EAs at the time and that the EAs have been superseded by the Dalby Expansion Project. The conditions in the consolidated EA are not expected to differ significantly from those in the existing EAs.

A2 Selection of Environmental Values, Water Quality Guidelines and Objectives for the Surat Gas Project

A2.1 Catchment Analysis

The Surat Gas Project development area lies within the sub-catchments listed below as illustrated on Figure A2-1, page 54.

Condamine – Balonne Region

Condamine River.

- Branch Creek.
- Charleys Creek.
- Back Creek.
- Un-named creek, north of Jingi Jingi Creek.
- Jingi Jingi Creek.
- Jimbour Creek.
- Myall Creek.
- Oakey Creek.
- Ashall Creek.
- Kogan Creek.
- Braemar Creek.
- Moramby Creek.
- Rocky Creek.
- Un-named creek, north of Willis Creek.
- Willis Creek.
- Clayhole Creek.
- Wambo Creek.
- Crawlers Creek.
- Kurrawa Creek.
- Wilkie Creek.
- Cooranga Creek.
- Honeysuckle Creek.
- Leonard Gully (Back Creek).

Balonne River

- Bottle Tree Creek.
- Rocky Creek.
- Unnamed Creek south of Bottle Tree Creek.
- Dogwood Creek.
- Columboola Creek.
- Eleven Mile Creek.
- Hellhole Creek.
- L Tree Creek.
- Punch-bowl Creek.
- Unnamed Creek East of Dogwood Creek.

Moonie Region

Moonie River

- Durabilla Creek.
- Dunmore Creek.

- Border Rivers Region

Macintyre Brook

- Boola Creek.
- Nicol Creek.
- Unnamed Creek East of Nicol Creek.
- Canning Creek.
- Mosquito Creek.
- Cattle Creek.
- Pariagara Creek.

Weir River.

- Western Creek.
- Paddy Creek.
- Bora Creek.
- Scrubby Creek.
- Buli Creek.
- Yarril Creek.
- Wyaga Creek.
- Commoron Creek.
- Muri Muri Creek.
- Wondalli Creek.

Fitzroy Central sub-catchment.

Dawson River.

- Roche Creek.
- Weringa Creek.
- Juandah Creek.
- Downfall Creek.

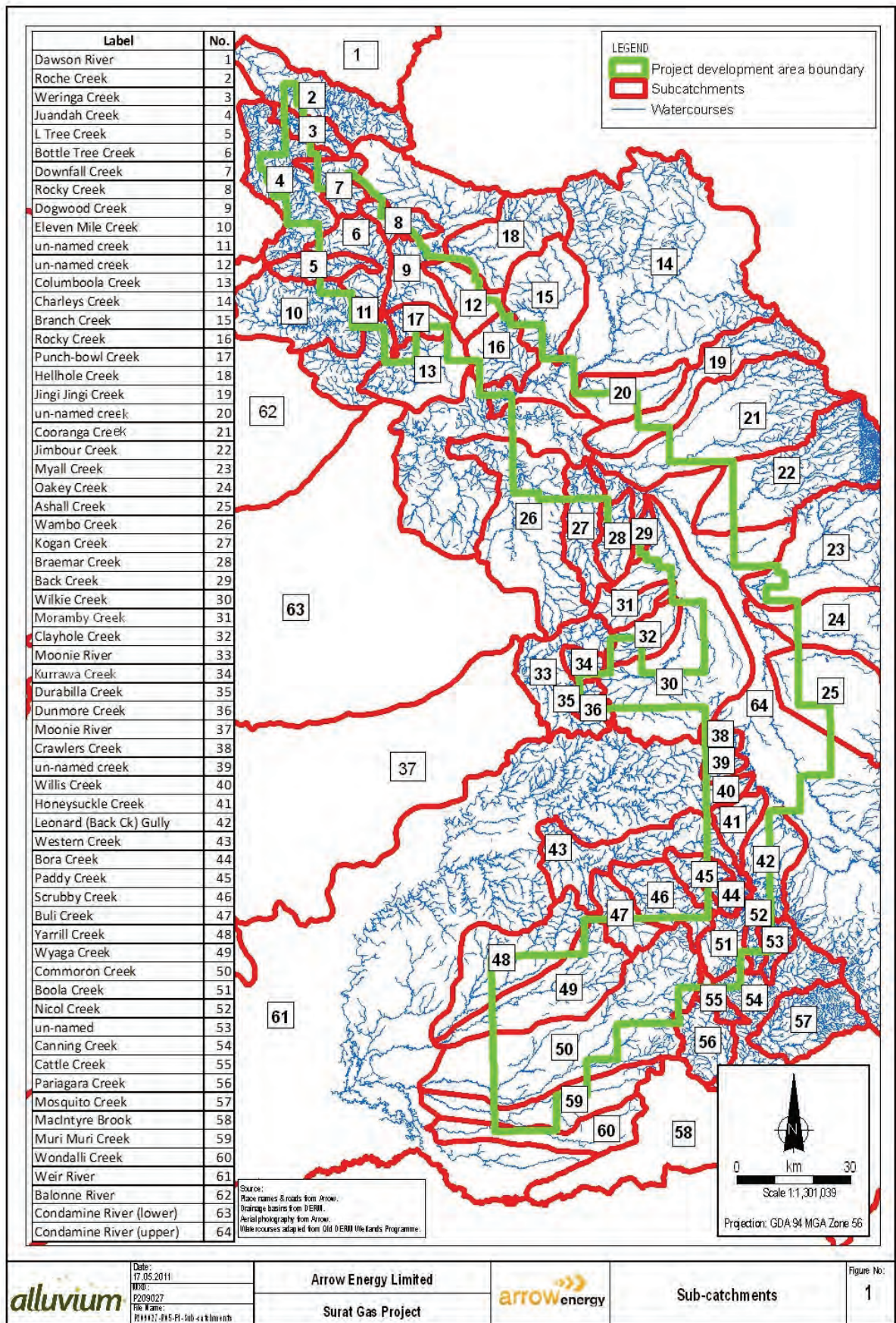


Figure A2-1. Project development area subcatchments

A2.2 Environmental Values

Water quality data maintained by the Department of Environment and Resource Management (DERM) is available for streams in the Dawson River, Balonne River, Condamine River and Macintyre Brook catchments in the vicinity of the project development area, and is provided in Appendix A – Attachment A. The data was reviewed in combination with field survey water quality results to determine the suitability of waters for the following environmental values (DERM 2009).

- High ecological value waters—the biological integrity of an aquatic ecosystem that is effectively unmodified or highly valued.
- Slightly disturbed waters—the biological integrity of an aquatic ecosystem that has effectively unmodified biological indicators, but slightly modified physical, chemical or other indicators.
- Moderately disturbed waters—the biological integrity of an aquatic ecosystem that is adversely affected by human activity to a relatively small but measurable degree.
- Highly disturbed waters—the biological integrity of an aquatic ecosystem that is measurably degraded and of lower ecological value than waters mentioned above.
- Primary industry or agricultural purposes, *e.g.*
 - agricultural use.
 - aquaculture use.
 - producing aquatic foods for human consumption.
- Recreation or aesthetic purposes, *.eg.*
 - primary recreational use (*i.e.* full body contact, *eg* swimming, skiing).
 - secondary recreational use (*i.e.* contact other than full body contact, *eg* boating, fishing).
- Drinking water.
- Industrial purposes.
- Cultural and spiritual values.

The environmental values considered most appropriate for waters in the project development area are slightly to moderately disturbed waters⁶, water that may be used for drinking water and water that may be used for primary industry or agricultural purposes. These environmental values were nominated based on the details provided below.

- During the field survey, creeks and rivers were observed to be affected by human activity due to land uses upstream of sites, although sites did not appear sufficiently degraded to be considered highly disturbed waters.
- In the absence of community consultation, it cannot be assumed that waters are not used for drinking (standards for drinking water are more conservative than for recreational contact), and it is likely that cultural and spiritual values exist although there are no applicable water quality guidelines for these.
- Primary industry and agricultural land use is dominant in the region.

⁶ Note that although some waters may show high levels of disturbance from agricultural or urban runoff and channel modification, the level of protection nominated for the project development area is consistent with most waters and also considers the quality likely to be desired by stakeholders (ANZECC 2000).

A2.3 Water Quality Guidelines

Analyte Selection

Analytes included in the Surat Gas Project water quality field survey were selected based on an assessment of current EAs and water quality results for associated wells and dams. The analyte list was reviewed, and recommendations for the inclusion of specific analytes as water quality guidelines in any future surface water quality monitoring programs are presented in Table A1T-1.

Guideline Values

To select water quality guidelines sufficient to protect the nominated environmental values, the 80th (and 20th) percentile of water quality data collected during the field survey, in combination with water quality data provided by DERM⁷, was calculated for the major catchments (Dawson River, Condamine River, Balonne River and Macintyre Brook) within the project development area. The 80th (and 20th) percentile was calculated as per the Australian and New Zealand Guidelines for Fresh and Marine Water Quality (ANZECC 2000). The Queensland Water Quality Guidelines (DERM 2009) (QWQG) noted that eastern tributaries of the Condamine River (including Oakey Creek and Jimbour Creek) were in the 'most generally saline zone in Queensland'. As proposed by the QWQG the 75th percentile value was calculated for electrical conductivity. The 75th and 80th percentiles were calculated using site specific data collected during baseline surveys in October 2009 and November 2009 combined with data provided by the State of Queensland (DERM) [2009] for the major catchments of the project development area, as well as the Jimbour Creek and Oakey Creek subcatchments. The 75th and 80th percentiles are provided in Table A1T-2 along with published guideline values for slightly-moderately disturbed ecosystems and drinking water (only those analytes recommended for inclusion in future surface water quality monitoring programs are included in Table A1T-2).

Water Quality Guidelines were nominated based on the following steps.

1. The 80th (or 75th) percentile value was nominated where this value was calculated from more than 18 data points ($n \geq 18$), was below the health-based drinking water guideline value, and was greater than (or less than for 20th percentile values) the published ecosystem guideline value.
2. Where no site-specific guideline was calculated, the most conservative (lowest) of the published ecosystem (slightly-moderately disturbed) or drinking water guideline was nominated.

The nominated water quality guidelines (and objectives) are not intended to provide compliance limits. Instead they provide trigger levels, allowing users of the document to assess water quality and identify corrective actions where elevated results 'trigger' further investigation. Water quality guidelines/objectives with nominated trigger levels are included in Table A1T-2 below.

Field Component Methodology

Sampling

To document water quality to support the EIS for the Surat Gas Project, water samples were collected from creeks and rivers within the vicinity of the project development area. An initial round of sampling was undertaken between 14 and 16 October 2009 (referred to as the "Dalby Expansion Project", see below) and 17 and 19 November 2009 by NRA environmental scientists Anne-Marie Calvi and Martine Adriaansen. Sampling undertaken in October 2009 was conducted to supplement an application made by Arrow to expand their existing infrastructure in the Dalby area. The results of this sampling event have been included in the Surat Gas Project report to provide additional water quality information.

⁷ Note: DERM water quality was assessed prior to inclusion in percentile calculations. Data which was reported as being of Good (actual) quality (code 1), Good (Code 10), Historic Water Quality Data, Quality Fair (code 125) and not coded value (code 130) were included in the calculation dataset. Zero values were removed from the dataset before percentile calculations. Only one data point for each analyte was included for a single day with *in situ* results used in preference to laboratory results where available.

Site Locations

Sample sites are listed in Table A1T-3 and shown on Figure A2-2, page 58.

Sites were selected to reflect different creek and river system conditions within the project development area, together with different land uses in the project development area (agriculture use, residential, forest parks, mining).

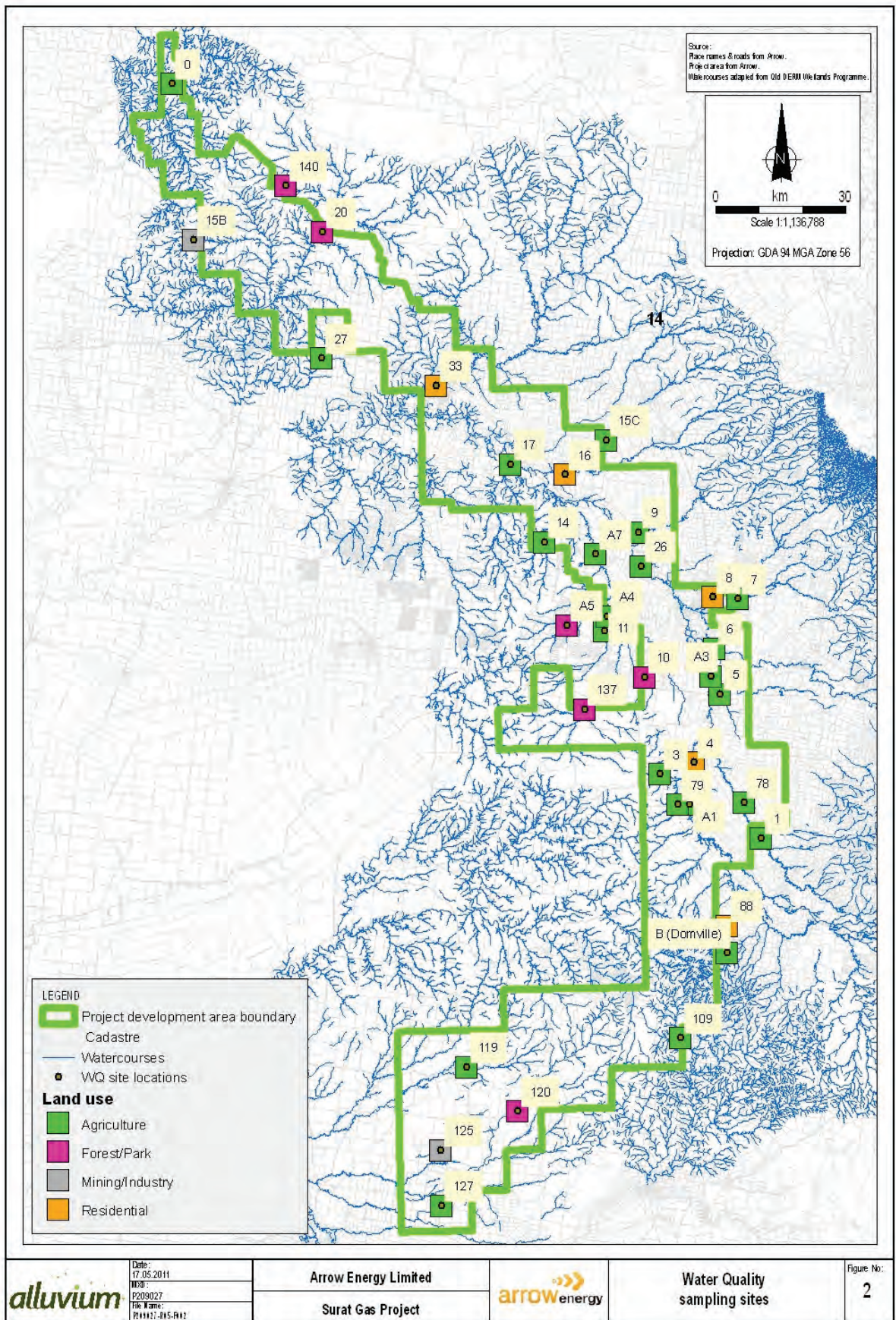


Figure A2-2. Sample site locations and landuse

Analytes

The analytes reported for the field survey were nominated with reference to the following.

- Analytes listed in the criteria for hazardous dams in existing EAs⁸ for wells in the project development area.
- Analytes recorded above relevant published guideline values in water quality samples collected from wells and dams in the project development area (data provided by Arrow Energy).
- Analytes identified as relevant to the activities associated with the Surat Gas Project.
- Limits of reporting (LOR) (*i.e.* laboratory detection limits) were selected to allow comparison to the most conservative values in the slightly-moderately disturbed ecosystem and drinking water published guidelines.

Water Data

The methods used to collect, analyse and validate the water quality data were guided by:

- AS5667.1:1998 Water Quality-Sampling Part 1: Guidance on the design of sampling programs, sampling techniques and the preservation and handling of samples.
- AS5667.6:1998 Water Quality-Sampling Part 6: Guidance on sampling of rivers and streams.
- Monitoring and Sampling Manual (DERM 2010).
- advice from the laboratory undertaking analysis of the samples.

Water samples were collected where pools were of sufficient size to be sampled without disturbance of bottom sediments. Samples were collected directly from the waterbody in sample bottles provided by ALS Laboratory Group (ALS) (NATA accreditation number 825). Field filtered water samples were collected (using StericupTM disposable 0.45 µm filter units or disposable syringes, 0.8 µm prefilters and 0.45 µm filters) for dissolved metals analysis. Samples were stored chilled and transported to the laboratory within nominated holding times where practicable. Temperature, pH, electrical conductivity, turbidity and dissolved oxygen were determined *in situ* using water quality meters calibrated according to manufacturer's specifications.

The water samples were delivered to ALS Brisbane. Sample analysis included the following.

- Physico-chemical: total suspended solids, hardness, fluoride, sulfate, chloride, major cations (calcium, magnesium, sodium).
- Metals and metalloids: arsenic, boron, cadmium, cobalt, copper, lead, mercury, nickel, selenium, vanadium, zinc.
- Nutrients: nitrate, nitrite, total nitrogen, total phosphorus, ammonia.
- Tri-ethylene glycol (TEG).
- Monocyclic Aromatic Hydrocarbons (including BTEX).
- Polycyclic aromatic hydrocarbons.
- Phenol.
- Total petroleum hydrocarbons.
- Organochlorine pesticides.
- Organophosphorus pesticides.

The total and soluble concentration of metals and metalloids was analysed (*ie* concentrations were determined using unfiltered and filtered (0.45 µm samples)).

Laboratory documentation relating to the water samples (*eg* chain of custody, sample receipt notification, certificate of analysis, quality control report) is provided in Attachment A – Appendix B.

⁸ Note that this document was prepared based on Arrow's existing EAs at the time and that while the EAs have been superseded by the Dalby Expansion Project the selection of stock water quality guidelines as criteria for hazardous dams is still considered appropriate.

Quality Assurance

Analytical QA for October 2009 Survey

The ALS data quality control sheets for the October 2009 survey (ALS reports EB0916401 and EB0916488, see Attachment B) showed that laboratory data quality was generally good, with no method blank, duplicate, or matrix spike outliers occurring during analysis of the samples.

There were some issues with laboratory control spike, regular sample surrogate, holding time, and frequency of laboratory control sample outliers. Most of these were minor and consisted of breaches of holding times for analysis (the longest was 3 days for turbidity and nitrite on report EB0916488 due to sample transit times, delivery on the weekend and a follow-up request for turbidity analysis on samples with very high turbidity), laboratory control spike recoveries that were outside the control limits (most no greater than $\pm 2\%$ of the control limit), or recoveries of regular sample surrogates that were outside the data quality objectives (largest was $\pm 3\%$). The frequency of laboratory control samples was less than the specified rate for total nitrogen and total phosphorus on reports EB0916401 and EB0916488.

Despite most of the laboratory quality control outliers being minor, two were potentially more problematic. The laboratory control spike recoveries for chloride and p-isopropyltoluene in report EB0916401 were outside the dynamic control limits by 8.7% and 16%, respectively. Although these outliers exceeded the dynamic control limits, both were within the static control limits and the data were considered valid (*pers. comm.* Bryn Stephens, Client Services Officer, ALS, 9 November 2009).

None of the quality control issues identified by ALS are expected to compromise the conclusions drawn from the reported data.

The reproducibility of the water quality data was assessed using the method provided in Attachment C. Replicate samples were collected as per AS5667.1. The reproducibility for the analysis of all components was within prescribed thresholds and is therefore considered acceptable.

Blank samples were used to determine if sample handling, equipment, transportation and/or laboratory analysis introduced gross contamination to the water samples. A field blank was prepared as per AS5667.1 using deionised water supplied by ALS. The analytical results of QA samples are included in Appendix C.

Ammonia and total oxidised nitrogen were reported at low, but detectable concentrations in the blank (0.03 mg/L and 0.01 mg/L, respectively). Nitrate was also reported in the blank (it is calculated from the total oxidised nitrogen concentration (*ie* nitrate = total oxidised nitrogen - nitrite)). The concentrations of ammonia and total oxidised nitrogen (and nitrate) in the blank are not considered significant (detected at concentrations equal to, or marginally above, the laboratory's limit of reporting), and the results are not expected to compromise interpretations of the data set.

Analytical QA for November 2009 Survey

The ALS data quality control sheets for the November 2009 survey (ALS reports EB0918276, EB0918288 and EB0918367, see Attachment B) showed that laboratory data quality was generally good, with no method blank, matrix spike, or surrogate recovery outliers occurring during analysis of the samples.

There were issues with holding time, laboratory control spike recovery, duplicate, and frequency of laboratory control sample outliers and with the LORs reported for some analytes. Most of the QA issues were minor.

Laboratory control spike recoveries outside of control limits were reported for: chloride, naphthalene, acenaphthylene, fluorene, benzo(a)anthracene, and benzo(b)fluoranthene in report

EB0918276; chloride in report EB0918288; and p-Isopropyltoluene in report EB0918367. The largest laboratory control spike recovery outside the control limit was $\pm 3.2\%$ of the dynamic control limit. Although the recoveries from the laboratory control spike samples were outside the dynamic limits, they were within the static limits and were therefore deemed acceptable by ALS (*pers. comm.* Bryn Stephens, Customer Service Officer, ALS, 22 December 2009).

The frequency of laboratory control samples was less than ALS's specified rate for total petroleum hydrocarbons (in reports EB0918276 and EB0918288), total phosphorus (in reports EB0918276 and EB0918367), and total nitrogen (in report EB0918367). In all of these cases, the lowest rate of laboratory control samples was 5 %, compared to ALS's specified rate of 10 %.

The relative percent difference (RPD) of a laboratory duplicate was reported as 'not determined' for chloride on report EB0918367. ALS identified this as an internal quality control issue that could be disregarded as other duplicates analysed by the instrument (discrete analyser) with the monitoring samples returned acceptable reproducibility (*pers. comm.* Bryn Stephens, Customer Service Officer, ALS, 22 December 2009).

Although an LOR of 1 mg/L was originally quoted for tri-ethylene glycol (TEG), the achievable LOR of 5 mg/L was "the best documented and validated method at the time of quoting" (*pers. comm.* Michael Heery, Business Manager for the Queensland Environmental Division of the ALS Laboratory Group, 22 February 2010 (included in Attachment B)). The LOR reported by the laboratory for TEG (5 mg/L) was greater than the published guideline value nominated for TEG (for aquatic ecosystem protection, 0.33 mg/L). Note that all samples reported TEG at concentrations less than the elevated LOR, indicating no gross contamination at the time of sampling.

With the exception of TEG that was reported at a LOR greater than the published guideline value, these quality issues are not expected to compromise conclusions drawn from the data.

The reproducibility of the water quality data was assessed using the method in Attachment C. Replicate samples were collected as per AS5667.1. The reproducibility for the analysis of all components was within prescribed thresholds and is therefore considered acceptable. Turbidity was not analysed in the replicate sample set.

Blank samples were used to determine if sample handling, equipment, transportation and/or laboratory analysis introduced gross contamination to the water samples. A field blank was prepared as per AS5667.1 using deionised water supplied by ALS. The analytical results of QA samples are included in Attachment B.

Ammonia, total oxidised nitrogen and dissolved zinc were reported at low, but detectable concentrations in the blank (0.047 mg/L, 0.02 mg/L and 0.002 mg/L, respectively). Nitrate was also reported in the blank at a concentration of 0.02 mg/L (it is calculated from the total oxidised nitrogen concentration (*ie* nitrate = total oxidised nitrogen - nitrite)). The dissolved zinc concentration was confirmed by re-analysis of the sample. However, the concentration of total zinc in the sample was less than the LOR (< 0.001 mg/L). This suggests the low concentration of dissolved zinc was possibly introduced during filtering, or was the product of analytical error, which increases as the LOR is approached. The concentrations of ammonia, total oxidised nitrogen (and nitrate) and dissolved zinc are not considered significant (as they were detected at concentrations marginally above the laboratory's LOR). Hence, it is not considered that these results compromise interpretation of the dataset.

Analytical QA for March 2010 Survey

The ALS data quality control sheets for the March 2010 survey (included in SGS reports CE66955R, CE66983R and CE67025R, see Attachment B) showed that laboratory data quality was acceptable.

All samples were delivered to the laboratory and analysed within recommended holding times.

Tri-ethylene glycol (TEG) was analysed at the NATA accredited LOR of 5 mg/L as well as the lower LOR level of 0.01 mg/L by a method not covered by the laboratory's NATA accreditation. This lower LOR was requested to allow comparison of TEG levels against the published guideline value nominated for TEG (for aquatic ecosystem protection, 0.33 mg/L).

The reproducibility of the water quality data was assessed using the method in Attachment C. Replicate samples were collected as per AS5667.1. The reproducibility for the analysis of all components was within prescribed thresholds and is therefore considered acceptable.

Blank samples were used to determine if sample handling, equipment, transportation and/or laboratory analysis introduced gross contamination to the water samples. A field blank was prepared as per AS5667.1 using deionised water supplied by SGS. The analytical results of QA samples are included in Attachment B.

Ammonia, total oxidised nitrogen and total phenolics concentrations were reported at low, but detectable concentrations in the blank (0.045 mg/L, 0.021 mg/L and 0.006 mg/L, respectively). Nitrate was also reported in the blank at a concentration of 0.021 mg/L (it is calculated from the total oxidised nitrogen concentration (*ie* nitrate = total oxidised nitrogen - nitrite)). The concentrations of ammonia and total oxidised nitrogen (and nitrate) are not considered significant (as they were detected at concentrations marginally above the laboratory's LOR).

The total phenolics present in the blank sample at concentrations marginally above the laboratory's LOR were attributed to the use of phenol resins in the blank water provided by the laboratory. The presence of phenol in the blank sample is therefore not due to contamination by the field sampling methodology.

The results presented above are not considered likely to significantly compromise interpretation of the dataset.

Results

Most sites in the subcatchment of the Condamine River were dry at the time of the October field survey. The first rains recorded in the month prior to the October field survey occurred between 11 October and 13 October, with 5.6 mm recorded in Dalby. Further rainfall occurred within the project development area before the November field survey and more sites contained water and could be sampled. All sites held water at the time of the March 2010 field survey following wet season rains. Samples were collected from those sites with sufficient water. Field data sheets and photographs from the Dalby Expansion Project (October 2009) and Surat Gas Project (November 2009 and March 2010) water quality monitoring surveys are presented in Attachment D and water quality results are presented in Attachment E.

Water quality in rivers and streams of the project development area was generally not consistent with national published ecosystem guideline values for the protection of slightly-moderately disturbed ecosystems (ANZECC 2000). Water quality results were generally comparable to site-specific guideline values derived from reference data obtained from DERM (*ie* water quality was comparable to that recorded prior to the Surat Gas Project baseline surveys).

Electrical conductivity (EC) varied widely across the project development area, as seen in the difference in EC percentiles calculated for the different river systems (Appendix A: Table A1T-2). Waters in the Southern Divide Zone (westward flowing Condamine River subcatchments between Warwick and Dalby) are described as the most generally saline zone in Queensland and have a nominated guideline value (75th percentile) of 1120 µS/cm, in comparison to the guideline value of 500 µS/cm provided for other sections of the Condamine River catchment (DERM 2009).

Turbidity varied across the project development area and above the ANZECC 2000 ecosystem protection guideline value (25 NTU) (Table A1T-2). Turbidity during the baseline surveys was higher at some sites (eg Balonne River sites) than previously recorded in the respective catchment (data supplied by DERM). This may have been due to mobilisation of sediments from rainfall occurring prior to the baseline surveys.

Dissolved oxygen (DO) was generally low (less than the ANZECC 2000 lower ecosystem protection guideline value of 90 % saturation) in surface waters of the project development area (refer to Appendix A) and this is likely to reflect the non-permanent nature of many streams in the area. The QWQG (2009) states that low DO can occur naturally in pools with no flow.

The results for other water quality parameters that were monitored in the project development area were generally not consistent with the ecosystem protection trigger values nominated in ANZECC 2000. Details are provided below.

- Nutrients recorded in the rivers relevant to the project development area were generally above ANZECC 2000 guideline values nominated to protect surface waters from eutrophication (eg total oxidised nitrogen, ammonia, total nitrogen, total phosphorus).
- Several heavy metals, including cobalt, copper, vanadium and zinc, were recorded above ANZECC 2000 ecosystem protection values in a number of creeks and rivers across the project development area.

Conclusion

Desktop investigations identified several catchments flowing from the east into the Condamine River as being in the most generally saline zone in Queensland (DERM 2009). This was confirmed during the baseline field investigation with most of the highest electrical conductivity results recorded in Myall Creek and Oakey Creek (within the high salinity zone).

Water quality results collected during the three baseline surveys in the project development area were variable and generally not consistent with guideline values developed for the protection of slightly- moderately disturbed ecosystems (ANZECC 2000). Baseline water quality results were generally comparable to reference data provided by DERM for relevant catchments in the vicinity of the project development area.

References

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EPA 2007. Operational Policy: Petroleum. Management of water produced in association with petroleum activities (associated water). Environmental Protection Agency, 13 December 2007.

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Tables

Table A1T-1. Surat Gas Project – Analyte Review

Parameter	Unit	Aquatic Ecosystems	Drinking Water ²	Analyte Source (Reason for Inclusion)	Data Range Arrow water quality laboratory results (wells and dams)	Comments	Recommended for inclusion in future monitoring program
		(Dissolved Metals)	(Total Metals)				
		(Protection of slightly to moderately disturbed aquatic ecosystems) ¹	Health-based (and aesthetic [^]) guideline values				
Electrical conductivity	µS/cm	340 ^A , 325 ^B , 500 ^C , or 1120 ^D	746 ^{^+}	Standard; existing EA ³ ; relevant to project development area.	1160 - 30900	Relevant to project and local area.	Yes
pH	pH unit	6.5 – 7.5	6.5 – 8.5 [^]	Standard; existing EA ³	7.14 - 9.26	Standard	Yes
Turbidity	NTU	2 - 25	5 [^]	Standard	1.5 - 1100	Standard	Yes
Dissolved Oxygen	% Saturation	90 - 110	>85% [^]	Standard		Standard	Yes
Temperature	°C	NV	NV	Standard		Standard	Yes
Total Suspended Solids (TSS)	mg/L	NV	NV	Standard	5 - 2200	Standard	Yes
Sodium Absorption Ratio (SAR)		NV	NV	Project Specific	47.2 - 48.4	Relevant to project	Yes
Sulfate	mg/L	NV	500 (250 [^])	Standard	<1 - 158	Standard	Yes
Chloride	mg/L	NV	250 [^]	Existing EA ³	260 - 3740	Standard	Yes
Fluoride	mg/L	NV	1.5	Existing EA ³	0.4 - 9.8	Standard	Yes
Nitrate	mg/L	31.9 ^E (0.015 – eutrophication value) (Nitrate as NO ₃) 7.2 ^C (Nitrate as N)	50 (Nitrate as NO ₃) 11.5 (Nitrate as N)	Existing EA ³	<0.01 - 0.27 (as N) <0.01 - 1.19 (as NO ₃)	Possible that nitrate may be in coal seam waters. Recommended that TON is monitored rather than Nitrate + Nitrite as nitrite not expected and all TON could be assumed to be	Yes - as TON

Parameter	Unit	Aquatic Ecosystems	Drinking Water ²	Analyte Source (Reason for Inclusion)	Data Range Arrow water quality laboratory results (wells and dams)	Comments	Recommended for inclusion in future monitoring program
		(Dissolved Metals)	(Total Metals)				
		(Protection of slightly to moderately disturbed aquatic ecosystems) ¹	Health-based (and aesthetic [^]) guideline values				
						Nitrate.	
Total Nitrogen	mg/L	0.25	NV	Project Specific (sewage)	0.2 - 2.7 (as N)	Identified in coal seam waters (also relevant if onsite sewage treatment sufficient to trigger ERA)	Yes
Total Phosphorus	mg/L	0.02	NV	Project Specific (sewage)	<0.01 - 0.5	Identified in coal seam waters (also relevant if onsite sewage treatment sufficient to trigger ERA)	Yes
Ammonia (NH ₃ as N)	mg/L	0.9 (0.013 – NH ₄ as N eutrophication value)	0.5 [^] (as NH ₃)	Project Specific (identified in waters from other local coal seam gas projects)	<0.01 - 2.53 (as N)	Possible that ammonia may be in coal seam waters.	Yes
Hardness (as CaCO ₃)	mg/L	NV	200	Standard (dissolved metals interpretation)	19 - 333	Aid for interpretation of dissolved metals results.	Yes
Arsenic	mg/L	0.013*	0.007	Standard & Existing EA ³	<0.001 - 0.005 (dissolved) <0.001 – 0.01 (total)		Yes
Boron	mg/L	0.37	4	Existing EA ³	0.24 - 0.79		Yes

Parameter	Unit	Aquatic Ecosystems	Drinking Water ²	Analyte Source (Reason for Inclusion)	Data Range Arrow water quality laboratory results (wells and dams)	Comments	Recommended for inclusion in future monitoring program
		(Dissolved Metals)	(Total Metals)				
		(Protection of slightly to moderately disturbed aquatic ecosystems) ¹	Health-based (and aesthetic [^]) guideline values				
					(dissolved) 0.24 – 0.7 (total)		
Cadmium	mg/L	0.0002	0.002	Standard & Existing EA ³	<0.0001 - 0.0009 (dissolved) <0.0001 - 0.0011 (total)		Yes
Cobalt	mg/L	0.0014 [#]	NV	Existing EA ³	<0.001 (dissolved) <0.001 - 0.006 (total)	Not detected in August/September 2009 in: - Tipton, Kogan or Daandine dams - Meenawarra, Stratheden, Tipton, Kogan North or Daandine wells.	Yes
Copper	mg/L	0.0014	2 (1 [^])	Standard & Existing EA ³	<0.001 - 0.008 (dissolved) <0.001 - 0.278 (total)		Yes
Lead	mg/L	0.0034	0.01	Standard & Existing EA ³	<0.001 - 0.007 (dissolved) <0.001 - 0.258 (total)		Yes
Mercury	mg/L	0.00006	0.001	Existing EA ³	<0.0001 (dissolved) <0.0001 - 0.0002 (total)	Limit of reporting not sufficient for comparison to ecosystem guideline values. Note that LOR of	Yes

Parameter	Unit	Aquatic Ecosystems	Drinking Water ²	Analyte Source (Reason for Inclusion)	Data Range Arrow water quality laboratory results (wells and dams)	Comments	Recommended for inclusion in future monitoring program
		(Dissolved Metals)	(Total Metals)				
		(Protection of slightly to moderately disturbed aquatic ecosystems) ¹	Health-based (and aesthetic [^]) guideline values				
						0.00006 not practicably achievable.	
Nickel	mg/L	0.011	0.02	Existing EA ³	<0.001 - 0.003 (dissolved) <0.001 - 0.013 (total)		Yes
Selenium	mg/L	0.005	0.01	Existing EA ³	<0.01 - 0.01 (total)	Limit of reporting not sufficient for comparison to ecosystem guideline values.	Yes
Vanadium	mg/L	0.006 [#]	NV	Identified in Arrow monitoring	<0.01 - 0.02 (dissolved) <0.01 - 0.02 (total)	Limit of reporting not sufficient for comparison to ecosystem guideline values. Detected above guideline values.	Yes
Zinc	mg/L	0.008	3 [^]	Standard & Existing EA ³	<0.005 - 0.089 (dissolved) <0.005 - 0.354 (total)		Yes
Triethylene Glycol (TEG)	mg/L	0.33 [#]	NV	Project Specific		Relevant to project	Yes

Parameter	Unit	Aquatic Ecosystems	Drinking Water ²	Analyte Source (Reason for Inclusion)	Data Range Arrow water quality laboratory results (wells and dams)	Comments	Recommended for inclusion in future monitoring program
		(Dissolved Metals)	(Total Metals)				
		(Protection of slightly to moderately disturbed aquatic ecosystems) ¹	Health-based (and aesthetic [^]) guideline values				
Aromatic Hydrocarbons (BTEX)	µg/L			Existing EA ³		Logic for aromatic hydrocarbon inclusion unclear, unless significant petrol storage on site (note BTEX can detect most volatile components in fuels).	No, unless significant storage on site.
- Benzene		950	1		<1	Not detected in August 2009 in: Tipton, Kogan or Daandine dams Kogan North or Daandine wells.	
- Toluene		180 [#]	800 (25 [^])		<2	Not detected in August 2009 in: Tipton, Kogan or Daandine dams Kogan North or Daandine wells.	
- Ethylbenzene		80 [#]	300 (3 [^])		<2	Not detected in August 2009 in: Tipton, Kogan or Daandine dams Kogan North or Daandine wells.	
- Xylene		NV	600 (20 [^])				

Parameter	Unit	Aquatic Ecosystems	Drinking Water ²	Analyte Source (Reason for Inclusion)	Data Range Arrow water quality laboratory results (wells and dams)	Comments	Recommended for inclusion in future monitoring program
		(Dissolved Metals)	(Total Metals)				
		(Protection of slightly to moderately disturbed aquatic ecosystems) ¹	Health-based (and aesthetic [^]) guideline values				
- o-xylene		350	NV		<2	Not detected in August 2009 in: Tipton, Kogan or Daandine dams Kogan North or Daandine wells.	
- m-xylene		75	NV				
- p-xylene		200	NV				
- m+p-xylene		NV	NV		<2	Not detected in August 2009 in: Tipton, Kogan or Daandine dams Kogan North or Daandine wells.	
- Cumene (Isopropylbenzene)		30	NV				
Polycyclic Aromatic Hydrocarbons (PAHs)	µg/L			Project Specific & Existing EA ³	NV	Present in coal. Produced as a byproduct of fuel burning. Present in diesel. PAHs may not be relevant to Arrow activities.	No, unless significant diesel storage on site.
- Naphthalene		16	NV				
- Benzo(a)pyrene		0.2 [#]	0.01				

Parameter	Unit	Aquatic Ecosystems	Drinking Water ²	Analyte Source (Reason for Inclusion)	Data Range Arrow water quality laboratory results (wells and dams)	Comments	Recommended for inclusion in future monitoring program
		(Dissolved Metals)	(Total Metals)				
		(Protection of slightly to moderately disturbed aquatic ecosystems) ¹	Health-based (and aesthetic [^]) guideline values				
Total Petroleum Hydrocarbons (TPH)	µg/L	0.7 [#]	NV	Existing EA ³	<20 (C6 - C9 Fraction) <50 (C10 - C14 Fraction) <100 - 600 (C15 - C28 Fraction) < 50 - 680 (C29 - C36 Fraction)	False positive may be due to natural organic matter. Chromatogram required to confirm presence of TPH. Associated with diesel and oil storage. May be value in screening for semi-volatile organics to identify specific compounds where TPH gives positive reading.	No, unless significant storage on site.
Organochlorine Pesticides	µg/L			CNS Request (email dated 12/10/2009)	NV	Unlikely to be present but should be confirmed with monitoring of coal seam water.	No, unless present in coal seam waters.
- Aldrin		0.001 [#]	0.3				
- Chlordane		0.03	1				
- DDE		0.03 [#]	NV				
- DDT		0.006	20				
- Dicofol		0.5 [#]	3				
- Dieldrin		0.01 [#]	0.3				
- Endosulfan		0.03	30				
- Endosulfan alpha		0.0002 [#]	NV				
- Endosulfan beta		0.007 [#]	NV				

Parameter	Unit	Aquatic Ecosystems	Drinking Water ²	Analyte Source (Reason for Inclusion)	Data Range Arrow water quality laboratory results (wells and dams)	Comments	Recommended for inclusion in future monitoring program
		(Dissolved Metals)	(Total Metals)				
		(Protection of slightly to moderately disturbed aquatic ecosystems) ¹	Health-based (and aesthetic [^]) guideline values				
- Endrin		0.01	NV				
- Heptachlor		0.01	0.3				
- Lindane		0.2	20				
- Methoxychlor		0.005 [#]	300				
- Mirex		0.04 [#]	NV				
- Toxaphene		0.1	NV				
Organophosphorus Pesticides	µg/L			CNS Request (email dated 12/10/2009)	NV	Unlikely to be present but should be confirmed with monitoring of coal seam water.	No, unless present in coal seam waters.
- Azinphos methyl		0.01	3				
- Chlorpyrifos		0.01	10				
- Demeton		0.04 [#]	NV				
- Demeton-S-methyl		4 [#]	NV				
- Diazinon		0.01	3				
- Dimethoate		0.15	50				
- Fenitrothion		0.2	10				
- Malathion		0.05	NV				
- Parathion		0.004	10				
- Profenofos		0.02 [#]	0.3				

Parameter	Unit	Aquatic Ecosystems	Drinking Water ²	Analyte Source (Reason for Inclusion)	Data Range Arrow water quality laboratory results (wells and dams)	Comments	Recommended for inclusion in future monitoring program
		(Dissolved Metals)	(Total Metals)				
		(Protection of slightly to moderately disturbed aquatic ecosystems) ¹	Health-based (and aesthetic [^]) guideline values				
- Temephos		0.05 [#]	300				

A – Queensland Water Quality Guideline (DERM 2009) 75th percentile values for the Fitzroy Central Rivers (Appendix G).

B – Queensland Water Quality Guideline (DERM 2009) 75th percentile values for the Maranoa-Balonne-Border Rivers (Appendix G).

C - Queensland Water Quality Guideline (DERM 2009) 75th percentile values for the Condamine-Macintyre Rivers (Appendix G).

D - Queensland Water Quality Guideline (DERM 2009) 75th percentile values for the Southern Divide (tributaries of the Condamine) (Appendix G).

E – Memorandum regarding nitrate guideline values in ANZECC/ARMCANZ 2000 (Chris Hickey - NIWA, 30 September 2002).

1 – Derived from ANZECC/ARMCANZ (2000) guideline values for the protection of slightly to moderately disturbed aquatic freshwater ecosystems (Table 3.4.1 – 95% or 99% protection level; and Table 3.3.2/ 3.3.3 – South-east Australian upland rivers).

2 –Derived from NHMRC & NRMCC Australian Drinking Water Guidelines (ADWG) 2004.

3 – For determination if content of dam is hazardous waste – eg PEN200055107. Note that the analyte list included in this report was developed based on Arrow's existing EAs at the time of report preparation and it is understood that these EAs have since been superseded by the Dalby Expansion Project, Any changes incorporated into the consolidated EA are not expected to change the conclusions drawn in this report.

* Value is for Arsenic V. Arsenic III trigger value is 0.024 mg/L.

^ Based on aesthetic drinking water guideline value (Australian Drinking Water Guidelines 2004).

Interim (low reliability) value from ANZECC (2000) Section 8.3.7.

+ Converted from ADWG value of 500 mg/L TDS using calculation provided in ANZECC/ARMCANZ (2000).

NV – No value

LOR – Limit of Reporting

Table A1T-2. Published and Site-Specific Guideline Values for the Surat Gas Project

Parameter	Unit	Aquatic Ecosystems	Drinking Water ²	Site-specific ³						
		(Dissolved Metals)	(Total Metals)	80 th Percentile (n)						
		(Protection of slightly to moderately disturbed aquatic ecosystems) ¹	Health-based (and aesthetic [^]) guideline values	Dawson River	Balonne River	Condamine River ⁴		Oakey Creek	Macintyre Brook	
Electrical conductivity (75 th percentile)	µS/cm	340 ^A for Dawson River 325 ^B for Balonne and Weir Rivers 500 ^C for Condamine River and Macintyre Brook 1120 ^D for Jimbour and Oakey Creeks	746 ^{^+}	276 ^F (n = 25)	130 ^F (n = 48)	500 ^{FG} (n = 738)		3220 ^F (n = 18)	1400 ^F (n = 422)	571 ^F (n = 21)
pH	pH unit	6.5 – 7.5	6.5 – 8.5 [^]	7.2 – 8.0 (n = 17)	6.4 – 7.8 (n = 39)	7.3 – 8.3 (n = 311)		ID	7.5 – 8.4 (n = 208)	ID
Turbidity	NTU	2 - 25	5 [^]	311 (n = 23)	248 (n = 47)	200 (n = 431)		50 (n = 10)	72 (n = 258)	ID
Dissolved Oxygen	% Saturation	90 - 110	>85% [^]	56.4 – 87.8 (n = 13)	24.2 – 80.2 (n = 33)	46 – 103 (n = 213)		ID	64.0 – 116.3 (n = 109)	ID
Temperature	° C	NV	NV	-	-	-		-	-	-

Parameter	Unit	Aquatic Ecosystems	Drinking Water ²	Site-specific ³					
		(Dissolved Metals)	(Total Metals)	80 th Percentile (n)					
				Dawson River	Balonne River	Condamine River ⁴			Macintyre Brook
		(Protection of slightly to moderately disturbed aquatic ecosystems) ¹	Health-based (and aesthetic [^]) guideline values			Condamine River (excluding Jimbour, & Oakey Creek)	Jimbour Creek	Oakey Creek	
Total Suspended Solids (TSS)	mg/L	NV	NV	1227 (n = 25)	83 (n = 59)	152 (n = 492)	100 (n = 15)	100 (n = 265)	128 (n = 12)
Sodium Absorption Ratio (SAR)		NV	NV						
Sulfate	mg/L	NV	500 (250 [^])	9.6 (n = 22)	4.9 (n = 39)	9 (n = 490)	15 (n = 15)	57 (n = 269)	14 (n = 12)
Chloride	mg/L	NV	250 [^]	45 (n = 22)	22 (n = 46)	94 (n = 577)	781 (n = 17)	305 (n = 291)	126 (n = 20)
Fluoride	mg/L	NV	1.5	0.16 (n = 24)	0.10 (n = 49)	0.23 (n = 576)	0.38 (n = 17)	0.2 (n = 284)	0.4 (n = 20)
Nitrate	mg/L	31.9 ^E (Nitrate as NO ₃) 7.2 (Nitrate as N)	50 (Nitrate as NO ₃) 11.5 (Nitrate as N)	1.4 (as NO ₃) 0.32 (as N) (n = 15)	1.6 (as NO ₃) 0.36 (as N) (n = 35)	2.84 (as NO ₃) 0.64 (as N) (n = 208)	ID	19.0 (as NO ₃) 4.29 (as N) (n = 120)	ID
Total Oxidised Nitrogen	mg/L	0.015 – NO _x eutrophication value		ID	0.11 (as N) (n = 9)	0.44 (as N) (n = 102)	ID	8.69 (as N) (n = 33)	ID
Ammonia (NH ₃ as N)	mg/L	0.9 (0.013 – NH ₄ as N eutrophication value)		ID	0.13 (as N) (n = 8)	0.07 (n = 103)	ID	0.69 (n = 33)	ID
Total Nitrogen	mg/L	0.25	NV	1.45 (n = 10)	1.57 (n = 31)	1.89 (n = 143)	ID	3.94 (n = 99)	ID
Total Phosphorus	mg/L	0.02	NV	0.59 (n = 13)	0.25 (n = 41)	0.54 (n = 239)	ID	3.07 (n = 139)	ID

Parameter	Unit	Aquatic Ecosystems	Drinking Water ²	Site-specific ³						
		(Dissolved Metals)	(Total Metals)	Dawson River	Balonne River	80 th Percentile (n)			Macintyre Brook	
		(Protection of slightly to moderately disturbed aquatic ecosystems) ¹	Health-based (and aesthetic [^]) guideline values			Condamine River ⁴		Oakey Creek		
						Condamine River (excluding Jimbour, & Oakey Creek)	Jimbour Creek			
Hardness (as CaCO ₃)	mg/L	NV	200							
Arsenic	mg/L	0.013*	0.007	ID	ID	0.001 (dissolved, n = 30) 0.004 (total, n = 31)	ID	ID	ID	
Boron	mg/L	0.37	4	0.06 (total, n = 12)	0.07 (total, n = 20)	0.046 (dissolved, n = 31) 0.1 (total, n = 137)	ID	1.6 (n = 104)	ID	
Cadmium	mg/L	0.0002	0.002	ID	ID	< 0.0001 (dissolved, n = 31) 0.0001 (total, n = 39)	ID	ID	ID	
Cobalt	mg/L	0.0014 [#]	NV	ID	ID	0.002 (dissolved, n = 31) 0.012 (total, n = 31)	ID	ID	ID	

Parameter	Unit	Aquatic Ecosystems	Drinking Water ²	Site-specific ³					
		(Dissolved Metals)	(Total Metals)	Dawson River	Balonne River	80 th Percentile (n)			Macintyre Brook
		(Protection of slightly to moderately disturbed aquatic ecosystems) ¹	Health-based (and aesthetic [^]) guideline values			Condamine River ⁴		Oakey Creek	
						Condamine River (excluding Jimbour, & Oakey Creek)	Jimbour Creek	Oakey Creek	
Copper	mg/L	0.0014	2 (1 [^])	0.01 (dissolved, n = 13)	0.03 (dissolved, n = 30)	0.020 (dissolved, n = 171) 0.011 (total, n = 40)	ID	0.015 (dissolved, n = 104) ID (total)	ID
Lead	mg/L	0.0034	0.01	ID	ID	0.001 (dissolved, n = 31) 0.011 (total, n = 37)	ID	ID	ID
Mercury	mg/L	0.00006	0.001	ID	ID	< 0.0001 (dissolved, n = 31) < 0.0001 (total, n = 31)	ID	ID	ID
Nickel	mg/L	0.011	0.02	ID	ID	0.004 (dissolved, n = 31) 0.022 (total, n = 40)	ID	ID	ID
Selenium	mg/L	0.005	0.01	ID	ID	0.0003 (dissolved, n = 31) 0.0006 (total, n = 31)	ID	ID	ID

Parameter	Unit	Aquatic Ecosystems	Drinking Water ²	Site-specific ³					
		(Dissolved Metals)	(Total Metals)	80 th Percentile (n)					
				Dawson River	Balonne River	Condamine River ⁴		Oakey Creek	Macintyre Brook
		(Protection of slightly to moderately disturbed aquatic ecosystems) ¹	Health-based (and aesthetic [^]) guideline values			Condamine River (excluding Jimbour, & Oakey Creek)	Jimbour Creek		
Vanadium	mg/L	0.006 [#]	NV	ID	ID	0.010 (dissolved, n = 29) 0.027 (total, n = 22)	ID	ID	ID
Zinc	mg/L	0.008	3 [^]	0.04 (dissolved, n = 13)	0.07 (dissolved, n = 30)	0.03 (dissolved, n = 143) 0.053 (total, n = 39)	ID	0.04 (dissolved, n = 96) ID (total)	ID
Tri-Ethylene Glycol	mg/L	0.33 [#]	-	ID	ID	ID	ID	ID	ID
<u>Aromatic Hydrocarbons (BTEX)</u>	<u>µg/L</u>								
- Benzene		<u>950</u>	<u>1</u>	<u>ID</u>	<u>ID</u>	<u><1</u> (n = 23)	<u>ID</u>	<u>ID</u>	<u>ID</u>
- Toluene		<u>180[#]</u>	<u>800 (25[^])</u>	<u>ID</u>	<u>ID</u>	<u><2</u> (n = 23)	<u>ID</u>	<u>ID</u>	<u>ID</u>
- Ethylbenzene		<u>80[#]</u>	<u>300 (3[^])</u>	<u>ID</u>	<u>ID</u>	<u><2</u> (n = 23)	<u>ID</u>	<u>ID</u>	<u>ID</u>
- Xylene		<u>NV</u>	<u>600 (20[^])</u>	<u>ID</u>	<u>ID</u>	<u>ID</u>	<u>ID</u>	<u>ID</u>	<u>ID</u>

Parameter	Unit	Aquatic Ecosystems	Drinking Water ²	Site-specific ³					
		(Dissolved Metals)	(Total Metals)	Dawson River	Balonne River	80 th Percentile (n)			Macintyre Brook
		(Protection of slightly to moderately disturbed aquatic ecosystems) ¹	Health-based (and aesthetic [^]) guideline values			Condamine River ⁴		Oakey Creek	
						Condamine River (excluding Jimbour, & Oakey Creek)	Jimbour Creek		
- o-xylene		350	NV	ID	ID	<2 (n = 23)	ID	ID	ID
- m-xylene		75	NV	ID	ID	<2 (n = 23)	ID	ID	ID
- p-xylene		200	NV	ID	ID	<2 (n = 23)	ID	ID	ID
- cumene (isopropylbenzene)		30	NV	ID	ID	<5 (n = 23)	ID	ID	ID
Polycyclic Aromatic Hydrocarbons (PAH)	µg/L								
- Naphthalene		16	NV	ID	ID	<0.02 (n = 14)	ID	ID	ID
- Benzo(a)pyrene		0.2 [#]	0.01	ID	ID	<0.005 (n = 14)	ID	ID	ID
Total Petroleum Hydrocarbons (TPH)	µg/L	0.7 [#]	NV	ID	ID	270 (n = 50)	ID	ID	ID
Organo-chlorine Pesticides	µg/L								

Parameter	Unit	Aquatic Ecosystems	Drinking Water ²	Site-specific ³					
		(Dissolved Metals)	(Total Metals)	Dawson River	Balonne River	80 th Percentile (n)			Macintyre Brook
		(Protection of slightly to moderately disturbed aquatic ecosystems) ¹	Health-based (and aesthetic [^]) guideline values			Condamine River ⁴		Oakey Creek	
						Condamine River (excluding Jimbour, & Oakey Creek)	Jimbour Creek		
- Aldrin		<u>0.001[#]</u>	<u>0.3</u>	<u>ID</u>	<u>ID</u>	<u><0.002</u> <u>(n = 15)</u>	<u>ID</u>	<u>ID</u>	<u>ID</u>
- Chlordane		<u>0.03</u>	<u>1</u>	<u>ID</u>	<u>ID</u>	<u><0.002</u> <u>(n = 15)</u>	<u>ID</u>	<u>ID</u>	<u>ID</u>
- DDE		<u>0.03[#]</u>	<u>NV</u>	<u>ID</u>	<u>ID</u>	<u><0.01</u> <u>(n = 15)</u>	<u>ID</u>	<u>ID</u>	<u>ID</u>
- DDT		<u>0.006</u>	<u>20</u>	<u>ID</u>	<u>ID</u>	<u><0.002</u> <u>(n = 15)</u>	<u>ID</u>	<u>ID</u>	<u>ID</u>
- Dicofol		<u>0.5[#]</u>	<u>3</u>	<u>ID</u>	<u>ID</u>	<u>ID</u>	<u>ID</u>	<u>ID</u>	<u>ID</u>
- Dieldrin		<u>0.01[#]</u>	<u>0.3</u>	<u>ID</u>	<u>ID</u>	<u><0.002</u> <u>(n = 15)</u>	<u>ID</u>	<u>ID</u>	<u>ID</u>
- Endosulfan		<u>0.03</u>	<u>30</u>	<u>ID</u>	<u>ID</u>	<u><0.005</u> <u>(n = 15)</u>	<u>ID</u>	<u>ID</u>	<u>ID</u>
- Endosulfan alpha		<u>0.0002[#]</u>	<u>NV</u>	<u>ID</u>	<u>ID</u>	<u><0.005</u> <u>(n = 15)</u>	<u>ID</u>	<u>ID</u>	<u>ID</u>
- Endosulfan beta		<u>0.007[#]</u>	<u>NV</u>	<u>ID</u>	<u>ID</u>	<u><0.005</u> <u>(n = 15)</u>	<u>ID</u>	<u>ID</u>	<u>ID</u>
- Endrin		<u>0.01</u>	<u>NV</u>	<u>ID</u>	<u>ID</u>	<u><0.004</u> <u>(n = 15)</u>	<u>ID</u>	<u>ID</u>	<u>ID</u>

Parameter	Unit	Aquatic Ecosystems	Drinking Water ²	Site-specific ³					
		(Dissolved Metals)	(Total Metals)	Dawson River	Balonne River	80 th Percentile (n)			Macintyre Brook
		(Protection of slightly to moderately disturbed aquatic ecosystems) ¹	Health-based (and aesthetic [^]) guideline values			Condamine River ⁴	Jimbour Creek	Oakey Creek	
				Condamine River (excluding Jimbour, & Oakey Creek)					
- Heptachlor		0.01	0.3	ID	ID	<0.01 (n = 15)	ID	ID	ID
- Lindane		0.2	20	ID	ID	ID	ID	ID	ID
- Methoxychlor		0.005 [#]	300	ID	ID	<0.002 (n = 15)	ID	ID	ID
- Mirex		0.04 [#]	NV	ID	ID	ID	ID	ID	ID
- Toxaphene		0.1	NV	ID	ID	ID	ID	ID	ID
Organo-phosphorus Pesticides	µg/L								
- Azinphos methyl		0.01	3	ID	ID	<0.10 (n = 15)	ID	ID	ID
- Chlorpyrifos		0.01	10	ID	ID	<0.05 (n = 15)	ID	ID	ID
- Demeton		0.04 [#]	NV	ID	ID	ID	ID	ID	ID
- Demeton-S-methyl		4 [#]	NV	ID	ID	<0.5 (n = 15)	ID	ID	ID
- Diazinon		0.01	3	ID	ID	<0.10 (n = 15)	ID	ID	ID
- Dimethoate		0.15	50	ID	ID	<0.15 (n = 15)	ID	ID	ID
- Fenitrothion		0.2	10	ID	ID	ID	ID	ID	ID

Parameter	Unit	Aquatic Ecosystems	Drinking Water ²	Site-specific ³					
		(Dissolved Metals)	(Total Metals)	Dawson River	Balonne River	80 th Percentile (n)			Macintyre Brook
		(Protection of slightly to moderately disturbed aquatic ecosystems) ¹	Health-based (and aesthetic [^]) guideline values			Condamine River ⁴	Jimbour Creek	Oakey Creek	
- Malathion		0.05	NV	ID	ID	<0.10 (n = 15)	ID	ID	ID
- Parathion		0.004	10	ID	ID	<0.10 (n = 11)	ID	ID	ID
- Profenofos		0.02 [#]	0.3	ID	ID	ID	ID	ID	ID
- Temephos		0.05 [#]	300	ID	ID	ID	ID	ID	ID

A – Queensland Water Quality Guideline (DERM 2009) 75th percentile values for the Fitzroy Central Rivers (Appendix G).

B – Queensland Water Quality Guideline (DERM 2009) 75th percentile values for the Maranoa-Balonne-Border Rivers (Appendix G).

C – Queensland Water Quality Guideline (DERM 2009) 75th percentile values for the Condamine-Macintyre Rivers (Appendix G).

D – Queensland Water Quality Guideline (DERM 2009) 75th percentile values for the Southern Divide (tributaries of the Condamine) (Appendix G).

E – Memorandum regarding nitrate guideline values in ANZECC 2000 (Chris Hickey - NIWA, 30 September 2002).

F – 75th percentile calculated for electrical conductivity based on recommendation in Queensland Water Quality Guidelines, DERM 2009.

G – Myall Creek, within the Southern Divide catchment identified as having generally very high salinity, has been excluded in the electrical conductivity guideline value calculation for the Condamine River.

1 – Derived from ANZECC 2000 guideline values for the protection of slightly to moderately disturbed aquatic freshwater ecosystems (Table 3.4.1 – 95% or 99% protection level; and Table 3.3.2/ 3.3.3 – South-east Australian upland rivers).

2 – Derived from NHMRC & NRMCC Australian Drinking Water Guidelines (ADWG) 2004.

3 – Site specific guideline values were calculated using data provided by the State of Queensland (Department of Environment and Resource Management) [2009 and 2011]) and baseline

data collected during baseline surveys undertaken in October 2009, November 2009 and March 2010.

4 – Where no guideline value exists for Jimbour Creek and Oakey Creek, default to the value provided for Condamine River.

* Value is for Arsenic V. Arsenic III trigger value is 0.024 mg/L.

^ Based on aesthetic drinking water guideline value (Australian Drinking Water Guidelines 2004).

Interim (low reliability) value from ANZECC (2000) Section 8.3.7.

+ Converted from ADWG value of 500 mg/L TDS using calculation provided in ANZECC (2000).

ID – Insufficient data

NV – No value

LOR – Limit of reporting

Note insufficient data were available for the Weir River to calculate site specific trigger values

Underlined analytes are optional (*ie* the benefit of analysing for these parameters to aid environmental management has not been determined and should be based on site specific conditions, onsite chemical use or surrounding land use).

Table A1T-3. NRA Water Quality Sites October 2009

Site ID	Catchment	Northing	Easting	Land Use
		GDA94, Zone 56J	GDA94, Zone 56J	
1	Condamine River (north branch)	6935920	338242	Agriculture
3	Crawlers Creek	6950656	314934	Agriculture
4	Condamine River (south branch)	6953318	322793	Residential
5	Ashall Creek	6969047	328860	Agriculture
6	Oakey Creek	6979588	327460	Agriculture
7	Myall Creek	6991059	332980	Agriculture
8	Myall Creek	6991447	327101	Residential
9	Jimbour Creek	7006407	310085	Agriculture
10	Broadwater Lagoon	6973068	311377	Forest/Park
11	Clayhole Creek	6983628	302265	Agriculture
14	Braemar Creek	7004153	288318	Agriculture
15C	Cooranga Creek	7027606	302555	Agriculture
16	Cooranga Creek	7019709	293194	Residential
17	Condamine River	7022127	280481	Agriculture
A1	Condamine River	6950651	314931	Agriculture
A3	Condamine River	6973167	326717	Agriculture
A4	Wilkie Creek	6986992	302831	Agriculture
A5	Moramby Creek	6985019	293496	Forest Park
A7	Wilkie Creek	7001348	300080	Agriculture

Table A1T-4. NRA Water Quality Sites November 2009

Site ID	Catchment	Northing	Easting	Land Use
		GDA94, Zone 56J	GDA94, Zone 56J	
0	Weringa Creek	7109815	202512	Agriculture
4	Condamine River (south branch)	6953334	322772	Residential
8	Myall Creek	6991451	327102	Residential
15B	Balonne River	7073776	207488	Mining/Industry
16	Cooranga Creek	7019706	293248	Residential
17	Condamine River	7022184	280536	Agriculture
20	Dogwood Creek	7075632	237168	Forest/Park
26	Condamine River (north branch)	6998633	310659	Agriculture
27	Columboola Creek	7046515	237102	Agriculture
33	Charleys Creek	7040275	263434	Town/Residential
78	Condamine River (north branch)	6944040	334238	Agriculture
79	Un-named Creek	6943624	319050	Agriculture
88	Back Creek	6915697	330481	Town/Residential
109	Boola Creek	6889868	319654	Agriculture
119	Wyaga Creek	6883087	270380	Agriculture
120	Commoron Creek	6872959	282183	Forest/Park
125	Commoron Creek	6863915	264500	Mining/Industry
127	Muri Muri Creek	6851196	264553	Agriculture
137	Wilkie Creek	6965603	297549	Forest/Park
140	Rocky Creek	7086312	228766	Forest/Park
A5	Moramby Creek	6985019	293496	Forest/Park
B (Domville)	Back Creek	6909410	330439	Mining/Industry

Table A1T-5. NRA Water Quality Sites March 2010

Site ID	Catchment	Northing	Easting	Land Use
		GDA94, Zone 56J	GDA94, Zone 56J	
0	Dawson River	7109815	202512	Agriculture
1	Condamine River (north branch)	6935920	338242	Agriculture
4	Condamine River (south branch)	6953334	322772	Residential
6	Oakey Creek (Condamine River)	6979588	327460	Agriculture
8	Myall Creek (Condamine River)	6991451	327102	Residential
9	Jimbour Creek (Condamine River)	7006407	310085	Agriculture
10	Lake Broadwater (Condamine River)	6973068	311377	Forest/Park
14	Braemar Creek (Condamine River)	7004153	288318	Agriculture
15B	Balonne River	7073776	207488	Mining/Industry
16	Cooranga Creek	7019706	293248	Residential
17	Condamine River	7022184	280536	Agriculture
20	Dogwood Creek	7075632	237168	Forest/Park
27	Columboola Creek	7046515	237102	Agriculture
33	Charleys Creek	7040275	263434	Town/Residential
79	Un-named Creek	6943624	319050	Agriculture
88	Back Creek	6915697	330481	Town/Residential
109	Boola Creek	6889868	319654	Agriculture
119	Wyaga Creek	6883087	270380	Agriculture
120	Commoron Creek	6872959	282183	Forest/Park
127	Muri Muri Creek	6851196	264553	Agriculture
137	Wilkie Creek	6965603	297549	Forest/Park
A4	Wilkie Creek	6986992	302831	Agriculture
A7	Wilkie Creek	7001346	300080	Agriculture

Table A1T-6. Watershed sites used for environmental objective percentile calculations

Watershed Site ID	Date Received	Catchment	GDA 94	
			Latitude	Longitude
1303139	24/12/2009	Dawson	-25.983	149.933
130344A	24/12/2009	Dawson	-26.033	149.883
4164055	24/12/2009	Macintyre Brook	-28.4	151.117
416407A	24/12/2009	Macintyre Brook	-28.367	151.133
422202A	24/12/2009	Balonne	-26.667	150.183
422202B	24/12/2009	Balonne	-26.717	150.183
422202B	19/04/2011	Balonne	-26.717	150.183
4223005	24/12/2009	Condamine	-27.733	151.283
4223006	24/12/2009	Condamine	-26.8	150.683
4223030	24/12/2009	Condamine (Oakey Creek)	-27.3	151.267
4223031	24/12/2009	Condamine (Oakey Creek)	-27.433	151.717
4223049	24/12/2009	Condamine	-27.7	151.267
4223050	24/12/2009	Condamine	-27.433	151.250
4223051	24/12/2009	Condamine	-27.317	151.217
4223068	24/12/2009	Condamine	-27.367	151.100
4223069	24/12/2009	Condamine	-27.367	151.250
4223073	24/12/2009	Condamine	-27.2	151.517
4223074	24/12/2009	Condamine (Oakey Creek)	-27.633	151.817
4223076	24/12/2009	Condamine (Oakey Creek)	-27.583	151.950
4223078	24/12/2009	Condamine (Oakey Creek)	-27.583	151.967
4223079	24/12/2009	Condamine (Oakey Creek)	-27.517	151.933
4223080	24/12/2009	Condamine (Oakey Creek)	-27.567	151.900
422308B	24/12/2009	Condamine	-26.8	150.567
422308C	24/12/2009	Condamine	-26.8	150.567
422312A	24/12/2009	Condamine (Oakey Creek)	-27.383	151.917
422314A	30/10/2009	Condamine	-27.117	151.083
422316A	30/10/2009	Condamine	-27.533	151.200
422322A	30/10/2009	Condamine	-27.683	151.617
422323A	30/10/2009	Condamine	-27.867	151.517
422326A	30/10/2009	Condamine (Oakey Creek)	-27.517	151.933
422330A	30/10/2009	Condamine (Oakey Creek)	-27.433	151.717
422330B	24/12/2009	Condamine (Oakey Creek)	-27.433	151.717
422331A	24/12/2009	Condamine (Oakey Creek)	-27.517	151.750
422332A	30/10/2009	Condamine (Oakey Creek)	-27.467	151.733
422332B	24/12/2009	Condamine (Oakey Creek)	-27.467	151.733
422332B	19/04/2011	Condamine (Oakey Creek)	-27.467	151.733
422333A	30/10/2009	Condamine	-27.233	151.183
422339A	30/10/2009	Condamine (Jimbour Creek)	-26.917	151.283
422345A	30/10/2009	Condamine	-27.667	151.350
422346A	30/10/2009	Condamine	-27.567	151.267
422347A	30/10/2009	Condamine	-27.783	151.417
422347B	24/12/2009	Condamine	-27.783	151.417
422348A	30/10/2009	Condamine	-27.817	151.517
422350A	30/10/2009	Condamine (Oakey Creek)	-27.3	151.283
422353A	24/12/2009	Condamine	-27.833	151.450
422354A	24/12/2009	Condamine	-27.517	151.250

**Attachment A
Water Quality Data -
Provided by Department of Environment and Resource
Management**

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Station	Station Name	Receiving Creek/ River	Date	V2010.00	F2010.00	Q2010.00	V2010.50	F2010.50	Q2010.50	V2030.00	F2030.00	Q2030.00	V2030.50	F2030.50	Q2030.50	V2030.51	F2030.51	Q2030.51	V2080.50	F2080.50	Q2080.50	V2100.00	F2100.00	Q2100.00	V2100.50	F2100.50	Q2100.50	
				Conductivity @ 25C (uS/cm)			Conductivity @ 25C FLD			Turbidity (NTU)			Turbidity (NTU) FLD			Turbidity (NTU) FLD Webb test only			Water Temperature FLD			pH (pH units)			pH (pH units) FLD			
422314A	Condamine_R Range Br	Condamine River	24/09/1963	742	OK	125													20	OK	130	7.8	OK	135				
422314A	Condamine_R Range Br	Condamine River	28/04/1964	225	OK	125																	8	OK	135			
422314A	Condamine_R Range Br	Condamine River	21/07/1964	370	OK	125													10	OK	130	7.3	OK	135				
422314A	Condamine_R Range Br	Condamine River	8/12/1964	850	OK	125													29	OK	130	7.3	OK	135				
422314A	Condamine_R Range Br	Condamine River	14/09/1965	540	OK	125													19	OK	130	7.7	OK	135				
422314A	Condamine_R Range Br	Condamine River	8/08/1996	726	OK	130				15.4	OK	130										8.29	OK	130				
422314A	Condamine_R Range Br	Condamine River	4/03/1997	227	OK	130				243	OK	130										7.76	OK	130				
422314A	Condamine_R Range Br	Condamine River	22/05/1997	370	OK	130				60	OK	130										7.9	OK	130				
422314A	Condamine_R Range Br	Condamine River	20/11/1997	399	OK	130				130	OK	130										7.58	OK	130				
422314A	Condamine_R Range Br	Condamine River	18/02/1998	222	OK	130				480	OK	130										7.4	OK	130				
422314A	Condamine_R Range Br	Condamine River	28/05/1998	247	OK	130				470	OK	130										7.55	OK	130				
422314A	Condamine_R Range Br	Condamine River	16/03/2001	309	OK	130				40.1	OK	130										7.57	OK	130				
422314A	Condamine_R Range Br	Condamine River	8/11/2001	389	OK	130				36.9	OK	130										7.98	OK	130				
422316A	Condamine_R Cecil Wr	Condamine River	27/05/1963	240	OK	125																7.6	OK	135				
422316A	Condamine_R Cecil Wr	Condamine River	18/06/1963	420	OK	125																7.3	OK	135				
422316A	Condamine_R Cecil Wr	Condamine River	1/08/1963	440	OK	125																7.8	OK	135				
422316A	Condamine_R Cecil Wr	Condamine River	25/09/1963	590	OK	125													21	OK	130	7	OK	135				
422316A	Condamine_R Cecil Wr	Condamine River	17/12/1964	640	OK	125													26	OK	130	7.6	OK	135				
422316A	Condamine_R Cecil Wr	Condamine River	31/10/1965	450	OK	125																7.6	OK	135				
422316A	Condamine_R Cecil Wr	Condamine River	1/06/1971	390	OK	125																7.7	OK	135				
422316A	Condamine_R Cecil Wr	Condamine River	1/06/1971																5	OK	130							
422316A	Condamine_R Cecil Wr	Condamine River	20/07/1971	446	OK	125													13	OK	130	8.3	OK	135				
422316A	Condamine_R Cecil Wr	Condamine River	1/09/1971	610	OK	125													17	OK	130	8	OK	135				
422316A	Condamine_R Cecil Wr	Condamine River	18/10/1971	550	OK	125													23	OK	130	7.6	OK	135				
422316A	Condamine_R Cecil Wr	Condamine River	1/04/1972	310	OK	125																8.1	OK	135				
422316A	Condamine_R Cecil Wr	Condamine River	30/06/1972	340	OK	125																7.7	OK	135				
422316A	Condamine_R Cecil Wr	Condamine River	23/08/1972	395	OK	125													16	OK	130	8.1	OK	135				
422316A	Condamine_R Cecil Wr	Condamine River	30/09/1972	460	OK	125																7.8	OK	135				
422316A	Condamine_R Cecil Wr	Condamine River	31/12/1972	200	OK	125																7.8	OK	135				
422316A	Condamine_R Cecil Wr	Condamine River	21/01/1973	280	OK	125																7.6	OK	135				
422316A	Condamine_R Cecil Wr	Condamine River	20/03/1973	280	OK	125																7.7	OK	135				
422316A	Condamine_R Cecil Wr	Condamine River	20/03/1973																26	OK	130							
422316A	Condamine_R Cecil Wr	Condamine River	2/04/1973	385	OK	125																7.8	OK	135				
422316A	Condamine_R Cecil Wr	Condamine River	9/05/1973	370	OK	125													21	OK	130	7.4	OK	135				
422316A	Condamine_R Cecil Wr	Condamine River	19/06/1973	370	OK	125																7.6	OK	135				
422316A	Condamine_R Cecil Wr	Condamine River	19/06/1973																14	OK	130							
422316A	Condamine_R Cecil Wr	Condamine River	1/07/1973	360	OK	125																8	OK	135				
422316A	Condamine_R Cecil Wr	Condamine River	25/07/1973	295	OK	125																7.9	OK	135				
422316A	Condamine_R Cecil Wr	Condamine River	25/07/1973																14	OK	130							
422316A	Condamine_R Cecil Wr	Condamine River	31/10/1973	485	OK	125																8.2	OK	135				
422316A	Condamine_R Cecil Wr	Condamine River	31/10/1973																24	OK	130							
422316A	Condamine_R Cecil Wr	Condamine River	17/12/1973	400	OK	125																8.6	OK	135				
422316A	Condamine_R Cecil Wr	Condamine River	23/01/1974	190	OK	135													23	OK	130	8	OK	135				
422316A	Condamine_R Cecil Wr	Condamine River	27/03/1974	225	OK	125																7.8	OK	135				
422316A	Condamine_R Cecil Wr	Condamine River	27/03/1974																22	OK	130							
422316A	Condamine_R Cecil Wr	Condamine River	1/07/1974	255	OK	135																9.4	OK	135				
422316A	Condamine_R Cecil Wr	Condamine River	17/09/1974	432	OK	125																7.9	OK	135				
422316A	Condamine_R Cecil Wr	Condamine River	17/09/1974																16	OK	130							
422316A	Condamine_R Cecil Wr	Condamine River	3/12/1974	490	OK	125																8	OK	135				
422316A	Condamine_R Cecil Wr	Condamine River	14/10/1975	570	OK	125																7.7	OK	135				
422316A	Condamine_R Cecil Wr	Condamine River	10/12/1975	340	OK	125																8	OK	135				
422316A	Condamine_R Cecil Wr	Condamine River	29/01/1976	270	OK	125																7.3	OK	135				
422316A	Condamine_R Cecil Wr	Condamine River	12/05/1976	475	OK	125																7.8	OK	135				
422316A	Condamine_R Cecil Wr	Condamine River	12/05/1976	570	OK	125																8	OK	135				
422316A	Condamine_R Cecil Wr	Condamine River	30/06/1976	650	OK	125																8.2	OK	135				

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Station	Station Name	Receiving Creek/ River	Date	V2010.00	F2010.00	Q2010.00	V2010.50	F2010.50	Q2010.50	V2030.00	F2030.00	Q2030.00	V2030.50	F2030.50	Q2030.50	V2030.51	F2030.51	Q2030.51	V2080.50	F2080.50	Q2080.50	V2100.00	F2100.00	Q2100.00	V2100.50	F2100.50	Q2100.50
				Conductivity @ 25C (uS/cm)			Conductivity @ 25C FLD			Turbidity (NTU)			Turbidity (NTU) FLD			Turbidity (NTU) FLD Webb test only			Water Temperature FLD			pH (pH units)			pH (pH units) FLD		
422316A	Condamine_R Cecil Wr	Condamine River	25/08/1976	640	OK	125																8.2	OK	135			
422316A	Condamine_R Cecil Wr	Condamine River	30/09/1976	565	OK	125																8.1	OK	135			
422316A	Condamine_R Cecil Wr	Condamine River	3/11/1977	645	OK	125																8	OK	135			
422316A	Condamine_R Cecil Wr	Condamine River	14/03/1978	420	OK	125																7.4	OK	135			
422316A	Condamine_R Cecil Wr	Condamine River	25/04/1978	450	OK	125																7.5	OK	135			
422316A	Condamine_R Cecil Wr	Condamine River	27/07/1978	570	OK	125																7.5	OK	135			
422316A	Condamine_R Cecil Wr	Condamine River	11/10/1978	410	OK	125																8	OK	135			
422316A	Condamine_R Cecil Wr	Condamine River	14/02/1979	400	OK	125																7.7	OK	135			
422316A	Condamine_R Cecil Wr	Condamine River	14/02/1979																26	OK	130						
422316A	Condamine_R Cecil Wr	Condamine River	11/07/1979	350	OK	125																7.8	OK	135			
422316A	Condamine_R Cecil Wr	Condamine River	11/07/1979																11	OK	130						
422316A	Condamine_R Cecil Wr	Condamine River	3/09/1979	700	OK	125																7.8	OK	135			
422316A	Condamine_R Cecil Wr	Condamine River	12/09/1979	710	OK	125																7.8	OK	135			
422316A	Condamine_R Cecil Wr	Condamine River	12/09/1979																18	OK	130						
422316A	Condamine_R Cecil Wr	Condamine River	30/01/1980	250	OK	125																7.1	OK	135			
422316A	Condamine_R Cecil Wr	Condamine River	30/01/1980																24	OK	130						
422316A	Condamine_R Cecil Wr	Condamine River	31/01/1980	235	OK	135													25	OK	130						
422316A	Condamine_R Cecil Wr	Condamine River	2/07/1980	413	OK	125																7.5	OK	135			
422316A	Condamine_R Cecil Wr	Condamine River	2/07/1980																12	OK	130						
422316A	Condamine_R Cecil Wr	Condamine River	1/07/1981	460	OK	125				5	OK	125										7.8	OK	135			
422316A	Condamine_R Cecil Wr	Condamine River	1/07/1981																12	OK	130						
422316A	Condamine_R Cecil Wr	Condamine River	8/07/1982	425	OK	125				3	OK	125										7.6	OK	135			
422316A	Condamine_R Cecil Wr	Condamine River	28/09/1982	520	OK	125				5	OK	125										7.8	OK	135			
422316A	Condamine_R Cecil Wr	Condamine River	28/07/1983	430	OK	125				16	OK	125										7.9	OK	135			
422316A	Condamine_R Cecil Wr	Condamine River	29/05/1984	540	OK	125				5	OK	125										7.5	OK	135			
422316A	Condamine_R Cecil Wr	Condamine River	29/05/1984																16	OK	130						
422316A	Condamine_R Cecil Wr	Condamine River	9/01/1985	510	OK	125				12	OK	125										7.6	OK	135			
422316A	Condamine_R Cecil Wr	Condamine River	9/01/1985																27	OK	130						
422316A	Condamine_R Cecil Wr	Condamine River	14/05/1985	485	OK	125				12	OK	125										7.8	OK	135			
422316A	Condamine_R Cecil Wr	Condamine River	14/05/1985																17	OK	130						
422316A	Condamine_R Cecil Wr	Condamine River	22/10/1985	740	OK	125				1	OK	125										8.4	OK	135			
422316A	Condamine_R Cecil Wr	Condamine River	22/10/1985				853	OK	130										20	OK	130						
422316A	Condamine_R Cecil Wr	Condamine River	8/10/1986	650	OK	125				2	OK	125										8.3	OK	135			
422316A	Condamine_R Cecil Wr	Condamine River	8/10/1986				688	OK	130										23	OK	130						
422316A	Condamine_R Cecil Wr	Condamine River	14/01/1987	435	OK	125				100	OK	125										7.9	OK	135			
422316A	Condamine_R Cecil Wr	Condamine River	14/01/1987				507	OK	130										29	OK	130						
422316A	Condamine_R Cecil Wr	Condamine River	2/04/1987	405	OK	125				21	OK	125										7.9	OK	135			
422316A	Condamine_R Cecil Wr	Condamine River	2/04/1987																23	OK	130						
422316A	Condamine_R Cecil Wr	Condamine River	18/06/1987	310	OK	125				83	OK	125										8.1	OK	135			
422316A	Condamine_R Cecil Wr	Condamine River	18/06/1987				316	OK	130										15	OK	130						
422316A	Condamine_R Cecil Wr	Condamine River	3/09/1987	260	OK	125				100	OK	125										7.7	OK	135			
422316A	Condamine_R Cecil Wr	Condamine River	3/09/1987				232	OK	130										15	OK	130						
422316A	Condamine_R Cecil Wr	Condamine River	5/11/1987	365	OK	125				86	OK	125										7.5	OK	135			
422316A	Condamine_R Cecil Wr	Condamine River	5/11/1987				372	OK	130										24	OK	130						
422316A	Condamine_R Cecil Wr	Condamine River	6/04/1988	105	OK	135				100	OK	125										6.5	OK	135			
422316A	Condamine_R Cecil Wr	Condamine River	23/05/1988	140	OK	135				100	OK	125										7.2	OK	135			
422316A	Condamine_R Cecil Wr	Condamine River	24/05/1988	425	OK	125				26	OK	125										7.9	OK	135			
422316A	Condamine_R Cecil Wr	Condamine River	24/05/1988				404	OK	130										16	OK	130						
422316A	Condamine_R Cecil Wr	Condamine River	4/08/1988	395	OK	125				90	OK	125										7.9	OK	135			
422316A	Condamine_R Cecil Wr	Condamine River	4/08/1988				381	OK	130										15	OK	130						
422316A	Condamine_R Cecil Wr	Condamine River	10/11/1988	420	OK	125																7.8	OK	135			
422316A	Condamine_R Cecil Wr	Condamine River	10/11/1988				500	OK	130										27	OK	130						
422316A	Condamine_R Cecil Wr	Condamine River	26/01/1989	345	OK	125				12	OK	125										7.6	OK	135			
422316A	Condamine_R Cecil Wr	Condamine River	26/01/1989				357	OK	130										26	OK	130						
422316A	Condamine_R Cecil Wr	Condamine River	22/08/1989	580	OK	125																7.9	OK	135			

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Station	Station Name	Receiving Creek/ River	Date	V2010.00	F2010.00	Q2010.00	V2010.50	F2010.50	Q2010.50	V2030.00	F2030.00	Q2030.00	V2030.50	F2030.50	Q2030.50	V2030.51	F2030.51	Q2030.51	V2080.50	F2080.50	Q2080.50	V2100.00	F2100.00	Q2100.00	V2100.50	F2100.50	Q2100.50
				Conductivity @ 25C (uS/cm)			Conductivity @ 25C FLD			Turbidity (NTU)			Turbidity (NTU) FLD			Turbidity (NTU) FLD Webb test only			Water Temperature FLD			pH (pH units)			pH (pH units) FLD		
422316A	Condamine_R Cecil Wr	Condamine River	22/08/1989				520	OK	130										14	OK	130						
422316A	Condamine_R Cecil Wr	Condamine River	28/03/1990	354	OK	125				9	OK	125										7.9	OK	135			
422316A	Condamine_R Cecil Wr	Condamine River	28/03/1990				375	OK	130										21	OK	130						
422316A	Condamine_R Cecil Wr	Condamine River	3/07/1990	457	OK	125				23	OK	125										8	OK	135			
422316A	Condamine_R Cecil Wr	Condamine River	3/07/1990				413	OK	130										10	OK	130						
422316A	Condamine_R Cecil Wr	Condamine River	17/10/1990	720	OK	125				8	OK	125										7.8	OK	135			
422316A	Condamine_R Cecil Wr	Condamine River	17/10/1990				818	OK	130										23	OK	130						
422316A	Condamine_R Cecil Wr	Condamine River	25/02/1992	287	OK	125				32	OK	125										7	OK	135			
422316A	Condamine_R Cecil Wr	Condamine River	25/02/1992				311	OK	130										27	OK	130						
422316A	Condamine_R Cecil Wr	Condamine River	2/07/1992	501	OK	125				7	OK	125										7.5	OK	135			
422316A	Condamine_R Cecil Wr	Condamine River	2/07/1992				418	OK	130										14	OK	130						
422316A	Condamine_R Cecil Wr	Condamine River	21/10/1992	567	OK	125				2	OK	125										7.9	OK	135			
422316A	Condamine_R Cecil Wr	Condamine River	21/10/1992				373	OK	130										22	OK	130						
422316A	Condamine_R Cecil Wr	Condamine River	8/03/1994	124	OK	135				200	OK	151										7.5	OK	135			
422316A	Condamine_R Cecil Wr	Condamine River	8/03/1994				113	OK	130										24.1	OK	130						
422316A	Condamine_R Cecil Wr	Condamine River	12/04/1994	267	OK	125				13	OK	125										7.5	OK	135			
422316A	Condamine_R Cecil Wr	Condamine River	16/05/1994	287	OK	125				4	OK	125										8.2	OK	135			
422316A	Condamine_R Cecil Wr	Condamine River	15/06/1994	281	OK	125				2	OK	125										7.9	OK	135			
422316A	Condamine_R Cecil Wr	Condamine River	12/07/1994	273	OK	125				2	OK	125										8	OK	135			
422316A	Condamine_R Cecil Wr	Condamine River	14/07/1994				303	OK	130										12.2	OK	130						
422316A	Condamine_R Cecil Wr	Condamine River	15/08/1994	293	OK	125				2	OK	125										8.2	OK	135			
422316A	Condamine_R Cecil Wr	Condamine River	15/08/1994				308	OK	130										13.9	OK	130						
422316A	Condamine_R Cecil Wr	Condamine River	20/09/1994	313	OK	125				4	OK	125										8.3	OK	135			
422316A	Condamine_R Cecil Wr	Condamine River	20/09/1994				317	OK	130										18.6	OK	130						
422316A	Condamine_R Cecil Wr	Condamine River	11/10/1994	327	OK	125				3	OK	125										7.6	OK	135			
422316A	Condamine_R Cecil Wr	Condamine River	11/10/1994				324	OK	130										20.6	OK	130						
422316A	Condamine_R Cecil Wr	Condamine River	28/11/1994	317.1	OK	130	304	OK	130	1.8	OK	130							26.2	OK	130	8.37	OK	130	9	OK	130
422316A	Condamine_R Cecil Wr	Condamine River	10/01/1995	303.2	OK	130	299	OK	130	3.8	OK	130							27.5	OK	130	7.41	OK	130	8.6	OK	130
422316A	Condamine_R Cecil Wr	Condamine River	15/02/1995	247	OK	130	243	OK	130	174	OK	130	218	OK	130				22.1	OK	130	7.41	OK	130	8.1	OK	130
422316A	Condamine_R Cecil Wr	Condamine River	21/03/1995	225.5	OK	130				51	OK	130	65	OK	130							7.1	OK	130	7.6	OK	130
422316A	Condamine_R Cecil Wr	Condamine River	11/04/1995	222.2	OK	130	233	OK	130	5	OK	130	21	OK	130				20.9	OK	130	7.22	OK	130	7.4	OK	130
422316A	Condamine_R Cecil Wr	Condamine River	24/05/1995	227.5	OK	130	241	OK	130	18.1	OK	130	25	OK	130				18.6	OK	130	7.3	OK	130	7.7	OK	130
422316A	Condamine_R Cecil Wr	Condamine River	27/06/1995	255	OK	130	240	OK	130	14	OK	130	23	OK	130				12.8	OK	130	7.55	OK	130	7.9	OK	130
422316A	Condamine_R Cecil Wr	Condamine River	26/07/1995				250	OK	130				11	OK	130				12.2	OK	130				7.4	OK	130
422316A	Condamine_R Cecil Wr	Condamine River	13/08/1995				333	OK	130																		
422316A	Condamine_R Cecil Wr	Condamine River	30/08/1995				263	OK	130				7	OK	130				18.5	OK	130				8.2	OK	130
422316A	Condamine_R Cecil Wr	Condamine River	25/09/1995	265.2	OK	130	271	OK	130	8.1	OK	130	15	OK	130				21.5	OK	130	7.5	OK	130	8.4	OK	130
422316A	Condamine_R Cecil Wr	Condamine River	26/09/1995	419	OK	130				2.1	OK	130										7.38	OK	130			
422316A	Condamine_R Cecil Wr	Condamine River	17/10/1995	289	OK	130	283	OK	130	0.9	OK	130	3	OK	130				21.1	OK	130	7.41	OK	130	7.9	OK	130
422316A	Condamine_R Cecil Wr	Condamine River	11/12/1995	229.6	OK	130				159	OK	130										7.45	OK	130			
422316A	Condamine_R Cecil Wr	Condamine River	20/12/1995	210	OK	130	202	OK	130	321	OK	130	423	OK	130				27.3	OK	130	7.3	OK	130	6.4	OK	130
422316A	Condamine_R Cecil Wr	Condamine River	30/01/1996	255	OK	130	239	OK	130	898	OK	130							27.5	OK	130	7.67	OK	130	7.6	OK	130
422316A	Condamine_R Cecil Wr	Condamine River	5/02/1996				281	OK	130										29.5	OK	130						
422316A	Condamine_R Cecil Wr	Condamine River	28/02/1996	303	OK	130	300	OK	130	40.9	OK	130	51	OK	130				24.2	OK	130	7.57	OK	130	7.4	OK	130
422316A	Condamine_R Cecil Wr	Condamine River	27/03/1996				188	OK	130				90	OK	130				24	OK	130				7.6	OK	130
422316A	Condamine_R Cecil Wr	Condamine River	28/05/1996	315	OK	130	315	OK	130	76	OK	130	99	OK	130				15.8	OK	130	7.63	OK	130	8.2	OK	130
422316A	Condamine_R Cecil Wr	Condamine River	19/06/1996	468	OK	130	473	OK	130	9.1	OK	130	12	OK	130				14.7	OK	130	8.15	OK	130	8.4	OK	130
422316A	Condamine_R Cecil Wr	Condamine River	25/07/1996	654.2	OK	130	628	OK	130	5.2	OK	130	6	OK	130				12.2	OK	130	8.27	OK	130	8	OK	130
422316A	Condamine_R Cecil Wr	Condamine River	17/09/1996				438	OK	130										16.7	OK	130						
422316A	Condamine_R Cecil Wr	Condamine River	17/09/1996				438	OK	130				36	OK	130				16.7	OK	130				8.6	OK	130
422316A	Condamine_R Cecil Wr	Condamine River	3/12/1996				430	OK	130										25.9	OK	130						
422316A	Condamine_R Cecil Wr	Condamine River	3/12/1996	464	OK	130				6.1	OK	130										7.87	OK	130			
422316A	Condamine_R Cecil Wr	Condamine River	11/02/1997	432	OK	130	436	OK	130	6.7	OK	130	10	OK	130				30.8	OK	130	8.44	OK	130	8.9	OK	130
422316A	Condamine_R Cecil Wr	Condamine River	25/03/1997				271	OK	130										24.3	OK	130						
422316A	Condamine_R Cecil Wr	Condamine River	24/04/1997				286	OK	130										25.8	OK	130						

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Station	Station Name	Receiving Creek/ River	Date	V2010.00	F2010.00	Q2010.00	V2010.50	F2010.50	Q2010.50	V2030.00	F2030.00	Q2030.00	V2030.50	F2030.50	Q2030.50	V2030.51	F2030.51	Q2030.51	V2080.50	F2080.50	Q2080.50	V2100.00	F2100.00	Q2100.00	V2100.50	F2100.50	Q2100.50
				Conductivity @ 25C (uS/cm)			Conductivity @ 25C FLD			Turbidity (NTU)			Turbidity (NTU) FLD			Turbidity (NTU) FLD Webb test only			Water Temperature FLD			pH (pH units)			pH (pH units) FLD		
422316A	Condamine_R Cecil Wr	Condamine River	24/04/1997				286	OK	130				59	OK	130				25.8	OK	130				7.7	OK	130
422316A	Condamine_R Cecil Wr	Condamine River	29/05/1997				287	OK	130										16	OK	130				7.2	OK	130
422316A	Condamine_R Cecil Wr	Condamine River	20/06/1997	359	OK	130	349	OK	130	15	OK	130	19.9	OK	130				14.9	OK	130	7.91	OK	130	8	OK	130
422316A	Condamine_R Cecil Wr	Condamine River	22/07/1997				300	OK	130				63.1	OK	130				14.6	OK	130				8.3	OK	130
422316A	Condamine_R Cecil Wr	Condamine River	25/09/1997				355	OK	130										19.9	OK	130						
422316A	Condamine_R Cecil Wr	Condamine River	25/09/1997				355	OK	130										19.9	OK	130						
422316A	Condamine_R Cecil Wr	Condamine River	25/11/1997				280	OK	130										25.7	OK	130						
422316A	Condamine_R Cecil Wr	Condamine River	25/11/1997				444	OK	130				112	OK	130				28.6	OK	130				8.2	OK	130
422316A	Condamine_R Cecil Wr	Condamine River	25/11/1997	282	OK	130				108	OK	130										7.51	OK	130			
422316A	Condamine_R Cecil Wr	Condamine River	28/04/1998				331	OK	130										22.4	OK	130						
422316A	Condamine_R Cecil Wr	Condamine River	7/10/1998	366	OK	130	360	OK	130	43	OK	130	74	OK	130				24.2	OK	130	7.6	OK	130	8.4	OK	130
422316A	Condamine_R Cecil Wr	Condamine River	18/02/1999	193.33	OK	130	202	OK	130	126	OK	130	153	OK	130				28.6	OK	130	7.5	OK	130	7.6	OK	130
422316A	Condamine_R Cecil Wr	Condamine River	19/03/1999				264	OK	130										26.5	OK	130						
422316A	Condamine_R Cecil Wr	Condamine River	16/06/1999	314.05	OK	130	350	OK	130	23.2	OK	130	42	OK	130				12.5	OK	130	8.21	OK	130	8.4	OK	130
422316A	Condamine_R Cecil Wr	Condamine River	29/06/1999				348	OK	130										14.1	OK	130						
422316A	Condamine_R Cecil Wr	Condamine River	29/06/1999				348	OK	130										14.4	OK	130						
422316A	Condamine_R Cecil Wr	Condamine River	1/09/1999	376	OK	130	380	OK	130	10.6	OK	130	18	OK	130				16.9	OK	130	8.3	OK	130	8.6	OK	130
422316A	Condamine_R Cecil Wr	Condamine River	12/11/1999				391	OK	130										20.3	OK	130						
422316A	Condamine_R Cecil Wr	Condamine River	17/11/1999				242	OK	130										25.4	OK	130						
422316A	Condamine_R Cecil Wr	Condamine River	14/01/2000				426	OK	130										25.1	OK	130				7.6	OK	130
422316A	Condamine_R Cecil Wr	Condamine River	24/01/2000				396	OK	130										28	OK	130				7.7	OK	130
422316A	Condamine_R Cecil Wr	Condamine River	27/01/2000				368	OK	130										25.8	OK	130						
422316A	Condamine_R Cecil Wr	Condamine River	27/01/2000	387	OK	130	380	OK	130	58.7	OK	130	81	OK	130				26.1	OK	130	7.75	OK	130	7.9	OK	130
422316A	Condamine_R Cecil Wr	Condamine River	21/02/2000	326	OK	130	316	OK	130	120	OK	130	173	OK	130				25.4	OK	130	7.52	OK	130	7.5	OK	130
422316A	Condamine_R Cecil Wr	Condamine River	19/06/2000	470	OK	130	477	OK	130	9	OK	130	16	OK	130				14.2	OK	130	8.3	OK	130	7.5	OK	130
422316A	Condamine_R Cecil Wr	Condamine River	5/09/2000				395	OK	130				15	OK	130				16.5	OK	130				8.5	OK	130
422316A	Condamine_R Cecil Wr	Condamine River	21/12/2000				287	OK	130										27.2	OK	130						
422316A	Condamine_R Cecil Wr	Condamine River	5/01/2001				314	OK	130										30.6	OK	130						
422316A	Condamine_R Cecil Wr	Condamine River	5/01/2001				314	OK	130										30.6	OK	130						
422316A	Condamine_R Cecil Wr	Condamine River	18/01/2001				318	OK	130										30.8	OK	130						
422316A	Condamine_R Cecil Wr	Condamine River	25/01/2001																								
422316A	Condamine_R Cecil Wr	Condamine River	1/02/2001				318	OK	130										25.9	OK	130						
422316A	Condamine_R Cecil Wr	Condamine River	1/02/2001	309	OK	130	315	OK	130	322	OK	130	451	OK	130				25.3	OK	130	7.21	OK	130	6.9	OK	130
422316A	Condamine_R Cecil Wr	Condamine River	6/02/2001																								
422316A	Condamine_R Cecil Wr	Condamine River	8/02/2001																								
422316A	Condamine_R Cecil Wr	Condamine River	27/02/2001				256	OK	130										32.9	OK	130				6.4	OK	130
422316A	Condamine_R Cecil Wr	Condamine River	17/03/2001	303	OK	130				82	OK	130										7.68	OK	130			
422316A	Condamine_R Cecil Wr	Condamine River	20/03/2001				276	OK	130										24.6	OK	130						
422316A	Condamine_R Cecil Wr	Condamine River	17/04/2001																								
422316A	Condamine_R Cecil Wr	Condamine River	13/06/2001	318	OK	130	264	OK	130	53.3	OK	130	10	OK	130				15.2	OK	130	7.84	OK	130	8.5	OK	130
422316A	Condamine_R Cecil Wr	Condamine River	11/07/2001				265	OK	130				60	OK	130	57	OK	130	12.7	OK	130				7.9	OK	130
422316A	Condamine_R Cecil Wr	Condamine River	9/11/2001	294.4	OK	130				27.3	OK	130										7.82	OK	130			
422316A	Condamine_R Cecil Wr	Condamine River	10/04/2002				183	OK	130				481	OK	130				23.1	OK	130				6.7	OK	130
422316A	Condamine_R Cecil Wr	Condamine River	17/04/2002	188.2	OK	130				407	OK	130										7.19	OK	130			
422316A	Condamine_R Cecil Wr	Condamine River	26/09/2002				208	OK	130							5	OK	130	17.5	OK	130				7.7	OK	130
422316A	Condamine_R Cecil Wr	Condamine River	21/11/2002				241	OK	130				271	OK	130				22.4	OK	130				8.1	OK	130
422316A	Condamine_R Cecil Wr	Condamine River	8/05/2003				106	OK	130				496	OK	130				17.6	OK	130				7.3	OK	130
422316A	Condamine_R Cecil Wr	Condamine River	5/06/2003				121	OK	130				441	OK	130	582	OK	130	18.1	OK	130				7	OK	130
422316A	Condamine_R Cecil Wr	Condamine River	6/11/2003				130	OK	130										18.5	OK	130						
422316A	Condamine_R Cecil Wr	Condamine River	10/03/2004	285	OK	130	289	OK	130	51	OK	130	51	OK	130				24.7	OK	130	7.6	OK	130	7.4	OK	130
422316A	Condamine_R Cecil Wr	Condamine River	11/03/2004	215	OK	130	215	OK	130	690	OK	130	965	OK	130				25.6	OK	130	7.45	OK	130	7.6	OK	130
422316A	Condamine_R Cecil Wr	Condamine River	20/12/2005	229	OK	130	224	OK	130	234	OK	130	229	OK	130				26.7	OK	130	7.45	OK	130	7.5	OK	130
422316A	Condamine_R Cecil Wr	Condamine River	15/03/2006	184	OK	130	184	OK	130	309	OK	130	511	OK	130				22.9	OK	130	7.56	OK	130	3.5	OK	130
422316A	Condamine_R Cecil Wr	Condamine River	29/08/2006	202	OK	10				585	OK	10										7.82	OK	10			
422316A	Condamine_R Cecil Wr	Condamine River	1/07/2009				225	OK	130				74	OK	130				13.3	OK	130				7.9	OK	130

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Station	Station Name	Receiving Creek/ River	Date	V2010.00	F2010.00	Q2010.00	V2010.50	F2010.50	Q2010.50	V2030.00	F2030.00	Q2030.00	V2030.50	F2030.50	Q2030.50	V2030.51	F2030.51	Q2030.51	V2080.50	F2080.50	Q2080.50	V2100.00	F2100.00	Q2100.00	V2100.50	F2100.50	Q2100.50
				Conductivity @ 25C (uS/cm)			Conductivity @ 25C FLD			Turbidity (NTU)			Turbidity (NTU) FLD			Turbidity (NTU) FLD Webb test only			Water Temperature FLD			pH (pH units)			pH (pH units) FLD		
422322A	Rocky_Ck Pittsworth	Condamine River	26/09/1963	1760	OK	125																7.5	OK	135			
422322A	Rocky_Ck Pittsworth	Condamine River	30/08/1971	1120	OK	125																7.1	OK	135			
422322A	Rocky_Ck Pittsworth	Condamine River	5/05/1983	150	OK	135				100	OK	125										7.9	OK	135			
422322A	Rocky_Ck Pittsworth	Condamine River	4/12/1996	478	OK	130				9999	OK	130										7.42	OK	130			
422322A	Rocky_Ck Pittsworth	Condamine River	4/12/1996	309	OK	130				6213	OK	130										7.32	OK	130			
422323A	Tummalville	Condamine River	11/03/1963	323	OK	125																7.2	OK	135			
422323A	Tummalville	Condamine River	28/05/1963	260	OK	125																6.7	OK	135			
422323A	Tummalville	Condamine River	1/08/1963	495	OK	125																7.7	OK	135			
422323A	Tummalville	Condamine River	26/09/1963	680	OK	125													18	OK	130	7.4	OK	135			
422323A	Tummalville	Condamine River	31/10/1963	570	OK	125													26	OK	130	7.6	OK	135			
422323A	Tummalville	Condamine River	16/01/1964	415	OK	125													26	OK	130	7.6	OK	135			
422323A	Tummalville	Condamine River	11/03/1964	210	OK	125																7.5	OK	135			
422323A	Tummalville	Condamine River	13/03/1964	280	OK	125																8	OK	135			
422323A	Tummalville	Condamine River	17/07/1964	440	OK	125																8.2	OK	135			
422323A	Tummalville	Condamine River	17/12/1964	700	OK	125																7.5	OK	135			
422323A	Tummalville	Condamine River	26/03/1971	355	OK	125																7.2	OK	135			
422323A	Tummalville	Condamine River	26/03/1971																23	OK	130						
422323A	Tummalville	Condamine River	1/06/1971	440	OK	135																7.5	OK	135			
422323A	Tummalville	Condamine River	17/06/1971	422	OK	135													12	OK	130	7.8	OK	135			
422323A	Tummalville	Condamine River	21/07/1971	570	OK	125																8	OK	135			
422323A	Tummalville	Condamine River	21/07/1971																11	OK	130						
422323A	Tummalville	Condamine River	1/09/1971	600	OK	125													16	OK	130	7.9	OK	135			
422323A	Tummalville	Condamine River	20/10/1971	510	OK	125													20	OK	130	7.7	OK	135			
422323A	Tummalville	Condamine River	16/12/1971	380	OK	125													22	OK	130	7.3	OK	135			
422323A	Tummalville	Condamine River	27/01/1972	400	OK	125													28	OK	130	7.6	OK	135			
422323A	Tummalville	Condamine River	15/03/1972	340	OK	125													24	OK	130	7.4	OK	135			
422323A	Tummalville	Condamine River	13/07/1972	355	OK	125																7.5	OK	135			
422323A	Tummalville	Condamine River	8/09/1972	400	OK	125																7.8	OK	135			
422323A	Tummalville	Condamine River	25/10/1972	360	OK	125																7.2	OK	135			
422323A	Tummalville	Condamine River	7/12/1972	360	OK	125																6.8	OK	135			
422323A	Tummalville	Condamine River	7/12/1972																23	OK	130						
422323A	Tummalville	Condamine River	9/01/1973	280	OK	125																7	OK	135			
422323A	Tummalville	Condamine River	25/01/1973	295	OK	125													27	OK	130	7.6	OK	135			
422323A	Tummalville	Condamine River	4/05/1973	358	OK	125																8.2	OK	135			
422323A	Tummalville	Condamine River	4/05/1973																17	OK	130						
422323A	Tummalville	Condamine River	19/06/1973	400	OK	125																8.1	OK	135			
422323A	Tummalville	Condamine River	19/06/1973																15	OK	130						
422323A	Tummalville	Condamine River	25/07/1973	290	OK	125																7.9	OK	135			
422323A	Tummalville	Condamine River	25/07/1973																15	OK	130						
422323A	Tummalville	Condamine River	19/08/1973	645	OK	125																8.5	OK	135			
422323A	Tummalville	Condamine River	19/08/1973																19	OK	130						
422323A	Tummalville	Condamine River	31/10/1973	370	OK	125																7.7	OK	135			
422323A	Tummalville	Condamine River	31/10/1973																23	OK	130						
422323A	Tummalville	Condamine River	20/12/1973	350	OK	125																7.8	OK	135			
422323A	Tummalville	Condamine River	28/03/1974	257	OK	125																8.1	OK	135			
422323A	Tummalville	Condamine River	29/08/1974	410	OK	125																7.7	OK	135			
422323A	Tummalville	Condamine River	10/06/1975	585	OK	125																8.1	OK	135			
422323A	Tummalville	Condamine River	14/10/1975	570	OK	125																7.9	OK	135			
422323A	Tummalville	Condamine River	8/12/1975	400	OK	125																7.7	OK	135			
422323A	Tummalville	Condamine River	11/12/1975	380	OK	125																7.7	OK	135			
422323A	Tummalville	Condamine River	26/08/1976	710	OK	125																8.1	OK	135			
422323A	Tummalville	Condamine River	9/02/1978	375	OK	125																7.5	OK	135			
422323A	Tummalville	Condamine River	6/04/1978	520	OK	125																8.4	OK	135			
422323A	Tummalville	Condamine River	16/02/1979	185	OK	135													26	OK	130	7.9	OK	135			
422323A	Tummalville	Condamine River	16/07/1979	410	OK	125																7.9	OK	135			

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Station	Station Name	Receiving Creek/ River	Date	V2010.00	F2010.00	Q2010.00	V2010.50	F2010.50	Q2010.50	V2030.00	F2030.00	Q2030.00	V2030.50	F2030.50	Q2030.50	V2030.51	F2030.51	Q2030.51	V2080.50	F2080.50	Q2080.50	V2100.00	F2100.00	Q2100.00	V2100.50	F2100.50	Q2100.50
				Conductivity @ 25C (uS/cm)			Conductivity @ 25C FLD			Turbidity (NTU)			Turbidity (NTU) FLD			Turbidity (NTU) FLD Webb test only			Water Temperature FLD			pH (pH units)			pH (pH units) FLD		
422323A	Tummalville	Condamine River	16/07/1979																13	OK	130						
422323A	Tummalville	Condamine River	1/02/1980	360	OK	125																7.1	OK	135			
422323A	Tummalville	Condamine River	1/02/1980																28	OK	130						
422323A	Tummalville	Condamine River	16/04/1980	455	OK	125																7.4	OK	135			
422323A	Tummalville	Condamine River	16/04/1980																21	OK	130						
422323A	Tummalville	Condamine River	3/07/1980	616	OK	125																7.9	OK	135			
422323A	Tummalville	Condamine River	3/07/1980																11	OK	130						
422323A	Tummalville	Condamine River	11/09/1980	800	OK	125																7.9	OK	135			
422323A	Tummalville	Condamine River	8/04/1981	390	OK	125																7.4	OK	135			
422323A	Tummalville	Condamine River	8/04/1981																22	OK	130						
422323A	Tummalville	Condamine River	2/07/1981	427	OK	125				22	OK	125										7.6	OK	135			
422323A	Tummalville	Condamine River	2/07/1981																16	OK	130						
422323A	Tummalville	Condamine River	15/09/1981	780	OK	125																7.9	OK	135			
422323A	Tummalville	Condamine River	7/05/1982	400	OK	125				5	OK	125										7.7	OK	135			
422323A	Tummalville	Condamine River	30/06/1982	590	OK	125				3	OK	125										7.7	OK	135			
422323A	Tummalville	Condamine River	19/11/1982	754	OK	125				9	OK	125										8	OK	135			
422323A	Tummalville	Condamine River	19/11/1982																23	OK	130						
422323A	Tummalville	Condamine River	3/02/1983	445	OK	125				24	OK	125										7.5	OK	135			
422323A	Tummalville	Condamine River	3/02/1983																26	OK	130						
422323A	Tummalville	Condamine River	4/05/1983	150	OK	125				100	OK	125										7.3	OK	135			
422323A	Tummalville	Condamine River	11/05/1983	205	OK	125				80	OK	125										7.8	OK	135			
422323A	Tummalville	Condamine River	2/06/1983	225	OK	125				15	OK	125										7.7	OK	135			
422323A	Tummalville	Condamine River	27/07/1983	465	OK	125				17	OK	125										8.2	OK	135			
422323A	Tummalville	Condamine River	12/10/1983	500	OK	125				40	OK	125										7.3	OK	135			
422323A	Tummalville	Condamine River	12/10/1983																20	OK	130						
422323A	Tummalville	Condamine River	16/12/1983	355	OK	125				100	OK	125										7.8	OK	135			
422323A	Tummalville	Condamine River	16/12/1983																22	OK	130						
422323A	Tummalville	Condamine River	31/05/1984	640	OK	125																7.1	OK	135			
422323A	Tummalville	Condamine River	31/05/1984																15	OK	130						
422323A	Tummalville	Condamine River	11/10/1984	740	OK	125																7.8	OK	135			
422323A	Tummalville	Condamine River	11/10/1984																23	OK	130						
422323A	Tummalville	Condamine River	12/03/1985	445	OK	125				30	OK	125										7.6	OK	135			
422323A	Tummalville	Condamine River	12/03/1985																23	OK	130						
422323A	Tummalville	Condamine River	14/05/1985	560	OK	125				16	OK	125										8.2	OK	135			
422323A	Tummalville	Condamine River	14/05/1985																15	OK	130						
422323A	Tummalville	Condamine River	29/07/1985	500	OK	125				54	OK	125										7.7	OK	135			
422323A	Tummalville	Condamine River	29/07/1985																13	OK	130						
422323A	Tummalville	Condamine River	22/10/1985	770	OK	125				1	OK	125										7.6	OK	135			
422323A	Tummalville	Condamine River	22/10/1985				910	OK	130										18	OK	130						
422323A	Tummalville	Condamine River	3/07/1986	830	OK	125				16	OK	125										8.3	OK	135			
422323A	Tummalville	Condamine River	3/07/1986				936	OK	130										13	OK	130						
422323A	Tummalville	Condamine River	7/10/1986	480	OK	125				43	OK	125										8	OK	135			
422323A	Tummalville	Condamine River	7/10/1986				506	OK	130										16	OK	130						
422323A	Tummalville	Condamine River	13/01/1987	315	OK	125				100	OK	125										7.7	OK	135			
422323A	Tummalville	Condamine River	13/01/1987				380	OK	130										28	OK	130						
422323A	Tummalville	Condamine River	2/04/1987	365	OK	125				41	OK	125										8.2	OK	135			
422323A	Tummalville	Condamine River	2/04/1987																23	OK	130						
422323A	Tummalville	Condamine River	15/06/1987	265	OK	125				84	OK	125										7.9	OK	135			
422323A	Tummalville	Condamine River	15/06/1987				249	OK	130										17	OK	130						
422323A	Tummalville	Condamine River	2/09/1987	405	OK	125				87	OK	125										8	OK	135			
422323A	Tummalville	Condamine River	2/09/1987				463	OK	130										15	OK	130						
422323A	Tummalville	Condamine River	4/11/1987	395	OK	125				78	OK	125										8	OK	135			
422323A	Tummalville	Condamine River	4/11/1987				469	OK	130										25	OK	130						
422323A	Tummalville	Condamine River	18/05/1988	440	OK	125				60	OK	125										7.9	OK	135			
422323A	Tummalville	Condamine River	18/05/1988				451	OK	130										18	OK	130						

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Station	Station Name	Receiving Creek/ River	Date	V2010.00	F2010.00	Q2010.00	V2010.50	F2010.50	Q2010.50	V2030.00	F2030.00	Q2030.00	V2030.50	F2030.50	Q2030.50	V2030.51	F2030.51	Q2030.51	V2080.50	F2080.50	Q2080.50	V2100.00	F2100.00	Q2100.00	V2100.50	F2100.50	Q2100.50
				Conductivity @ 25C (uS/cm)			Conductivity @ 25C FLD			Turbidity (NTU)			Turbidity (NTU) FLD			Turbidity (NTU) FLD Webb test only			Water Temperature FLD			pH (pH units)			pH (pH units) FLD		
422323A	Tummalville	Condamine River	9/02/1989	265	OK	125				100	OK	125										7.3	OK	135			
422323A	Tummalville	Condamine River	9/02/1989				298	OK	130										25	OK	130						
422323A	Tummalville	Condamine River	23/08/1989	600	OK	125																7.8	OK	135			
422323A	Tummalville	Condamine River	23/08/1989				526	OK	130										15	OK	130						
422323A	Tummalville	Condamine River	13/07/1990	536	OK	125				1	OK	125										8.1	OK	135			
422323A	Tummalville	Condamine River	13/07/1990				455	OK	130										12	OK	130						
422323A	Tummalville	Condamine River	1/1/1990	530	OK	125				11	OK	125										7.6	OK	135			
422323A	Tummalville	Condamine River	19/02/1992	283	OK	125	311	OK	130	125	OK	151							25	OK	130				7	OK	135
422323A	Tummalville	Condamine River	10/07/1992	705	OK	125				3	OK	125										8.3	OK	135			
422323A	Tummalville	Condamine River	26/10/1992	436	OK	125				6	OK	125										7.4	OK	135			
422323A	Tummalville	Condamine River	26/10/1992				452	OK	130										25	OK	130						
422323A	Tummalville	Condamine River	10/02/1993	396	OK	125				27	OK	125										7.4	OK	135			
422323A	Tummalville	Condamine River	10/02/1993				448	OK	130										26	OK	130						
422323A	Tummalville	Condamine River	25/02/1993				418	OK	130										24.2	OK	130						
422323A	Tummalville	Condamine River	10/06/1993	449	OK	125				54	OK	125										7.8	OK	135			
422323A	Tummalville	Condamine River	10/06/1993				446	OK	130										13.2	OK	130				8.2	OK	130
422323A	Tummalville	Condamine River	9/03/1994	621	OK	125				89	OK	125										8.1	OK	135			
422323A	Tummalville	Condamine River	9/03/1994				657	OK	130										21	OK	130						
422323A	Tummalville	Condamine River	14/07/1994	297	OK	125				25	OK	125										7.8	OK	135			
422323A	Tummalville	Condamine River	14/07/1994				313	OK	130										14.3	OK	130				8.4	OK	130
422323A	Tummalville	Condamine River	3/04/1995				230	OK	130										22.2	OK	130						
422323A	Tummalville	Condamine River	3/04/1995	213.4	OK	130	227	OK	130	200	OK	130							24.6	OK	130	7.86	OK	130	7.8	OK	130
422323A	Tummalville	Condamine River	29/08/1995	326.5	OK	130				248	OK	130										7.59	OK	130			
422323A	Tummalville	Condamine River	29/08/1995				338	OK	130				327	OK	130				24.7	OK	130				8.8	OK	130
422323A	Tummalville	Condamine River	13/09/1995				283	OK	130										18.6	OK	130						
422323A	Tummalville	Condamine River	15/09/1995				284	OK	130										18.9	OK	130						
422323A	Tummalville	Condamine River	22/11/1995				168	OK	130										21.5	OK	130						
422323A	Tummalville	Condamine River	29/11/1995				230	OK	130										26.6	OK	130						
422323A	Tummalville	Condamine River	29/11/1995				250	OK	130										26.6	OK	130						
422323A	Tummalville	Condamine River	8/01/1996	230	OK	130	215	OK	130	307	OK	130	464	OK	130				25.3	OK	130	7.53	OK	130	7.8	OK	130
422323A	Tummalville	Condamine River	1/02/1996				300	OK	130										28.4	OK	130						
422323A	Tummalville	Condamine River	24/02/1996																								
422323A	Tummalville	Condamine River	24/02/1996				321	OK	130				137	OK	130				15.7	OK	130				8.1	OK	130
422323A	Tummalville	Condamine River	17/07/1996				696	OK	130										8.1	OK	130						
422323A	Tummalville	Condamine River	18/09/1996				543	OK	130				65	OK	130				18.3	OK	130				8.5	OK	130
422323A	Tummalville	Condamine River	23/10/1996				610	OK	130										23.6	OK	130						
422323A	Tummalville	Condamine River	24/10/1996				544	OK	130										22.1	OK	130						
422323A	Tummalville	Condamine River	20/12/1996	376	OK	130	378	OK	130	204	OK	130	313	OK	130				24.9	OK	130	7.47	OK	130	7.8	OK	130
422323A	Tummalville	Condamine River	25/03/1997				353	OK	130										22.5	OK	130				7.7	OK	130
422323A	Tummalville	Condamine River	18/04/1997				371	OK	130										21	OK	130						
422323A	Tummalville	Condamine River	18/04/1997																								
422323A	Tummalville	Condamine River	18/04/1997				371	OK	130				56	OK	130				21.4	OK	130				8.1	OK	130
422323A	Tummalville	Condamine River	18/04/1997				371	OK	130										21.8	OK	130						
422323A	Tummalville	Condamine River	24/04/1997				306	OK	130										21.9	OK	130						
422323A	Tummalville	Condamine River	29/05/1997				609	OK	130										17.1	OK	130						
422323A	Tummalville	Condamine River	5/06/1997				514	OK	130										15.7	OK	130						
422323A	Tummalville	Condamine River	24/07/1997	434	OK	130	441	OK	130	9.6	OK	130	13.2	OK	130				12.8	OK	130	7.69	OK	130	8.3	OK	130
422323A	Tummalville	Condamine River	17/09/1997				267	OK	130										19.6	OK	130						
422323A	Tummalville	Condamine River	17/09/1997				270	OK	130										19.7	OK	130						
422323A	Tummalville	Condamine River	27/11/1997	450	OK	130				21.7	OK	130										8.06	OK	130			
422323A	Tummalville	Condamine River	27/11/1997				443	OK	130				27.8	OK	130				28.5	OK	130				8.7	OK	130
422323A	Tummalville	Condamine River	30/04/1998				353	OK	130										20	OK	130				8.7	OK	130
422323A	Tummalville	Condamine River	17/07/1998				340	OK	130										12.4	OK	130						
422323A	Tummalville	Condamine River	11/08/1998				158	OK	130										15.2	OK	130						
422323A	Tummalville	Condamine River	6/10/1998				372	OK	130										24	OK	130						

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Station	Station Name	Receiving Creek/ River	Date	V2010.00	F2010.00	Q2010.00	V2010.50	F2010.50	Q2010.50	V2030.00	F2030.00	Q2030.00	V2030.50	F2030.50	Q2030.50	V2030.51	F2030.51	Q2030.51	V2080.50	F2080.50	Q2080.50	V2100.00	F2100.00	Q2100.00	V2100.50	F2100.50	Q2100.50	
				Conductivity @ 25C (uS/cm)			Conductivity @ 25C FLD			Turbidity (NTU)			Turbidity (NTU) FLD			Turbidity (NTU) FLD Web test only			Water Temperature FLD			pH (pH units)			pH (pH units) FLD			
422323A	Tummalville	Condamine River	11/01/1999																									
422323A	Tummalville	Condamine River	22/02/1999	218	OK	130	220	OK	130	64.7	OK	130	87	OK	130				26.6	OK	130	7.79	OK	130	8.1	OK	130	
422323A	Tummalville	Condamine River	16/03/1999				271	OK	130										26	OK	130							
422323A	Tummalville	Condamine River	19/03/1999				264	OK	130										26.3	OK	130							
422323A	Tummalville	Condamine River	12/04/1999							40	OK	130																
422323A	Tummalville	Condamine River	16/06/1999	283.54	OK	130	306	OK	130	27.4	OK	130	54	OK	130				11.4	OK	130	7.86	OK	130	8.3	OK	130	
422323A	Tummalville	Condamine River	2/07/1999				301	OK	130										11.8	OK	130							
422323A	Tummalville	Condamine River	12/07/1999							90	OK	130																
422323A	Tummalville	Condamine River	11/08/1999	334	OK	130	357	OK	130	15.7	OK	130	27	OK	130				12.5	OK	130	8.23	OK	130	8.6	OK	130	
422323A	Tummalville	Condamine River	10/11/1999				146	OK	130										19.6	OK	130							
422323A	Tummalville	Condamine River	16/11/1999				249	OK	130										22.7	OK	130							
422323A	Tummalville	Condamine River	29/02/2000	448	OK	130	441	OK	130	8.3	OK	130	33	OK	130				23.9	OK	130	8.06	OK	130	8.3	OK	130	
422323A	Tummalville	Condamine River	2/03/2000				439	OK	130										25.1	OK	130							
422323A	Tummalville	Condamine River	19/06/2000	310	OK	130	332	OK	130	41	OK	130	23	OK	130				14.6	OK	130	7.75	OK	130	7.6	OK	130	
422323A	Tummalville	Condamine River	13/09/2000				358	OK	130				114	OK	130				15.8	OK	130				5.6	OK	130	
422323A	Tummalville	Condamine River	9/01/2001				323	OK	130										27.6	OK	130							
422323A	Tummalville	Condamine River	14/02/2001				234	OK	130																			
422323A	Tummalville	Condamine River	14/02/2001	238	OK	130	234	OK	130	87.2	OK	130	70	OK	130				22.1	OK	130	7.86	OK	130	8	OK	130	
422323A	Tummalville	Condamine River	13/06/2001	334	OK	130	334	OK	130	26.6	OK	130	10	OK	130				15.7	OK	130	7.97	OK	130	8.4	OK	130	
422323A	Tummalville	Condamine River	18/07/2001				377	OK	130				14	OK	130	12	OK	130	10.3	OK	130				8.7	OK	130	
422323A	Tummalville	Condamine River	12/02/2002				279	OK	130										25	OK	130							
422323A	Tummalville	Condamine River	21/11/2002				617	OK	130				29	OK	130				23.7	OK	130				9.2	OK	130	
422323A	Tummalville	Condamine River	7/05/2003				393	OK	130				43	OK	130				19.1	OK	130				8.3	OK	130	
422323A	Tummalville	Condamine River	31/07/2003				386	OK	130				46	OK	130	50	OK	130	9.2	OK	130				9	OK	130	
422323A	Tummalville	Condamine River	15/12/2003				384	OK	130										26.2	OK	130							
422323A	Tummalville	Condamine River	9/03/2004	205	OK	130	203	OK	130	475	OK	130	677	OK	130				24	OK	130	7.4	OK	130	7.4	OK	130	
422323A	Tummalville	Condamine River	11/03/2004	200	OK	130	203	OK	130	195	OK	130	300	OK	130				25.1	OK	130	7.4	OK	130	7.5	OK	130	
422323A	Tummalville	Condamine River	21/09/2005	285	OK	130				144	OK	130										7.36	OK	130				
422323A	Tummalville	Condamine River	7/02/2006	291	OK	10	288	OK	130	138	OK	10	296	OK	130				27.6	OK	130	7.7	OK	10	7.6	OK	130	
422323A	Tummalville	Condamine River	29/04/2009				392	OK	130				25	OK	130				17.1	OK	130				8.5	OK	130	
422333A	Condamine_R Loudouns	Condamine River	18/06/1963	345	OK	125																7.4	OK	135				
422333A	Condamine_R Loudouns	Condamine River	18/03/1971	370	OK	125																7	OK	135				
422333A	Condamine_R Loudouns	Condamine River	18/06/1971	610	OK	125													12	OK	130	7.4	OK	135				
422333A	Condamine_R Loudouns	Condamine River	21/07/1971	884	OK	125													11	OK	130	8.1	OK	135				
422333A	Condamine_R Loudouns	Condamine River	31/08/1971	770	OK	125													18	OK	130	7.9	OK	135				
422333A	Condamine_R Loudouns	Condamine River	19/10/1971	780	OK	125													24	OK	130	7.2	OK	135				
422333A	Condamine_R Loudouns	Condamine River	18/11/1971	980	OK	125																7.8	OK	135				
422333A	Condamine_R Loudouns	Condamine River	14/03/1972	410	OK	125													24	OK	130	7.5	OK	135				
422333A	Condamine_R Loudouns	Condamine River	22/08/1972	480	OK	125																7.7	OK	135				
422333A	Condamine_R Loudouns	Condamine River	24/10/1972	540	OK	125																8.1	OK	135				
422333A	Condamine_R Loudouns	Condamine River	16/03/1973	350	OK	125													26	OK	130	7.9	OK	135				
422333A	Condamine_R Loudouns	Condamine River	9/05/1973	475	OK	125													21	OK	130	7.5	OK	135				
422333A	Condamine_R Loudouns	Condamine River	19/06/1973	490	OK	125													12	OK	130	8.1	OK	135				
422333A	Condamine_R Loudouns	Condamine River	25/07/1973	485	OK	125													14	OK	130	8.3	OK	135				
422333A	Condamine_R Loudouns	Condamine River	18/09/1973	670	OK	125													20	OK	130	7.8	OK	135				
422333A	Condamine_R Loudouns	Condamine River	30/10/1973	570	OK	125													21	OK	130	7.8	OK	135				
422333A	Condamine_R Loudouns	Condamine River	27/03/1974	280	OK	125																7.7	OK	135				
422333A	Condamine_R Loudouns	Condamine River	27/03/1974																24	OK	130							
422333A	Condamine_R Loudouns	Condamine River	12/09/1974	595	OK	125																7.9	OK	135				
422333A	Condamine_R Loudouns	Condamine River	24/08/1976	980	OK	125																8.2	OK	135				
422333A	Condamine_R Loudouns	Condamine River	5/04/1978	855	OK	125																8.3	OK	135				
422333A	Condamine_R Loudouns	Condamine River	10/10/1978	680	OK	125																8.1	OK	135				
422333A	Condamine_R Loudouns	Condamine River	10/07/1979	600	OK	125																7.5	OK	135				
422333A	Condamine_R Loudouns	Condamine River	10/07/1979																11	OK	130							
422333A	Condamine_R Loudouns	Condamine River	11/09/1979	1300	OK	125																7.6	OK	135				

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Station	Station Name	Receiving Creek/ River	Date	V2010.00	F2010.00	Q2010.00	V2010.50	F2010.50	Q2010.50	V2030.00	F2030.00	Q2030.00	V2030.50	F2030.50	Q2030.50	V2030.51	F2030.51	Q2030.51	V2080.50	F2080.50	Q2080.50	V2100.00	F2100.00	Q2100.00	V2100.50	F2100.50	Q2100.50	
				Conductivity @ 25C (uS/cm)			Conductivity @ 25C FLD			Turbidity (NTU)			Turbidity (NTU) FLD			Turbidity (NTU) FLD Webb test only			Water Temperature FLD			pH (pH units)			pH (pH units) FLD			
422333A	Condamine_R Loudouns	Condamine River	11/09/1979																19	OK	130							
422333A	Condamine_R Loudouns	Condamine River	13/09/1979	570	OK	125																7.7	OK	135				
422333A	Condamine_R Loudouns	Condamine River	31/01/1980	275	OK	135													24	OK	130	7.1	OK	135				
422333A	Condamine_R Loudouns	Condamine River	2/07/1980	790	OK	125																7.5	OK	135				
422333A	Condamine_R Loudouns	Condamine River	2/07/1980																11	OK	130							
422333A	Condamine_R Loudouns	Condamine River	28/05/1984	710	OK	125																7.3	OK	135				
422333A	Condamine_R Loudouns	Condamine River	28/05/1984																16	OK	130							
422333A	Condamine_R Loudouns	Condamine River	10/10/1984	980	OK	125				13	OK	125										7.3	OK	135				
422333A	Condamine_R Loudouns	Condamine River	10/10/1984																21	OK	130							
422333A	Condamine_R Loudouns	Condamine River	9/01/1985	1050	OK	125				10	OK	125										8.1	OK	135				
422333A	Condamine_R Loudouns	Condamine River	9/01/1985																28	OK	130							
422333A	Condamine_R Loudouns	Condamine River	13/05/1985	1300	OK	125				13	OK	125										7.8	OK	135				
422333A	Condamine_R Loudouns	Condamine River	13/05/1985																18	OK	130							
422333A	Condamine_R Loudouns	Condamine River	24/07/1985	520	OK	125				34	OK	125										7.8	OK	135				
422333A	Condamine_R Loudouns	Condamine River	24/07/1985																11	OK	130							
422333A	Condamine_R Loudouns	Condamine River	21/10/1985	1200	OK	125				1	OK	125										7.9	OK	135				
422333A	Condamine_R Loudouns	Condamine River	21/10/1985				1413	OK	130										22	OK	130							
422333A	Condamine_R Loudouns	Condamine River	6/01/1986	940	OK	125				8	OK	125										8.1	OK	135				
422333A	Condamine_R Loudouns	Condamine River	6/01/1986				950	OK	130										28	OK	130							
422333A	Condamine_R Loudouns	Condamine River	2/07/1986	1000	OK	125				7	OK	125										8	OK	135				
422333A	Condamine_R Loudouns	Condamine River	2/07/1986				1119	OK	130										11	OK	130							
422333A	Condamine_R Loudouns	Condamine River	9/10/1986	1550	OK	125	1473	OK	130	5	OK	125							20	OK	130	8.9	OK	135				
422333A	Condamine_R Loudouns	Condamine River	15/01/1987	200	OK	125				100	OK	125										7.5	OK	135				
422333A	Condamine_R Loudouns	Condamine River	15/01/1987				237	OK	130										29	OK	130							
422333A	Condamine_R Loudouns	Condamine River	3/04/1987	660	OK	125																7.8	OK	135				
422333A	Condamine_R Loudouns	Condamine River	3/04/1987																21	OK	130							
422333A	Condamine_R Loudouns	Condamine River	18/06/1987	305	OK	125				100	OK	125										7.6	OK	135				
422333A	Condamine_R Loudouns	Condamine River	18/06/1987				294	OK	130										17	OK	130							
422333A	Condamine_R Loudouns	Condamine River	3/09/1987	285	OK	125				100	OK	125										7.4	OK	135				
422333A	Condamine_R Loudouns	Condamine River	3/09/1987				360	OK	130										18	OK	130							
422333A	Condamine_R Loudouns	Condamine River	5/11/1987	225	OK	125				100	OK	125										7.5	OK	135				
422333A	Condamine_R Loudouns	Condamine River	5/11/1987				205	OK	130										21	OK	130							
422333A	Condamine_R Loudouns	Condamine River	7/03/1988	340	OK	125				100	OK	125										7.5	OK	135				
422333A	Condamine_R Loudouns	Condamine River	25/05/1988	600	OK	125				44	OK	125										7.9	OK	135				
422333A	Condamine_R Loudouns	Condamine River	25/05/1988				670	OK	130										16	OK	130							
422333A	Condamine_R Loudouns	Condamine River	25/08/1988	500	OK	125				90	OK	125										7.9	OK	135				
422333A	Condamine_R Loudouns	Condamine River	27/01/1989	495	OK	125				6	OK	125										7.5	OK	135				
422333A	Condamine_R Loudouns	Condamine River	27/01/1989				611	OK	130										26	OK	130							
422333A	Condamine_R Loudouns	Condamine River	6/09/1989	870	OK	125				3	OK	125										7.9	OK	135				
422333A	Condamine_R Loudouns	Condamine River	6/09/1989				670	OK	130										15	OK	130							
422333A	Condamine_R Loudouns	Condamine River	7/12/1989	326	OK	125	303	OK	130	200	OK	151							25	OK	130	7.4	OK	135				
422333A	Condamine_R Loudouns	Condamine River	3/07/1990	490	OK	125				23	OK	125										7.9	OK	135				
422333A	Condamine_R Loudouns	Condamine River	3/07/1990				411	OK	130										10	OK	130							
422333A	Condamine_R Loudouns	Condamine River	16/10/1990	1073	OK	125				31	OK	125										8.2	OK	135				
422333A	Condamine_R Loudouns	Condamine River	16/10/1990				1188	OK	130										21	OK	130							
422333A	Condamine_R Loudouns	Condamine River	14/02/1992	252	OK	125	269	OK	130	200	OK	151							26	OK	130	6.9	OK	135				
422333A	Condamine_R Loudouns	Condamine River	1/07/1992	805	OK	125				4	OK	125										8	OK	135				
422333A	Condamine_R Loudouns	Condamine River	1/07/1992				630	OK	130										12	OK	130							
422333A	Condamine_R Loudouns	Condamine River	4/03/1994				145	OK	130										22.1	OK	130							
422333A	Condamine_R Loudouns	Condamine River	12/04/1994	327	OK	125				24	OK	125										7.5	OK	135				
422333A	Condamine_R Loudouns	Condamine River	16/05/1994	367	OK	125				26	OK	125										7.9	OK	135				
422333A	Condamine_R Loudouns	Condamine River	15/06/1994	357	OK	125				21	OK	125										7.8	OK	135				
422333A	Condamine_R Loudouns	Condamine River	12/07/1994	402	OK	125				9	OK	125										7.8	OK	135				
422333A	Condamine_R Loudouns	Condamine River	13/07/1994				416	OK	130										12.7	OK	130							
422333A	Condamine_R Loudouns	Condamine River	15/08/1994	528	OK	125				4	OK	125										8	OK	135				

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Station	Station Name	Receiving Creek/ River	Date	V2010.00	F2010.00	Q2010.00	V2010.50	F2010.50	Q2010.50	V2030.00	F2030.00	Q2030.00	V2030.50	F2030.50	Q2030.50	V2030.51	F2030.51	Q2030.51	V2080.50	F2080.50	Q2080.50	V2100.00	F2100.00	Q2100.00	V2100.50	F2100.50	Q2100.50	
				Conductivity @ 25C (uS/cm)			Conductivity @ 25C FLD			Turbidity (NTU)			Turbidity (NTU) FLD			Turbidity (NTU) FLD Webb test only			Water Temperature FLD			pH (pH units)			pH (pH units) FLD			
422333A	Condamine_R Loudouns	Condamine River	15/08/1994				531	OK	130										11.6	OK	130							
422333A	Condamine_R Loudouns	Condamine River	20/09/1994	681	OK	125				7	OK	125										7.9	OK	135				
422333A	Condamine_R Loudouns	Condamine River	20/09/1994				622	OK	130										16.2	OK	130							
422333A	Condamine_R Loudouns	Condamine River	11/10/1994	744	OK	125				1	OK	125										7.6	OK	135				
422333A	Condamine_R Loudouns	Condamine River	11/10/1994				715	OK	130										17.9	OK	130							
422333A	Condamine_R Loudouns	Condamine River	28/11/1994	904.6	OK	130	875	OK	130	3.9	OK	130							24.8	OK	130	7.92	OK	130	8.2	OK	130	
422333A	Condamine_R Loudouns	Condamine River	5/12/1994				884	OK	130										24.7	OK	130							
422333A	Condamine_R Loudouns	Condamine River	10/01/1995	991	OK	130	946	OK	130	4	OK	130							27.3	OK	130	7.55	OK	130	8.9	OK	130	
422333A	Condamine_R Loudouns	Condamine River	15/02/1995	952	OK	130	980	OK	130	4.5	OK	130	17.4	OK	130				23	OK	130	7.51	OK	130	8.9	OK	130	
422333A	Condamine_R Loudouns	Condamine River	21/03/1995	229.3	OK	130				190	OK	130	195	OK	130							7.31	OK	130	7.4	OK	130	
422333A	Condamine_R Loudouns	Condamine River	28/03/1995				237	OK	130										26.5	OK	130							
422333A	Condamine_R Loudouns	Condamine River	11/04/1995	227.5	OK	130	234	OK	130	21	OK	130	36	OK	130				18.2	OK	130	7.28	OK	130	7.3	OK	130	
422333A	Condamine_R Loudouns	Condamine River	24/05/1995	236.4	OK	130	254	OK	130	10.9	OK	130	11	OK	130				17.2	OK	130	7.52	OK	130	7.7	OK	130	
422333A	Condamine_R Loudouns	Condamine River	27/06/1995	494	OK	130	479	OK	130	17.5	OK	130	24	OK	130				11.7	OK	130	7.51	OK	130	7.7	OK	130	
422333A	Condamine_R Loudouns	Condamine River	26/07/1995	1005	OK	130	1028	OK	130	8.6	OK	130	8	OK	130				12	OK	130	7.9	OK	130	8	OK	130	
422333A	Condamine_R Loudouns	Condamine River	14/08/1995				1040	OK	130										12.8	OK	130							
422333A	Condamine_R Loudouns	Condamine River	30/08/1995	1063.8	OK	130	1059	OK	130	4.6	OK	130	5	OK	130				17.2	OK	130	8	OK	130	8.8	OK	130	
422333A	Condamine_R Loudouns	Condamine River	25/09/1995	1121.5	OK	130	1101	OK	130	2.6	OK	130	4	OK	130				20.5	OK	130	8.12	OK	130	9	OK	130	
422333A	Condamine_R Loudouns	Condamine River	17/10/1995	1102	OK	130	1122	OK	130	0.5	OK	130	3	OK	130				21.6	OK	130	8.15	OK	130	8.6	OK	130	
422333A	Condamine_R Loudouns	Condamine River	20/12/1995	226	OK	130	213	OK	130	499	OK	130	645	OK	130				26.1	OK	130	7.33	OK	130	6.4	OK	130	
422333A	Condamine_R Loudouns	Condamine River	30/01/1996	258	OK	130	243	OK	130	1390	OK	130							27.8	OK	130	7.52	OK	130	7.6	OK	130	
422333A	Condamine_R Loudouns	Condamine River	5/02/1996				321	OK	130										29	OK	130							
422333A	Condamine_R Loudouns	Condamine River	6/02/1996				290	OK	130										28.9	OK	130							
422333A	Condamine_R Loudouns	Condamine River	28/02/1996	334	OK	130	333	OK	130	62.3	OK	130	70	OK	130				24.3	OK	130	7.56	OK	130	7.4	OK	130	
422333A	Condamine_R Loudouns	Condamine River	27/03/1996				232	OK	130				130	OK	130				22.4	OK	130				7.3	OK	130	
422333A	Condamine_R Loudouns	Condamine River	29/05/1996	345	OK	130	346	OK	130	100	OK	130	131	OK	130				15.9	OK	130	7.72	OK	130	8	OK	130	
422333A	Condamine_R Loudouns	Condamine River	19/06/1996	584	OK	130	594	OK	130	29.6	OK	130	38	OK	130				14.4	OK	130	8.02	OK	130	8.2	OK	130	
422333A	Condamine_R Loudouns	Condamine River	25/07/1996	689.8	OK	130	691	OK	130	10.1	OK	130	14	OK	130				11.2	OK	130	8.31	OK	130	8.4	OK	130	
422333A	Condamine_R Loudouns	Condamine River	16/09/1996				630	OK	130				28	OK	130				18.5	OK	130				8.7	OK	130	
422333A	Condamine_R Loudouns	Condamine River	16/09/1996				628	OK	130										18.4	OK	130							
422333A	Condamine_R Loudouns	Condamine River	24/10/1996				390	OK	130										21.6	OK	130							
422333A	Condamine_R Loudouns	Condamine River	19/12/1996				286	OK	130										24.4	OK	130				7.7	OK	130	
422333A	Condamine_R Loudouns	Condamine River	19/12/1996				294	OK	130				750	OK	130				24.8	OK	130				7.7	OK	130	
422333A	Condamine_R Loudouns	Condamine River	19/12/1996	294	OK	130				486	OK	130										7.52	OK	130				
422333A	Condamine_R Loudouns	Condamine River	7/01/1997				395	OK	130										24.5	OK	130				7.65	OK	130	
422333A	Condamine_R Loudouns	Condamine River	16/01/1997				400	OK	130										27.2	OK	130				7.6	OK	130	
422333A	Condamine_R Loudouns	Condamine River	16/01/1997				398	OK	130										30.7	OK	130				8.35	OK	130	
422333A	Condamine_R Loudouns	Condamine River	11/02/1997	200	OK	130	199	OK	130	275	OK	130	331	OK	130				27.7	OK	130	7.08	OK	130	7.1	OK	130	
422333A	Condamine_R Loudouns	Condamine River	25/02/1997				240	OK	130				270	OK	130				29.5	OK	130				7.6	OK	130	
422333A	Condamine_R Loudouns	Condamine River	25/02/1997	230	OK	130				216	OK	130										7.55	OK	130				
422333A	Condamine_R Loudouns	Condamine River	23/04/1997	377	OK	130	395	OK	130	14.3	OK	130	18	OK	130				20	OK	130	7.55	OK	130	7.6	OK	130	
422333A	Condamine_R Loudouns	Condamine River	16/05/1997				566	OK	130										17.6	OK	130				7.6	OK	130	
422333A	Condamine_R Loudouns	Condamine River	27/05/1997	1350	OK	130	1391	OK	130	26.1	OK	130	42	OK	130				14.8	OK	130	8.03	OK	130	8.2	OK	130	
422333A	Condamine_R Loudouns	Condamine River	21/07/1997				1199	OK	130				16.1	OK	130				12.4	OK	130				9.2	OK	130	
422333A	Condamine_R Loudouns	Condamine River	24/11/1997				479	OK	130										25.2	OK	130				7.5	OK	130	
422333A	Condamine_R Loudouns	Condamine River	24/11/1997	481	OK	130	482	OK	130	83.8	OK	130	86	OK	130				25	OK	130	7.6	OK	130	7.5	OK	130	
422333A	Condamine_R Loudouns	Condamine River	18/12/1997				468	OK	130										27.8	OK	130				8.3	OK	130	
422333A	Condamine_R Loudouns	Condamine River	28/04/1998				360	OK	130										20.4	OK	130				7.4	OK	130	
422333A	Condamine_R Loudouns	Condamine River	7/10/1998	425	OK	130	418	OK	130	58	OK	130	70	OK	130				23.7	OK	130	7.61	OK	130	8	OK	130	
422333A	Condamine_R Loudouns	Condamine River	11/01/1999																									
422333A	Condamine_R Loudouns	Condamine River	18/02/1999	296.49	OK	130	328	OK	130	181	OK	130	205	OK	130				30.1	OK	130	7.86	OK	130	7.8	OK	130	
422333A	Condamine_R Loudouns	Condamine River	22/03/1999				285	OK	130				</															

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Station	Station Name	Receiving Creek/ River	Date	V2010.00	F2010.00	Q2010.00	V2010.50	F2010.50	Q2010.50	V2030.00	F2030.00	Q2030.00	V2030.50	F2030.50	Q2030.50	V2030.51	F2030.51	Q2030.51	V2080.50	F2080.50	Q2080.50	V2100.00	F2100.00	Q2100.00	V2100.50	F2100.50	Q2100.50
				Conductivity @ 25C (uS/cm)			Conductivity @ 25C FLD			Turbidity (NTU)			Turbidity (NTU) FLD			Turbidity (NTU) FLD Webb test only			Water Temperature FLD			pH (pH units)			pH (pH units) FLD		
422333A	Condamine_R Loudouns	Condamine River	12/07/1999							125	OK	130										7.2	OK	130			
422333A	Condamine_R Loudouns	Condamine River	1/09/1999	385	OK	130	388	OK	130	29.3	OK	130	37	OK	130				17	OK	130	7.91	OK	130	8.4	OK	130
422333A	Condamine_R Loudouns	Condamine River	21/02/2000	468	OK	130				14.1	OK	130										7.64	OK	130			
422333A	Condamine_R Loudouns	Condamine River	21/02/2000				452	OK	130				25	OK	130				24.6	OK	130				8.2	OK	130
422333A	Condamine_R Loudouns	Condamine River	19/06/2000	880	OK	130	939	OK	130	6	OK	130	16	OK	130				14.4	OK	130	8.1	OK	130	7.3	OK	130
422333A	Condamine_R Loudouns	Condamine River	25/08/2000				754	OK	130				22	OK	130				12.8	OK	130				8.9	OK	130
422333A	Condamine_R Loudouns	Condamine River	25/01/2001																								
422333A	Condamine_R Loudouns	Condamine River	6/02/2001	250	OK	130				850	OK	130										7.45	OK	130			
422333A	Condamine_R Loudouns	Condamine River	6/02/2001																								
422333A	Condamine_R Loudouns	Condamine River	8/02/2001				181	OK	130										26	OK	130				6.7	OK	130
422333A	Condamine_R Loudouns	Condamine River	8/02/2001																								
422333A	Condamine_R Loudouns	Condamine River	20/03/2001				259	OK	130										26.7	OK	130						
422333A	Condamine_R Loudouns	Condamine River	17/04/2001																								
422333A	Condamine_R Loudouns	Condamine River	14/05/2001				253	OK	130										18.4	OK	130						
422333A	Condamine_R Loudouns	Condamine River	13/06/2001	388	OK	130	393	OK	130	18.9	OK	130	10	OK	130				15.2	OK	130	7.84	OK	130	8.3	OK	130
422333A	Condamine_R Loudouns	Condamine River	11/11/2001																								
422333A	Condamine_R Loudouns	Condamine River	12/11/2001																								
422333A	Condamine_R Loudouns	Condamine River	13/11/2001																								
422333A	Condamine_R Loudouns	Condamine River	13/11/2001				232	OK	130										23.1	OK	130						
422333A	Condamine_R Loudouns	Condamine River	8/08/2002				398	OK	130										12.2	OK	130						
422333A	Condamine_R Loudouns	Condamine River	11/03/2004	410	OK	130	412	OK	130	320	OK	130	364	OK	130				24.3	OK	130	7.6	OK	130	7.4	OK	130
422333A	Condamine_R Loudouns	Condamine River	12/03/2004	450	OK	130	286	OK	130	5	OK	130	270	OK	130				25.9	OK	130	8.2	OK	130	7.3	OK	130
422333A	Condamine_R Loudouns	Condamine River	3/03/2005	742	OK	130	762	OK	130	54	OK	130	61	>	130				29.3	OK	130	7.61	OK	130	8	<	130
422333A	Condamine_R Loudouns	Condamine River	21/12/2005	228	OK	130	233	OK	130	249	OK	130	320	OK	130				33.1	OK	130	7.39	OK	130	7.3	OK	130
422333A	Condamine_R Loudouns	Condamine River	15/03/2006	220	OK	130	224	OK	130	18	OK	130	18	OK	130				25.6	OK	130	7.45	OK	130	7.9	OK	130
422333A	Condamine_R Loudouns	Condamine River	5/05/2006	232	OK	130				184	OK	130										7.39	OK	130			
422333A	Condamine_R Loudouns	Condamine River	12/11/2006																								
422333A	Condamine_R Loudouns	Condamine River	24/10/2008				306	OK	130										24.9	OK	130				7.8	OK	130
422333A	Condamine_R Loudouns	Condamine River	1/07/2009				175	OK	130				166	OK	130				13	OK	130				8	OK	130
422345A	Lone Pine	Condamine River (north branch)	11/07/1979	330	OK	125													9	OK	130	7.4	OK	135			
422345A	Lone Pine	Condamine River (north branch)	7/02/1980	460	OK	125													27	OK	130	7.5	OK	135			
422345A	Lone Pine	Condamine River (north branch)	8/02/1980	320	OK	125													25	OK	130	7.3	OK	135			
422345A	Lone Pine	Condamine River (north branch)	11/02/1981																29	OK	130						
422345A	Lone Pine	Condamine River (north branch)	19/02/1981																27	OK	130						
422345A	Lone Pine	Condamine River (north branch)	6/04/1981	165	OK	125																7.1	OK	135			
422345A	Lone Pine	Condamine River (north branch)	15/04/1981																18	OK	130						
422345A	Lone Pine	Condamine River (north branch)	28/07/1983	630	OK	125				16	OK	125							14	OK	130	8.3	OK	135			
422345A	Lone Pine	Condamine River (north branch)	11/10/1983	740	OK	125				13	OK	125							20	OK	130	7.8	OK	135			
422345A	Lone Pine	Condamine River (north branch)	29/05/1984																15	OK	130						
422345A	Lone Pine	Condamine River (north branch)	21/06/1984																14.5	OK	130						
422345A	Lone Pine	Condamine River (north branch)	8/08/1984	380	OK	125				100	OK	125										7.5	OK	135			
422345A	Lone Pine	Condamine River (north branch)	13/01/1987	250	OK	125	287	OK	130	100	OK	125							30	OK	130	7.9	OK	135			
422345A	Lone Pine	Condamine River (north branch)	18/02/1988				220	OK	130										20	OK	130						
422345A	Lone Pine	Condamine River (north branch)	17/05/1988	1200	OK	125	1190	OK	130	6	OK	125							19	OK	130	7.9	OK	135			
422345A	Lone Pine	Condamine River (north branch)	1/08/1988	970	OK	125	918	OK	130	10	OK	125							14	OK	130	8.2	OK	135			
422345A	Lone Pine	Condamine River (north branch)	8/02/1989	425	OK	125	502	OK	130	6	OK	125							24	OK	130	7.7	OK	135			
422345A	Lone Pine	Condamine River (north branch)	11/07/1989				345	OK	130										12	OK	130						
422345A	Lone Pine	Condamine River (north branch)	31/07/1989				418	OK	130										14	OK	130						
422345A	Lone Pine	Condamine River (north branch)	22/08/1989	530	OK	125	483	OK	130	1	OK	125							15	OK	130	7.7	OK	135			
422345A	Lone Pine	Condamine River (north branch)	8/12/1989	229	OK	125	277	OK	130	200	OK	151							25	OK	130	7.7	OK	135			
422345A	Lone Pine	Condamine River (north branch)	30/03/1990	365	OK	135	415	OK	130	21	OK	125							21	OK	130	8	OK	135			
422345A	Lone Pine	Condamine River (north branch)	2/07/1990	727	OK	125	601	OK	130	50	OK	125							11	OK	130	8	OK	135			
422345A	Lone Pine	Condamine River (north branch)	17/10/1990	687	OK	125	773	OK	130	22	OK	125							23	OK	130	7.9	OK	135			

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Station	Station Name	Receiving Creek/ River	Date	V2010.00	F2010.00	Q2010.00	V2010.50	F2010.50	Q2010.50	V2030.00	F2030.00	Q2030.00	V2030.50	F2030.50	Q2030.50	V2030.51	F2030.51	Q2030.51	V2080.50	F2080.50	Q2080.50	V2100.00	F2100.00	Q2100.00	V2100.50	F2100.50	Q2100.50	
				Conductivity @ 25C (uS/cm)			Conductivity @ 25C FLD			Turbidity (NTU)			Turbidity (NTU) FLD			Turbidity (NTU) FLD Web test only			Water Temperature FLD			pH (pH units)			pH (pH units) FLD			
422345A	Lone Pine	Condamine River (north branch)	6/06/1991				570	OK	130										21	OK	130							
422345A	Lone Pine	Condamine River (north branch)	30/10/1991				463	OK	130										20	OK	130							
422345A	Lone Pine	Condamine River (north branch)	20/02/1992	238	OK	125	281	OK	130	200	OK	151							26	OK	130	7	OK	135				
422345A	Lone Pine	Condamine River (north branch)	3/07/1992	471	OK	125	422	OK	130	25	OK	125							14	OK	130	7.8	OK	135				
422345A	Lone Pine	Condamine River (north branch)	21/10/1992	514	OK	125	463	OK	130	57	OK	125							19	OK	130	7.4	OK	135				
422345A	Lone Pine	Condamine River (north branch)	8/02/1993	432	OK	125	472	OK	130	25	OK	125							23	OK	130	7.5	OK	135				
422345A	Lone Pine	Condamine River (north branch)	9/06/1993				552	OK	130										12.6	OK	130				7.7	OK	130	
422345A	Lone Pine	Condamine River (north branch)	27/10/1993				565	OK	130										23.3	OK	130							
422345A	Lone Pine	Condamine River (north branch)	8/03/1994	142	OK	125	141	OK	130	200	OK	151							22.7	OK	130	7.5	OK	135				
422345A	Lone Pine	Condamine River (north branch)	14/07/1994	303	OK	125	322	OK	130	40	OK	125							11.5	OK	130	7.9	OK	135	7.7	OK	130	
422345A	Lone Pine	Condamine River (north branch)	8/12/1994	720.4	OK	130	682	OK	130	3.7	OK	130							27.4	OK	130	7.6	OK	130	8	OK	130	
422345A	Lone Pine	Condamine River (north branch)	29/03/1995				314	OK	130										23.6	OK	130							
422345A	Lone Pine	Condamine River (north branch)	29/03/1995	292.4	OK	130	313	OK	130	5.2	OK	130	7	OK	130				23.8	OK	130	8.31	OK	130	7.8	OK	130	
422345A	Lone Pine	Condamine River (north branch)	29/08/1995	393.7	OK	130	398	OK	130	7.7	OK	130	12	OK	130				15.1	OK	130	7.25	OK	130	7.6	OK	130	
422345A	Lone Pine	Condamine River (north branch)	30/11/1995				229	OK	130										25.6	OK	130							
422345A	Lone Pine	Condamine River (north branch)	30/11/1995				230	OK	130				366	OK	130				26.7	OK	130				7.8	OK	130	
422345A	Lone Pine	Condamine River (north branch)	2/02/1996				241	OK	130										30.2	OK	130							
422345A	Lone Pine	Condamine River (north branch)	2/02/1996	245	OK	130	238	OK	130	570	OK	130	512	OK	130				30.4	OK	130	7.4	OK	130	7.9	OK	130	
422345A	Lone Pine	Condamine River (north branch)	28/05/1996	998	OK	130	1046	OK	130	33	OK	130	36	OK	130				14.6	OK	130	8.13	OK	130	8.6	OK	130	
422345A	Lone Pine	Condamine River (north branch)	17/09/1996	475	OK	130	467	OK	130	44	OK	130	58	OK	130				16.9	OK	130	8.2	OK	130	8.7	OK	130	
422345A	Lone Pine	Condamine River (north branch)	24/10/1996				378	OK	130										21.5	OK	130							
422345A	Lone Pine	Condamine River (north branch)	6/12/1996	472	OK	130	465	OK	130	17.5	OK	130	45	OK	130				26.2	OK	130	7.7	OK	130	8	OK	130	
422345A	Lone Pine	Condamine River (north branch)	8/01/1997				378	OK	130										23.8	OK	130							
422345A	Lone Pine	Condamine River (north branch)	11/02/1997	385	OK	130	389	OK	130	37.4	OK	130	44	OK	130				28.8	OK	130	7.59	OK	130	7.9	OK	130	
422345A	Lone Pine	Condamine River (north branch)	25/03/1997				358	OK	130										23.6	OK	130							
422345A	Lone Pine	Condamine River (north branch)	18/04/1997				444	OK	130				13	OK	130				19.1	OK	130				7.7	OK	130	
422345A	Lone Pine	Condamine River (north branch)	29/05/1997				452	OK	130										15.2	OK	130				7.7	OK	130	
422345A	Lone Pine	Condamine River (north branch)	22/07/1997				322	OK	130				67.3	OK	130				9.3	OK	130				7.9	OK	130	
422345A	Lone Pine	Condamine River (north branch)	25/09/1997				309	OK	130										17.9	OK	130							
422345A	Lone Pine	Condamine River (north branch)	27/11/1997	321	OK	130	314	OK	130	138	OK	130	171	OK	130				24.3	OK	130	7.25	OK	130	7.2	OK	130	
422345A	Lone Pine	Condamine River (north branch)	29/04/1998				392	OK	130										16.8	OK	130							
422345A	Lone Pine	Condamine River (north branch)	29/04/1998				384	OK	130										17	OK	130							
422345A	Lone Pine	Condamine River (north branch)	23/09/1998	218	OK	130	212	OK	130	408	OK	130	389	OK	130				19.5	OK	130	7.31	OK	130	7.9	OK	130	
422345A	Lone Pine	Condamine River (north branch)	18/02/1999	195.63	OK	130	206	OK	130	128	OK	130	200	OK	130				30.2	OK	130	7.59	OK	130	7.3	OK	130	
422345A	Lone Pine	Condamine River (north branch)	18/03/1999				262	OK	130										25.5	OK	130							
422345A	Lone Pine	Condamine River (north branch)	29/03/1999				260	OK	130										22.2	OK	130							
422345A	Lone Pine	Condamine River (north branch)	16/06/1999	356.87	OK	130	405	OK	130	58.4	OK	130	12	OK	130				11	OK	130	8.02	OK	130	7.9	OK	130	
422345A	Lone Pine	Condamine River (north branch)	1/09/1999	289	OK	130	291	OK	130	86.1	OK	130	104	OK	130				20.7	OK	130	7.98	OK	130	8.3	OK	130	
422345A	Lone Pine	Condamine River (north branch)	1/11/1999				275	OK	130										22.2	OK	130							
422345A	Lone Pine	Condamine River (north branch)	1/11/1999				256	OK	130										22.5	OK	130							
422345A	Lone Pine	Condamine River (north branch)	21/12/1999				488	OK	130										22.8	OK	130							
422345A	Lone Pine	Condamine River (north branch)	29/02/2000	383	OK	130	380	OK	130	82	OK	130	107	OK	130				24.8	OK	130	7.87	OK	130	7.6	OK	130	
422345A	Lone Pine	Condamine River (north branch)	16/03/2000				465	OK	130										26.2	OK	130				7.5	OK	130	
422345A	Lone Pine	Condamine River (north branch)	19/06/2000	395	OK	130	410	OK	130	44	OK	130	36	OK	130				13.9	OK	130	7.75	OK	130	7.2	OK	130	
422345A	Lone Pine	Condamine River (north branch)	8/09/2000				568	OK	130				23	OK	130				16	OK	130				8	OK	130	
422345A	Lone Pine	Condamine River (north branch)	22/09/2000				364	OK	130										20.9	OK	130							
422345A	Lone Pine	Condamine River (north branch)	14/02/2001	244	OK	130	241	OK	130	225	OK	130	227	OK	130				25.1	OK	130	7.5	OK	130	7.7	OK	130	
422345A	Lone Pine	Condamine River (north branch)	13/06/2001	327	OK	130	330	OK	130	45.3	OK	130	18	OK	130				15.3	OK	130	7.78	OK	130	7.9	OK	130	
422345A	Lone Pine	Condamine River (north branch)	11/07/2001				351	OK	130				26	OK	130	25	OK	130	10.5	OK	130				7.9	OK	130	
422345A	Lone Pine	Condamine River (north branch)	18/07/2001				356	OK	130				30	OK	130	30	OK	130	10.5	OK	130				7.5	OK	130	
422345A	Lone Pine	Condamine River (north branch)	14/08/2001				366	OK	130				17	OK	130	18	OK	130	13.7	OK	130				7.9	OK	130	
422345A	Lone Pine	Condamine River (north branch)	12/12/2001				211	OK	130				967	OK	130	738	OK	130	24.5	OK	130				6.5	OK	130	
422345A	Lone Pine	Condamine River (north branch)	14/06/2002				229	OK	130										11.6	OK	130							
422345A																												

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Station	Station Name	Receiving Creek/ River	Date	V2010.00	F2010.00	Q2010.00	V2010.50	F2010.50	Q2010.50	V2030.00	F2030.00	Q2030.00	V2030.50	F2030.50	Q2030.50	V2030.51	F2030.51	Q2030.51	V2080.50	F2080.50	Q2080.50	V2100.00	F2100.00	Q2100.00	V2100.50	F2100.50	Q2100.50
				Conductivity @ 25C (uS/cm)			Conductivity @ 25C FLD			Turbidity (NTU)			Turbidity (NTU) FLD			Turbidity (NTU) FLD Webb test only			Water Temperature FLD			pH (pH units)			pH (pH units) FLD		
422345A	Lone Pine	Condamine River (north branch)	31/07/2003				454	OK	130				22	OK	130	26	OK	130	8.8	OK	130				8.3	OK	130
422345A	Lone Pine	Condamine River (north branch)	11/03/2004	340	OK	130	345	OK	130	155	OK	130	311	OK	130				26.5	OK	130	7.5	OK	130	7.7	OK	130
422345A	Lone Pine	Condamine River (north branch)	20/12/2005	322	OK	130	326	OK	130	167	OK	130	219	OK	130				26.8	OK	130	7.52	OK	130	7.5	OK	130
422345A	Lone Pine	Condamine River (north branch)	21/03/2006	385	OK	130	381	OK	130	8	OK	130	235	OK	130				24.9	OK	130	7.68	OK	130	8.1	OK	130
422345A	Lone Pine	Condamine River (north branch)	28/04/2009				485	OK	130				43	OK	130				15.4	OK	130				7.7	OK	130
422346A	N Condamine_R Kurlaw	Condamine River (north branch)	11/07/1979	360	OK	125													10	OK	130	7.3	OK	135			
422346A	N Condamine_R Kurlaw	Condamine River (north branch)	11/07/1979																								
422346A	N Condamine_R Kurlaw	Condamine River (north branch)	11/02/1980	360	OK	125																7.4	OK	135			
422346A	N Condamine_R Kurlaw	Condamine River (north branch)	11/02/1980																24	OK	130						
422346A	N Condamine_R Kurlaw	Condamine River (north branch)	9/02/1981	330	OK	125																7.6	OK	135			
422346A	N Condamine_R Kurlaw	Condamine River (north branch)	19/02/1981	315	OK	125																7.6	OK	135			
422346A	N Condamine_R Kurlaw	Condamine River (north branch)	19/02/1981																30	OK	130						
422346A	N Condamine_R Kurlaw	Condamine River (north branch)	1/07/1981	300	OK	125				190	OK	151							14	OK	130	7.5	OK	135			
422346A	N Condamine_R Kurlaw	Condamine River (north branch)	13/12/1983	455	OK	125				37	OK	125										7.9	OK	135			
422346A	N Condamine_R Kurlaw	Condamine River (north branch)	13/12/1983																22	OK	130						
422347A	Pampas Bridge	Condamine River (north branch)	6/02/1980	280	OK	135													25	OK	130	7.3	OK	135			
422347A	Pampas Bridge	Condamine River (north branch)	7/02/1980	255	OK	125																7.5	OK	135			
422347A	Pampas Bridge	Condamine River (north branch)	7/02/1980																26	OK	130						
422347A	Pampas Bridge	Condamine River (north branch)	8/02/1980	310	OK	125																7.5	OK	135			
422347A	Pampas Bridge	Condamine River (north branch)	8/02/1980																24	OK	130						
422347A	Pampas Bridge	Condamine River (north branch)	11/02/1980	275	OK	125																7.4	OK	135			
422347A	Pampas Bridge	Condamine River (north branch)	11/02/1980																24	OK	130						
422347A	Pampas Bridge	Condamine River (north branch)	9/02/1981	240	OK	125																7.6	OK	135			
422347A	Pampas Bridge	Condamine River (north branch)	9/02/1981																29	OK	130						
422347A	Pampas Bridge	Condamine River (north branch)	29/08/2006	596	OK	10				392	OK	10										7.61	OK	10			
422348A	Christians	Condamine River (north branch)	7/02/1980	310	OK	125																7.5	OK	135			
422348A	Christians	Condamine River (north branch)	7/02/1980																28	OK	130						
422348A	Christians	Condamine River (north branch)	7/04/1981	115	OK	135													21	OK	130	7	OK	135			
422339A	Jimbour_Ck Bunginie	Jimbour Creek	9/01/1973	1340	OK	125																7.6	OK	135			
422339A	Jimbour_Ck Bunginie	Jimbour Creek	24/01/1973	1870	OK	125																7.6	OK	135			
422339A	Jimbour_Ck Bunginie	Jimbour Creek	18/09/1973	1640	OK	125																8	OK	135			
422339A	Jimbour_Ck Bunginie	Jimbour Creek	18/09/1973																19	OK	130						
422339A	Jimbour_Ck Bunginie	Jimbour Creek	30/10/1973	1650	OK	125																7.9	OK	135			
422339A	Jimbour_Ck Bunginie	Jimbour Creek	30/10/1973																20	OK	130						
422339A	Jimbour_Ck Bunginie	Jimbour Creek	11/09/1974	5100	OK	125																8.1	OK	135			
422339A	Jimbour_Ck Bunginie	Jimbour Creek	24/08/1976	2600	OK	125																8.3	OK	135			
422339A	Jimbour_Ck Bunginie	Jimbour Creek	30/01/1980	230	OK	125																7	OK	135			
422339A	Jimbour_Ck Bunginie	Jimbour Creek	30/01/1980																25	OK	130						
422339A	Jimbour_Ck Bunginie	Jimbour Creek	21/01/1988	150	OK	135				100	OK	125										7.4	OK	135			
422339A	Jimbour_Ck Bunginie	Jimbour Creek	25/05/1988	2100	OK	125				3	OK	125										8.3	OK	135			
422339A	Jimbour_Ck Bunginie	Jimbour Creek	25/05/1988				1933	OK	130										15	OK	130						
422339A	Jimbour_Ck Bunginie	Jimbour Creek	4/08/1988	1850	OK	125				7	OK	125										8	OK	135			
422339A	Jimbour_Ck Bunginie	Jimbour Creek	4/08/1988				1460	OK	130										19	OK	130						
422339A	Jimbour_Ck Bunginie	Jimbour Creek	6/09/1989	2800	OK	125				50	OK	125										8.1	OK	135			
422339A	Jimbour_Ck Bunginie	Jimbour Creek	6/09/1989				2650	OK	130										16	OK	130						
422339A	Jimbour_Ck Bunginie	Jimbour Creek	3/07/1990	1890	OK	125				4	OK	125										8.2	OK	135			
422339A	Jimbour_Ck Bunginie	Jimbour Creek	3/07/1990				1479	OK	130										9	OK	130						
422339A	Jimbour_Ck Bunginie	Jimbour Creek	16/10/1990	3060	OK	125				28	OK	125										8.2	OK	135			
422339A	Jimbour_Ck Bunginie	Jimbour Creek	16/10/1990				3340	OK	130										22	OK	130						
422339A	Jimbour_Ck Bunginie	Jimbour Creek	1/07/1992	10468	OK	125																8.1	OK	135			
422339A	Jimbour_Ck Bunginie	Jimbour Creek	1/07/1992				4320	OK	130										17	OK	130						
422339A	Jimbour_Ck Bunginie	Jimbour Creek	14/08/1995				5150	OK	130																		
422339A	Jimbour_Ck Bunginie	Jimbour Creek	26/09/1995	6150	OK	130				1.1	OK	130										8.05	OK	130			

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Station	Station Name	Receiving Creek/ River	Date	V2010.00	F2010.00	Q2010.00	V2010.50	F2010.50	Q2010.50	V2030.00	F2030.00	Q2030.00	V2030.50	F2030.50	Q2030.50	V2030.51	F2030.51	Q2030.51	V2080.50	F2080.50	Q2080.50	V2100.00	F2100.00	Q2100.00	V2100.50	F2100.50	Q2100.50
				Conductivity @ 25C (uS/cm)			Conductivity @ 25C FLD			Turbidity (NTU)			Turbidity (NTU) FLD			Turbidity (NTU) FLD Webb test only			Water Temperature FLD			pH (pH units)			pH (pH units) FLD		
422339A	Jimbour_Ck Bunginie	Jimbour Creek	26/05/1997	2980	OK	130	3100	OK	130	14.3	OK	130	19	OK	130				18	OK	130	8.07	OK	130	8.2	OK	130
422339A	Jimbour_Ck Bunginie	Jimbour Creek	24/11/1997	2150	OK	130	2170	OK	130	8.6	OK	130	21	OK	130				27.3	OK	130	7.83	OK	130	7.6	OK	130
422339A	Jimbour_Ck Bunginie	Jimbour Creek	18/02/1999																								
422339A	Jimbour_Ck Bunginie	Jimbour Creek	18/10/1999																								
422326A	Gowrie_Ck Cranley	Oakey Creek	16/03/1971	650	OK	125													20	OK	130	7	OK	135			
422326A	Gowrie_Ck Cranley	Oakey Creek	31/05/1971	630	OK	125													14.4	OK	130	7.9	OK	135			
422326A	Gowrie_Ck Cranley	Oakey Creek	19/07/1971	680	OK	125													12	OK	130	7.7	OK	135			
422326A	Gowrie_Ck Cranley	Oakey Creek	30/08/1971	760	OK	125													17	OK	130	7.6	OK	135			
422326A	Gowrie_Ck Cranley	Oakey Creek	18/10/1971	605	OK	125																7.8	OK	135			
422326A	Gowrie_Ck Cranley	Oakey Creek	13/03/1972	920	OK	125													26	OK	130	7.7	OK	135			
422326A	Gowrie_Ck Cranley	Oakey Creek	19/06/1972	1400	OK	125																7.1	OK	135			
422326A	Gowrie_Ck Cranley	Oakey Creek	21/08/1972	980	OK	125																7.5	OK	135			
422326A	Gowrie_Ck Cranley	Oakey Creek	23/10/1972	1175	OK	125																8	OK	135			
422326A	Gowrie_Ck Cranley	Oakey Creek	8/01/1973	870	OK	125																7.5	OK	135			
422326A	Gowrie_Ck Cranley	Oakey Creek	16/03/1973	790	OK	125													23	OK	130	7.8	OK	135			
422326A	Gowrie_Ck Cranley	Oakey Creek	8/05/1973	929	OK	125													21	OK	130	8.4	OK	135			
422326A	Gowrie_Ck Cranley	Oakey Creek	18/06/1973	980	OK	125													14	OK	130	8.1	OK	135			
422326A	Gowrie_Ck Cranley	Oakey Creek	24/07/1973	620	OK	125													15	OK	130	7.3	OK	135			
422326A	Gowrie_Ck Cranley	Oakey Creek	17/09/1973	1050	OK	125													20	OK	130	7.7	OK	135			
422326A	Gowrie_Ck Cranley	Oakey Creek	29/10/1973	270	OK	135													21	OK	130	7.3	OK	135			
422326A	Gowrie_Ck Cranley	Oakey Creek	21/01/1974	625	OK	125																7.5	OK	135			
422326A	Gowrie_Ck Cranley	Oakey Creek	25/03/1974	695	OK	125													24	OK	130	8.3	OK	135			
422326A	Gowrie_Ck Cranley	Oakey Creek	16/09/1974	865	OK	125																8.2	OK	135			
422326A	Gowrie_Ck Cranley	Oakey Creek	24/02/1976	610	OK	125																7.4	OK	135			
422326A	Gowrie_Ck Cranley	Oakey Creek	23/08/1976	770	OK	125																8.1	OK	135			
422326A	Gowrie_Ck Cranley	Oakey Creek	9/07/1979	800	OK	125													13	OK	130	7.6	OK	135			
422326A	Gowrie_Ck Cranley	Oakey Creek	10/09/1979	1000	OK	125													20	OK	130	7.5	OK	135			
422326A	Gowrie_Ck Cranley	Oakey Creek	29/01/1980	680	OK	125													26	OK	130	7.3	OK	135			
422326A	Gowrie_Ck Cranley	Oakey Creek	14/04/1980	1070	OK	125													20	OK	130	7.6	OK	135			
422326A	Gowrie_Ck Cranley	Oakey Creek	1/07/1980	931	OK	125													12	OK	130	7.8	OK	135			
422326A	Gowrie_Ck Cranley	Oakey Creek	8/09/1980	960	OK	125																8	OK	135			
422326A	Gowrie_Ck Cranley	Oakey Creek	30/01/1981	1200	OK	125													28	OK	130	7.7	OK	135			
422326A	Gowrie_Ck Cranley	Oakey Creek	10/04/1981	705	OK	125				9	OK	125										7.5	OK	135			
422326A	Gowrie_Ck Cranley	Oakey Creek	29/06/1981	760	OK	125				10	OK	125							16	OK	130	7.6	OK	135			
422326A	Gowrie_Ck Cranley	Oakey Creek	14/09/1981	820	OK	125				5	OK	125										8.1	OK	135			
422326A	Gowrie_Ck Cranley	Oakey Creek	23/11/1982	740	OK	125				9	OK	125										7.8	OK	135			
422326A	Gowrie_Ck Cranley	Oakey Creek	2/02/1983	1150	OK	125				2	OK	125							22	OK	130	8.3	OK	135			
422326A	Gowrie_Ck Cranley	Oakey Creek	17/05/1983	660	OK	125				18	OK	125										7.6	OK	135			
422326A	Gowrie_Ck Cranley	Oakey Creek	12/07/1983	750	OK	125				15	OK	125										7.7	OK	135			
422326A	Gowrie_Ck Cranley	Oakey Creek	12/12/1983	680	OK	125				7	OK	125							24	OK	130	7.9	OK	135			
422326A	Gowrie_Ck Cranley	Oakey Creek	5/03/1984	660	OK	125				5	OK	125							24	OK	130	7.8	OK	135			
422326A	Gowrie_Ck Cranley	Oakey Creek	28/05/1984	760	OK	125													17	OK	130	7.8	OK	135			
422326A	Gowrie_Ck Cranley	Oakey Creek	10/10/1984	790	OK	125				5	OK	125							22	OK	130	7.7	OK	135			
422326A	Gowrie_Ck Cranley	Oakey Creek	8/01/1985	580	OK	125				32	OK	125							26	OK	130	7.3	OK	135			
422326A	Gowrie_Ck Cranley	Oakey Creek	11/03/1985	465	OK	125				30	OK	125							18	OK	130	7.2	OK	135			
422326A	Gowrie_Ck Cranley	Oakey Creek	24/07/1985	840	OK	125				5	OK	125							13	OK	130	7.3	OK	135			
422326A	Gowrie_Ck Cranley	Oakey Creek	21/10/1985	760	OK	125	864	OK	130	1	OK	125							20	OK	130	7.8	OK	135			
422326A	Gowrie_Ck Cranley	Oakey Creek	6/01/1986	810	OK	125	831	OK	130	5	OK	125							28	OK	130	7.9	OK	135			
422326A	Gowrie_Ck Cranley	Oakey Creek	1/04/1986	880	OK	125	933	OK	130	2	OK	125							22	OK	130	8.1	OK	135			
422326A	Gowrie_Ck Cranley	Oakey Creek	1/07/1986	980	OK	125	1175	OK	130	5	OK	125							13.5	OK	130	8.5	OK	135			
422326A	Gowrie_Ck Cranley	Oakey Creek	19/09/1986	1600	OK	125	1509	OK	130	19	OK	125							17.5	OK	130	7.2	OK	135			
422326A	Gowrie_Ck Cranley	Oakey Creek	19/12/1986	1050	OK	125	1250	OK	130	14	OK	125							28	OK	130	7.8	OK	135			
422326A	Gowrie_Ck Cranley	Oakey Creek	6/03/1987	1050	OK	125													27	OK	130	8	OK	135			

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Station	Station Name	Receiving Creek/ River	Date	V2010.00	F2010.00	Q2010.00	V2010.50	F2010.50	Q2010.50	V2030.00	F2030.00	Q2030.00	V2030.50	F2030.50	Q2030.50	V2030.51	F2030.51	Q2030.51	V2080.50	F2080.50	Q2080.50	V2100.00	F2100.00	Q2100.00	V2100.50	F2100.50	Q2100.50
				Conductivity @ 25C (uS/cm)	OK	130	Conductivity @ 25C FLD	OK	130	Turbidity (NTU)	OK	130	Turbidity (NTU) FLD	OK	130	Turbidity (NTU) FLD Web test only	OK	130	Water Temperature FLD	OK	130	pH (pH units)	OK	130	pH (pH units) FLD	OK	130
422326A	Gowrie_Ck Cranley	Oakey Creek	1/02/2001	67.3	OK	130	81	OK	130	152	OK	130	171	OK	130				20.9	OK	130	7.28	OK	130	8.2	OK	130
422326A	Gowrie_Ck Cranley	Oakey Creek	6/02/2001	503	OK	130	501	OK	130	10.9	OK	130	14	OK	130				22.2	OK	130	8.05	OK	130	7.4	OK	130
422326A	Gowrie_Ck Cranley	Oakey Creek	31/05/2001				522	OK	130										10.9	OK	130						
422326A	Gowrie_Ck Cranley	Oakey Creek	18/06/2001				540	OK	130				5	OK	130				10.5	OK	130				8	OK	130
422326A	Gowrie_Ck Cranley	Oakey Creek	24/10/2001				441	OK	130				6	OK	130				18.7	OK	130						
422326A	Gowrie_Ck Cranley	Oakey Creek	17/04/2002				367	OK	130				7	OK	130				19.4	OK	130				7.5	OK	130
422326A	Gowrie_Ck Cranley	Oakey Creek	17/04/2002	403	OK	130				3.6	OK	130										7.74	OK	130			
422326A	Gowrie_Ck Cranley	Oakey Creek	22/04/2002				492	OK	130				7	OK	130	6	OK	130	20.7	OK	130				8.2	OK	130
422326A	Gowrie_Ck Cranley	Oakey Creek	2/07/2002				512	OK	130				3	OK	130				9.9	OK	130				6.4	OK	130
422326A	Gowrie_Ck Cranley	Oakey Creek	16/07/2002				547	OK	130				3	OK	130				10.8	OK	130				8.2	OK	130
422326A	Gowrie_Ck Cranley	Oakey Creek	9/09/2002				310	OK	130										16	OK	130						
422326A	Gowrie_Ck Cranley	Oakey Creek	21/11/2002				501	OK	130										27	OK	130						
422326A	Gowrie_Ck Cranley	Oakey Creek	10/12/2002	121.5	OK	130				72.5	OK	130										7.05	OK	130			
422326A	Gowrie_Ck Cranley	Oakey Creek	5/12/2003	51	OK	130	43	OK	130	245	OK	130	409	OK	130				21.8	OK	130	6.55	OK	130	7.2	OK	130
422326A	Gowrie_Ck Cranley	Oakey Creek	5/12/2003	62	OK	130	60	OK	130	135	OK	130	225	OK	130				21.7	OK	130	6.95	OK	130	6.7	OK	130
422326A	Gowrie_Ck Cranley	Oakey Creek	8/12/2003	295	OK	130	317	OK	130	10	OK	130	28	OK	130				19	OK	130	7.85	OK	130	9	OK	130
422326A	Gowrie_Ck Cranley	Oakey Creek	10/03/2004	125	OK	130	495	OK	130	125	OK	130	11	OK	130				24.2	OK	130	7	OK	130			
422326A	Gowrie_Ck Cranley	Oakey Creek	25/01/2005	141	OK	130	141	OK	130	9	OK	130	17	OK	130				22.3	OK	130	7.14	OK	130	7.5	OK	130
422326A	Gowrie_Ck Cranley	Oakey Creek	22/07/2005	562	OK	130				2	OK	130										8.39	OK	130			
422326A	Gowrie_Ck Cranley	Oakey Creek	22/09/2005	469	OK	130				6	OK	130										8.04	OK	130			
422326A	Gowrie_Ck Cranley	Oakey Creek	22/08/2006	558	OK	131	547	OK	130	5	OK	131							11.5	OK	130	8.38	OK	131	7.8	OK	130
422326A	Gowrie_Ck Cranley	Oakey Creek	26/08/2006	555	OK	10				3	OK	10										8.22	OK	10			
422326A	Gowrie_Ck Cranley	Oakey Creek	14/01/2009				485	OK	130				382	OK	130				22.2	OK	130				8.4	OK	130
422326A	Gowrie_Ck Cranley	Oakey Creek	27/04/2009				496	OK	130				3	OK	130				16.1	OK	130				8.7	OK	130
422326A	Gowrie_Ck Cranley	Oakey Creek	14/09/2009				461	OK	130				3	OK	130				15.9	OK	130						
422330A	Oakey_Ck Oakey	Oakey Creek	8/03/1971	1050	OK	125																7.5	OK	135			
422330A	Oakey_Ck Oakey	Oakey Creek	8/03/1971	1650	OK	125																7.4	OK	135			
422330A	Oakey_Ck Oakey	Oakey Creek	18/10/1971	1005	OK	125													24	OK	130	7.2	OK	135			
422330A	Oakey_Ck Oakey	Oakey Creek	8/01/1973	430	OK	125													27	OK	130	7.8	OK	135			
422330A	Oakey_Ck Oakey	Oakey Creek	26/01/1973	605	OK	125													28	OK	130	7.1	OK	135			
422330A	Oakey_Ck Oakey	Oakey Creek	24/07/1973	1150	OK	135													14	OK	130	7.4	OK	135			
422330A	Oakey_Ck Oakey	Oakey Creek	17/09/1973	725	OK	125																8.2	OK	135			
422330A	Oakey_Ck Oakey	Oakey Creek	13/10/1975	1350	OK	125																8.4	OK	135			
422330A	Oakey_Ck Oakey	Oakey Creek	29/12/1975	185	OK	125																6.9	OK	135			
422330A	Oakey_Ck Oakey	Oakey Creek	29/12/1975	870	OK	125																8.1	OK	135			
422330A	Oakey_Ck Oakey	Oakey Creek	23/08/1976	3250	OK	125																7.9	OK	135			
422332A	Gowrie_Ck Oakey	Oakey Creek	15/03/1971	920	OK	125																7	OK	135			
422332A	Gowrie_Ck Oakey	Oakey Creek	31/05/1971	870	OK	125																7.3	OK	135			
422332A	Gowrie_Ck Oakey	Oakey Creek	31/05/1971																14	OK	130						
422332A	Gowrie_Ck Oakey	Oakey Creek	19/07/1971	760	OK	125																7.1	OK	135			
422332A	Gowrie_Ck Oakey	Oakey Creek	19/07/1971																11	OK	130						
422332A	Gowrie_Ck Oakey	Oakey Creek	30/08/1971	1120	OK	125																7.1	OK	135			
422332A	Gowrie_Ck Oakey	Oakey Creek	30/08/1971										17	OK	130												
422332A	Gowrie_Ck Oakey	Oakey Creek	18/10/1971	610	OK	135													22	OK	130	7.5	OK	135			
422332A	Gowrie_Ck Oakey	Oakey Creek	13/03/1972	1000	OK	125													24	OK	130	7.1	OK	135			
422332A	Gowrie_Ck Oakey	Oakey Creek	21/08/1972	1320	OK	125																6.9	OK	135			
422332A	Gowrie_Ck Oakey	Oakey Creek	23/10/1972	2300	OK	135																6.9	OK	135			
422332A	Gowrie_Ck Oakey	Oakey Creek	8/05/1973	1100	OK	125																7.2	OK	135			
422332A	Gowrie_Ck Oakey	Oakey Creek	8/05/1973																20	OK	130						
422332A	Gowrie_Ck Oakey	Oakey Creek	17/09/1973	950	OK	125																7.7	OK	135			
422332A	Gowrie_Ck Oakey	Oakey Creek	17/09/1973																19	OK	130						
422332A	Gowrie_Ck Oakey	Oakey Creek	29/10/1973	940	OK	125													20	OK	130	7.7	OK	135			
422332A	Gowrie_Ck Oakey	Oakey Creek	21/01/1974	820	OK	125																8.5	OK	135			
422332A	Gowrie_Ck Oakey	Oakey Creek	12/09/1974	1020	OK	125																7.6	OK	135			
422332A	Gowrie_Ck Oakey	Oakey Creek	13/10/1975	950	OK	125																7.4	OK	135			

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Station	Station Name	Receiving Creek/ River	Date	V2010.00	F2010.00	Q2010.00	V2010.50	F2010.50	Q2010.50	V2030.00	F2030.00	Q2030.00	V2030.50	F2030.50	Q2030.50	V2030.51	F2030.51	Q2030.51	V2080.50	F2080.50	Q2080.50	V2100.00	F2100.00	Q2100.00	V2100.50	F2100.50	Q2100.50	
				Conductivity @ 25C (uS/cm)	Conductivity @ 25C FLD	Turbidity (NTU)	Turbidity (NTU) FLD	Turbidity (NTU) FLD Webb test only	Water Temperature FLD	pH (pH units)	pH (pH units) FLD																	
422332A	Gowrie_Ck Oakey	Oakey Creek	8/12/1975	1150	OK	125																						
422332A	Gowrie_Ck Oakey	Oakey Creek	25/02/1976	635	OK	125																						
422332A	Gowrie_Ck Oakey	Oakey Creek	9/10/1978	1200	OK	151																						
422332A	Gowrie_Ck Oakey	Oakey Creek	9/07/1979	1300	OK	125																						
422332A	Gowrie_Ck Oakey	Oakey Creek	9/07/1979	3750	OK	125																						
422332A	Gowrie_Ck Oakey	Oakey Creek	9/07/1979																	12	OK	130						
422332A	Gowrie_Ck Oakey	Oakey Creek	10/09/1979	1500	OK	125																						
422332A	Gowrie_Ck Oakey	Oakey Creek	10/09/1979																	20	OK	130						
422332A	Gowrie_Ck Oakey	Oakey Creek	29/01/1980	400	OK	125																						
422332A	Gowrie_Ck Oakey	Oakey Creek	29/01/1980																	26	OK	130						
422332A	Gowrie_Ck Oakey	Oakey Creek	14/04/1980	1930	OK	125																						
422332A	Gowrie_Ck Oakey	Oakey Creek	14/04/1980																	20	OK	130						
422332A	Gowrie_Ck Oakey	Oakey Creek	1/07/1980	1450	OK	125																						
422332A	Gowrie_Ck Oakey	Oakey Creek	1/07/1980																	10	OK	130						
422332A	Gowrie_Ck Oakey	Oakey Creek	30/01/1981	1500	OK	125																						
422332A	Gowrie_Ck Oakey	Oakey Creek	30/01/1981																	26	OK	130						
422332A	Gowrie_Ck Oakey	Oakey Creek	26/08/2006	1840	OK	10				9	OK	10																
422350A	Oakey_Ck Fairview	Oakey Creek	18/06/1963	655	OK	125																						
422350A	Oakey_Ck Fairview	Oakey Creek	25/09/1963	1470	OK	125																						
422350A	Oakey_Ck Fairview	Oakey Creek	22/07/1964	1240	OK	125																						
422350A	Oakey_Ck Fairview	Oakey Creek	8/12/1964	1350	OK	125																						
422350A	Oakey_Ck Fairview	Oakey Creek	10/05/1965	1350	OK	125																						
422350A	Oakey_Ck Fairview	Oakey Creek	21/10/1965	1240	OK	125																						
422350A	Oakey_Ck Fairview	Oakey Creek	16/10/1980	1970	OK	125														23	OK	130						
422350A	Oakey_Ck Fairview	Oakey Creek	29/01/1981	1050	OK	125														30	OK	130						
422350A	Oakey_Ck Fairview	Oakey Creek	8/02/1981	345	OK	125																						
422350A	Oakey_Ck Fairview	Oakey Creek	8/02/1981	235	OK	125																						
422350A	Oakey_Ck Fairview	Oakey Creek	9/02/1981	210	OK	125																						
422350A	Oakey_Ck Fairview	Oakey Creek	19/02/1981	815	OK	125														27	OK	130						
422350A	Oakey_Ck Fairview	Oakey Creek	15/04/1981	685	OK	125				125	OK	151								21	OK	130						
422350A	Oakey_Ck Fairview	Oakey Creek	30/06/1981	1360	OK	125				10	OK	125								14	OK	130						
422350A	Oakey_Ck Fairview	Oakey Creek	15/09/1981	1240	OK	125				18	OK	125																
422350A	Oakey_Ck Fairview	Oakey Creek	16/02/1982	1400	OK	125				25	OK	125																
422350A	Oakey_Ck Fairview	Oakey Creek	29/06/1982	1550	OK	125				6	OK	125																
422350A	Oakey_Ck Fairview	Oakey Creek	14/09/1982	1300	OK	125				3	OK	125																
422350A	Oakey_Ck Fairview	Oakey Creek	25/11/1982	1650	OK	125				44	OK	125								27	OK	130						
422350A	Oakey_Ck Fairview	Oakey Creek	13/05/1983	430	OK	125				100	OK	125																
422350A	Oakey_Ck Fairview	Oakey Creek	28/07/1983	1450	OK	125				18	OK	125																
422350A	Oakey_Ck Fairview	Oakey Creek	10/10/1983	1650	OK	125				20	OK	125								21	OK	130						
422350A	Oakey_Ck Fairview	Oakey Creek	13/12/1983	1200	OK	125				100	OK	125								21	OK	130						
422350A	Oakey_Ck Fairview	Oakey Creek	6/03/1984	1100	OK	125				15	OK	125																
422350A	Oakey_Ck Fairview	Oakey Creek	28/05/1984	1600	OK	125				4	OK	125								15	OK	130						
422350A	Oakey_Ck Fairview	Oakey Creek	11/10/1984	1750	OK	125				13	OK	125								19	OK	130						
422350A	Oakey_Ck Fairview	Oakey Creek	9/01/1985	1300	OK	125				18	OK	125								29	OK	130						
422350A	Oakey_Ck Fairview	Oakey Creek	24/07/1985	1150	OK	125				15	OK	125								10	OK	130						
422350A	Oakey_Ck Fairview	Oakey Creek	21/10/1985	880	OK	125	1084	OK	130	1	OK	125								19	OK	130						
422350A	Oakey_Ck Fairview	Oakey Creek	7/01/1986	1500	OK	125	1470	OK	130	24	OK	125								24	OK	130						
422350A	Oakey_Ck Fairview	Oakey Creek	2/04/1986	880	OK	125	944	OK	130	36	OK	125								21	OK	130						
422350A	Oakey_Ck Fairview	Oakey Creek	1/07/1986	1700	OK	125	1903	OK	130	12	OK	125								10.5	OK	130						
422350A	Oakey_Ck Fairview	Oakey Creek	8/10/1986	1800	OK	125	1770	OK	130	30	OK	125								21	OK	130						
422350A	Oakey_Ck Fairview	Oakey Creek	15/01/1987	1600	OK	125	1925	OK	130	15	OK	125								30	OK	130						
422350A	Oakey_Ck Fairview	Oakey Creek	2/04/1987	1950	OK	125														23	OK	130						
422350A	Oakey_Ck Fairview	Oakey Creek	19/06/1987	680	OK	125	620	OK	130	45	OK	125								15	OK	130						
422350A	Oakey_Ck Fairview	Oakey Creek	3/09/1987	1100	OK	125	1360	OK	130	22	OK	125								16	OK	130						
422350A	Oakey_Ck Fairview	Oakey Creek	5/11/1987	530	OK	125	547	OK	130	82	OK	125								22	OK	130						

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Station	Station Name	Receiving Creek/ River	Date	V2010.00			V2010.50			V2030.00			V2030.50			V2030.51			V2080.50			V2100.00			V2100.50		
				F2010.00	Q2010.00	Q2010.50	F2010.50	Q2010.50	F2030.00	Q2030.00	Q2030.50	F2030.50	Q2030.50	F2030.51	Q2030.51	Q2030.51	F2080.50	Q2080.50	Q2080.50	F2100.00	Q2100.00	Q2100.00	F2100.50	Q2100.50	Q2100.50		
				Conductivity @ 25C (uS/cm)			Conductivity @ 25C FLD			Turbidity (NTU)			Turbidity (NTU) FLD			Turbidity (NTU) FLD Webb test only			Water Temperature FLD			pH (pH units)			pH (pH units) FLD		
422350A	Oakey_Ck Fairview	Oakey Creek	8/03/1988	1200	OK	125	1323	OK	130	72	OK	125						24.5	OK	130	8.4	OK	135				
422350A	Oakey_Ck Fairview	Oakey Creek	25/05/1988	1450	OK	125	1583	OK	130	30	OK	125						16	OK	130	7.9	OK	135				
422350A	Oakey_Ck Fairview	Oakey Creek	4/08/1988	1200	OK	125	1190	OK	130	20	OK	125						15	OK	130	7.9	OK	135				
422350A	Oakey_Ck Fairview	Oakey Creek	10/11/1988	1800	OK	125	2130	OK	130	30	OK	125						25	OK	130	7.7	OK	135				
422350A	Oakey_Ck Fairview	Oakey Creek	26/01/1989	860	OK	125	1070	OK	130	32	OK	125						23	OK	130	7.7	OK	135				
422350A	Oakey_Ck Fairview	Oakey Creek	6/09/1989	1550	OK	125	449	OK	130	16	OK	125						14	OK	130	7.8	OK	135				
422350A	Oakey_Ck Fairview	Oakey Creek	7/12/1989	395	OK	125	405	OK	130	200	OK	151						23	OK	130	7.5	OK	135				
422350A	Oakey_Ck Fairview	Oakey Creek	23/03/1990	858	OK	125	965	OK	130	15	OK	125						21	OK	130	7.9	OK	135				
422350A	Oakey_Ck Fairview	Oakey Creek	3/07/1990	1248	OK	125	1110	OK	130	9	OK	125						10	OK	130	8	OK	135				
422350A	Oakey_Ck Fairview	Oakey Creek	16/10/1990	1460	OK	125	1577	OK	130	20	OK	125						24	OK	130	8	OK	135				
422350A	Oakey_Ck Fairview	Oakey Creek	12/10/1992	1147	OK	125	1070	OK	130	13	OK	125						19	OK	130	7.4	OK	135				
422350A	Oakey_Ck Fairview	Oakey Creek	9/06/1993	1075	OK	125	1066	OK	130	41	OK	125						12.2	OK	130	7.7	OK	135	7.9	OK	130	
422350A	Oakey_Ck Fairview	Oakey Creek	15/03/1994				609	OK	130									22.6	OK	130							
422350A	Oakey_Ck Fairview	Oakey Creek	15/03/1994	617	OK	125	648	OK	130	74	OK	125						23.1	OK	130	8	OK	135				
422350A	Oakey_Ck Fairview	Oakey Creek	14/07/1994	1672	OK	125				22	OK	125									8.8	OK	135				
422350A	Oakey_Ck Fairview	Oakey Creek	20/07/1994	1822	OK	125	1765	OK	130	200	OK	151						13.7	OK	130	8.4	OK	135	10	OK	130	
422350A	Oakey_Ck Fairview	Oakey Creek	8/12/1994	2879.4	OK	130				17	OK	130									7.65	OK	130				
422350A	Oakey_Ck Fairview	Oakey Creek	28/03/1995				593	OK	130									28.6	OK	130							
422350A	Oakey_Ck Fairview	Oakey Creek	28/03/1995	572.7	OK	130	606	OK	130	23	OK	130	44	OK	130			28.3	OK	130	8.22	OK	130	7.7	OK	130	
422350A	Oakey_Ck Fairview	Oakey Creek	5/05/1995	1217.6	OK	130	1240	OK	130	28	OK	130	33	OK	130			17.8	OK	130	7.79	OK	130	7.9	OK	130	
422350A	Oakey_Ck Fairview	Oakey Creek	14/08/1995	1613	OK	130	1500	OK	130	35	OK	130	57	OK	130			15.6	OK	130	8.51	OK	130	10.4	OK	130	
422350A	Oakey_Ck Fairview	Oakey Creek	18/08/1995				1480	OK	130				27	OK	130			18.9	OK	130				10	OK	130	
422350A	Oakey_Ck Fairview	Oakey Creek	7/09/1995				2110	OK	130									14.4	OK	130							
422350A	Oakey_Ck Fairview	Oakey Creek	13/09/1995				2170	OK	130									18.2	OK	130				8.9	OK	130	
422350A	Oakey_Ck Fairview	Oakey Creek	20/09/1995				2030	OK	130									23	OK	130							
422350A	Oakey_Ck Fairview	Oakey Creek	4/10/1995	1772.6	OK	130	1951	OK	130	29	OK	130	41	OK	130			19.3	OK	130	8.73	OK	130	9	OK	130	
422350A	Oakey_Ck Fairview	Oakey Creek	12/12/1995				332	OK	130									23.4	OK	130							
422350A	Oakey_Ck Fairview	Oakey Creek	6/02/1996				439	OK	130				87	OK	130			27	OK	130				7.9	OK	130	
422350A	Oakey_Ck Fairview	Oakey Creek	28/05/1996				853	OK	130				99	OK	130			15.4	OK	130				7.9	OK	130	
422350A	Oakey_Ck Fairview	Oakey Creek	29/05/1996				880	OK	130									14.6	OK	130							
422350A	Oakey_Ck Fairview	Oakey Creek	13/06/1996				1128	OK	130				92	OK	130			15.2	OK	130				8	OK	130	
422350A	Oakey_Ck Fairview	Oakey Creek	20/06/1996				1190	OK	130									13.9	OK	130							
422350A	Oakey_Ck Fairview	Oakey Creek	16/09/1996				1505	OK	130									18.6	OK	130							
422350A	Oakey_Ck Fairview	Oakey Creek	16/09/1996				1493	OK	130				21	OK	130			18.6	OK	130				8.9	OK	130	
422350A	Oakey_Ck Fairview	Oakey Creek	7/10/1996				1400	OK	130									22	OK	130							
422350A	Oakey_Ck Fairview	Oakey Creek	31/10/1996				1126	OK	130									22.7	OK	130							
422350A	Oakey_Ck Fairview	Oakey Creek	18/11/1996	1450	OK	130	1455	OK	130	8.6	OK	130	15	OK	130			24.6	OK	130	8.3	OK	130	8.9	OK	130	
422350A	Oakey_Ck Fairview	Oakey Creek	7/01/1997	970	OK	130	1005	OK	130	9.8	OK	130	36	OK	130			23.5	OK	130	8.06	OK	130	8.2	OK	130	
422350A	Oakey_Ck Fairview	Oakey Creek	25/03/1997				1139	OK	130									22	OK	130							
422350A	Oakey_Ck Fairview	Oakey Creek	23/04/1997	1330	OK	130	1332	OK	130	2.4	OK	130	35	OK	130			22	OK	130	7.4	OK	130	8.2	OK	130	
422350A	Oakey_Ck Fairview	Oakey Creek	29/05/1997				1482	OK	130									14.4	OK	130							
422350A	Oakey_Ck Fairview	Oakey Creek	21/07/1997	1570	OK	130	1593	OK	130	20	OK	130	15.6	OK	130			11.5	OK	130	7.65	OK	130	8.4	OK	130	
422350A	Oakey_Ck Fairview	Oakey Creek	25/09/1997				1540	OK	130									19.5	OK	130							
422350A	Oakey_Ck Fairview	Oakey Creek	13/11/1997				446	OK	130									28	OK	130							
422350A	Oakey_Ck Fairview	Oakey Creek	24/11/1997	748	OK	130	750	OK	130	52	OK	130	21	OK	130			25.9	OK	130	7.89	OK	130	7.7	OK	130	
422350A	Oakey_Ck Fairview	Oakey Creek	28/04/1998				1271	OK	130				19	OK	130			18.6	OK	130				7.9	OK	130	
422350A	Oakey_Ck Fairview	Oakey Creek	21/05/1998	333	OK	130	338	OK	130	306	OK	130	353	OK	130			17.5	OK	130	7.54	OK	130	7.8	OK	130	
422350A	Oakey_Ck Fairview	Oakey Creek	7/10/1998	888	OK	130	912	OK	130	41	OK	130	71	OK	130			23.5	OK	130	7.78	OK	130	8.2	OK	130	
422350A	Oakey_Ck Fairview	Oakey Creek	19/11/1998	1380	OK	130	1427	OK	130	16.2	OK	130	53	OK	130			22.9	OK	130	7.82	OK	130	8.2	OK	130	
422350A	Oakey_Ck Fairview	Oakey Creek	18/02/1999	761.24	OK	130	773	OK	130	101	OK	130	136	OK	130			28.6	OK	130	7.76	OK	130	7.7	OK	130	
422350A	Oakey_Ck Fairview	Oakey Creek	22/03/1999				871	OK	130									26.2	OK	130							
422350A	Oakey_Ck Fairview	Oakey Creek	16/06/1999	1296.3	OK	130	1367	OK	130	30	OK	130	41	OK	130			11.2	OK	130	8.08	OK	130	8.1	OK	130	
422350A	Oakey_Ck Fairview	Oakey Creek	29/06/1999				1465	OK	130									13.5	OK	130							
422350A	Oakey_Ck Fairview	Oakey Creek	1/09/1999	1380	OK	130	1412	OK	130	28.4	OK	130	39	OK	130			17.1	OK	130	7.81	OK	130	8.7	OK	130	
422350A	Oakey_Ck Fairview	Oakey Creek	1/09/1999				1412	OK	130									17.1	OK	130							

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Station	Station Name	Receiving Creek/ River	Date	V2010.00	F2010.00	Q2010.00	V2010.50	F2010.50	Q2010.50	V2030.00	F2030.00	Q2030.00	V2030.50	F2030.50	Q2030.50	V2030.51	F2030.51	Q2030.51	V2080.50	F2080.50	Q2080.50	V2100.00	F2100.00	Q2100.00	V2100.50	F2100.50	Q2100.50	
				Conductivity @ 25C (uS/cm)			Conductivity @ 25C FLD			Turbidity (NTU)			Turbidity (NTU) FLD			Turbidity (NTU) FLD Webb test only			Water Temperature FLD			pH (pH units)			pH (pH units) FLD			
422350A	Oakey_Ck Fairview	Oakey Creek	27/01/2000				680	OK	130										23	OK	130							
422350A	Oakey_Ck Fairview	Oakey Creek	27/01/2000	693	OK	130	680	OK	130	45.2	OK	130	46	OK	130				23	OK	130	7.7	OK	130	8.1	OK	130	
422350A	Oakey_Ck Fairview	Oakey Creek	2/02/2000				1021	OK	130										25.8	OK	130							
422350A	Oakey_Ck Fairview	Oakey Creek	21/02/2000	810	OK	130	823	OK	130	25.9	OK	130	42	OK	130				24.9	OK	130	7.54	OK	130	7.7	OK	130	
422350A	Oakey_Ck Fairview	Oakey Creek	19/06/2000	970	OK	130	1019	OK	130	51	OK	130	10	OK	130				14.3	OK	130	7.85	OK	130	7.5	OK	130	
422350A	Oakey_Ck Fairview	Oakey Creek	24/08/2000				1787	OK	130										13.3	OK	130				8.3	OK	130	
422350A	Oakey_Ck Fairview	Oakey Creek	1/12/2000				1439	OK	130										26.9	OK	130							
422350A	Oakey_Ck Fairview	Oakey Creek	5/02/2001																									
422350A	Oakey_Ck Fairview	Oakey Creek	6/02/2001	368	OK	130				817	OK	130										7.68	OK	130				
422350A	Oakey_Ck Fairview	Oakey Creek	6/02/2001				369	OK	130										24.1	OK	130							
422350A	Oakey_Ck Fairview	Oakey Creek	6/02/2001																									
422350A	Oakey_Ck Fairview	Oakey Creek	8/02/2001																									
422350A	Oakey_Ck Fairview	Oakey Creek	17/04/2001																									
422350A	Oakey_Ck Fairview	Oakey Creek	29/05/2001	1296	OK	130				31.7	OK	130										8.09	OK	130				
422350A	Oakey_Ck Fairview	Oakey Creek	13/06/2001	857	OK	130	872	OK	130	22.7	OK	130	14	OK	130				16.6	OK	130	7.48	OK	130	9.1	OK	130	
422350A	Oakey_Ck Fairview	Oakey Creek	12/07/2001				1434	OK	130				20	OK	130	19	OK	130	13.5	OK	130				7.6	OK	130	
422350A	Oakey_Ck Fairview	Oakey Creek	20/08/2001				1528	OK	130										12.5	OK	130							
422350A	Oakey_Ck Fairview	Oakey Creek	15/10/2001	1650	OK	130	1685	OK	130	8	OK	130	29	OK	130				23.7	OK	130	7.85	OK	130	8.6	OK	130	
422350A	Oakey_Ck Fairview	Oakey Creek	25/10/2001				1460	OK	130				34	OK	130				22.1	OK	130							
422350A	Oakey_Ck Fairview	Oakey Creek	11/11/2001																									
422350A	Oakey_Ck Fairview	Oakey Creek	12/11/2001																									
422350A	Oakey_Ck Fairview	Oakey Creek	13/11/2001																									
422350A	Oakey_Ck Fairview	Oakey Creek	13/11/2001				217	OK	130				999	>	130	939	OK	130	22.7	OK	130				6.7	OK	130	
422350A	Oakey_Ck Fairview	Oakey Creek	30/11/2001				258	OK	130										24.7	OK	130							
422350A	Oakey_Ck Fairview	Oakey Creek	6/03/2002				1232	OK	130				21	OK	130				23.1	OK	130				7.3	OK	130	
422350A	Oakey_Ck Fairview	Oakey Creek	17/04/2002	545	OK	130				58.6	OK	130										7.65	OK	130				
422350A	Oakey_Ck Fairview	Oakey Creek	15/05/2002	597	OK	130				33	OK	130										7.92	OK	130				
422350A	Oakey_Ck Fairview	Oakey Creek	27/06/2002				1331	OK	130				33	OK	130	37	OK	130	11.8	OK	130				7.6	OK	130	
422350A	Oakey_Ck Fairview	Oakey Creek	3/10/2002				1774	OK	130										23.4	OK	130							
422350A	Oakey_Ck Fairview	Oakey Creek	7/10/2002	1950	OK	130	1977	OK	130	23.1	OK	130	24	OK	130				30.5	OK	130	7.93	OK	130	7.6	OK	130	
422350A	Oakey_Ck Fairview	Oakey Creek	12/05/2003	617	OK	130	639	OK	130	42	OK	130	90	OK	130				18	OK	130	7.83	OK	130	8.7	OK	130	
422350A	Oakey_Ck Fairview	Oakey Creek	12/10/2003	1850	OK	130	1901	OK	130	24	OK	130	21	OK	130				17.8	OK	130	8	OK	130	8.4	OK	130	
422350A	Oakey_Ck Fairview	Oakey Creek	8/12/2003	620	OK	130	645	OK	130	420	OK	130	629	OK	130				22.7	OK	130	7.1	OK	130	8.5	OK	130	
422350A	Oakey_Ck Fairview	Oakey Creek	9/12/2003	530	OK	130	562	OK	130	365	OK	130	513	OK	130				26.9	OK	130	7.25	OK	130	8	OK	130	
422350A	Oakey_Ck Fairview	Oakey Creek	11/03/2004	370	OK	130				260	OK	130										7.55	OK	130				
422350A	Oakey_Ck Fairview	Oakey Creek	26/11/2004	1430	OK	130				50	OK	130										7.51	OK	130				
422350A	Oakey_Ck Fairview	Oakey Creek	25/01/2005	731	OK	130	762	OK	130	26	OK	130	35	OK	130				23.3	OK	130	7.49	OK	130	7.6	OK	130	
422350A	Oakey_Ck Fairview	Oakey Creek	20/12/2005	599	OK	130	608	OK	130	58	OK	130	55	OK	130				28.3	OK	130	7.64	OK	130	7.4	OK	130	
422350A	Oakey_Ck Fairview	Oakey Creek	15/03/2006	812	OK	130	832	OK	130	19	OK	130	28	OK	130				28.3	OK	130	7.95	OK	130	8.1	OK	130	
422350A	Oakey_Ck Fairview	Oakey Creek	15/08/2006	1830	OK	131	1881	OK	130	22	OK	131	21	OK	130				12.2	OK	130	8.1	OK	131	8.5	OK	130	
422350A	Oakey_Ck Fairview	Oakey Creek	16/09/2009				796	OK	130				19	OK	130				18	OK	130							

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Station	Station Name	Receiving Creek/ River	Date	V2132.00	F2132.00	Q2132.00	V2169.00	F2169.00	Q2169.00	V2172.00	F2172.00	Q2172.00	V2311.00	F2311.00	Q2311.00	V2331.00	F2331.00	Q2331.00	V2343.00	F2343.00	Q2343.00	V2337.00	F2337.00	Q2337.00
				Hardness as CaCO3 (mg/L)			Total Diss. Solids (mg/L)			Total Suspended Solids			Chloride as Cl (mg/L)			Nitrate as NO3(mg/L)			Nitrate + nitrite as N - soluble (mg/L)			Total Nitrogen (mg/L)		
422314A	Condamine_R Range Br	Condamine River	24/09/1963	241	OK	125	430	OK	125				128	OK	125									
422314A	Condamine_R Range Br	Condamine River	28/04/1964	76	OK	125	140	OK	125				28	OK	125									
422314A	Condamine_R Range Br	Condamine River	21/07/1964	104	OK	125	274	OK	125				76	OK	125	0.2	OK	135						
422314A	Condamine_R Range Br	Condamine River	8/12/1964	245	OK	125	500	OK	125				185	OK	125									
422314A	Condamine_R Range Br	Condamine River	14/09/1965	158	OK	125	320	OK	125				96	OK	125									
422314A	Condamine_R Range Br	Condamine River	8/08/1996	245.14	OK	130	405.78	OK	130	23	OK	130	124.99	OK	130	4.4	OK	130						
422314A	Condamine_R Range Br	Condamine River	4/03/1997	76.33	OK	130	138.91	OK	130	225	OK	130	20.11	OK	130	1.45	OK	130						
422314A	Condamine_R Range Br	Condamine River	22/05/1997	122.47	OK	130	210.09	OK	130	43	OK	130	36.7	OK	130	0.2	OK	130						
422314A	Condamine_R Range Br	Condamine River	20/11/1997	107.01	OK	130	219.97	OK	130	92	OK	130	53.83	OK	130	1.62	OK	130						
422314A	Condamine_R Range Br	Condamine River	18/02/1998	59.79	OK	130	137.8	OK	130	288	OK	130	17.47	OK	130	1.87	OK	130						
422314A	Condamine_R Range Br	Condamine River	28/05/1998	57.64	OK	130	152.3	OK	130	93	OK	130	23.35	OK	130	3.32	OK	130				1.5066	OK	130
422314A	Condamine_R Range Br	Condamine River	16/03/2001	99.33	OK	130	173.22	OK	130	54	OK	130	25.17	OK	130	1.07	OK	130	0.0013	OK	130	0.8109	OK	130
422314A	Condamine_R Range Br	Condamine River	8/11/2001	131.64	OK	130	212.73	OK	130	39	OK	130	34.72	OK	130	0	ND	130	0.0013	OK	130	0.9158	OK	130
422316A	Condamine_R Cecil Wr	Condamine River	27/05/1963	85	OK	125	192	OK	125				32	OK	125									
422316A	Condamine_R Cecil Wr	Condamine River	18/06/1963	122	OK	125	263	OK	125				71	OK	125									
422316A	Condamine_R Cecil Wr	Condamine River	1/08/1963	158	OK	125	258	OK	125				80	OK	125									
422316A	Condamine_R Cecil Wr	Condamine River	25/09/1963	195	OK	125	320	OK	125				88	OK	125									
422316A	Condamine_R Cecil Wr	Condamine River	17/12/1964	175	OK	125	380	OK	125				135	OK	125									
422316A	Condamine_R Cecil Wr	Condamine River	31/10/1965	149	OK	125	270	OK	125				68	OK	125									
422316A	Condamine_R Cecil Wr	Condamine River	1/06/1971	147	OK	125	214	OK	125				48	OK	125									
422316A	Condamine_R Cecil Wr	Condamine River	1/06/1971																					
422316A	Condamine_R Cecil Wr	Condamine River	20/07/1971	177	OK	125	240	OK	125				60	OK	125									
422316A	Condamine_R Cecil Wr	Condamine River	1/09/1971	223	OK	125	309	OK	125				95	OK	125									
422316A	Condamine_R Cecil Wr	Condamine River	18/10/1971	226	OK	125	310	OK	125				95	OK	125									
422316A	Condamine_R Cecil Wr	Condamine River	1/04/1972	112	OK	125	156	OK	125				50	OK	125									
422316A	Condamine_R Cecil Wr	Condamine River	30/06/1972	117	OK	125	212	OK	125				56	OK	125									
422316A	Condamine_R Cecil Wr	Condamine River	23/08/1972	132	OK	125	243	OK	125				85	OK	125									
422316A	Condamine_R Cecil Wr	Condamine River	30/09/1972	107	OK	125	233	OK	125				86	OK	125									
422316A	Condamine_R Cecil Wr	Condamine River	31/12/1972	59	OK	125	110	OK	125				24	OK	125	5	OK	135						
422316A	Condamine_R Cecil Wr	Condamine River	21/01/1973	92	OK	125	156	OK	125				30	OK	125									
422316A	Condamine_R Cecil Wr	Condamine River	20/03/1973	96	OK	125	157	OK	125				34	OK	125	1	OK	135						
422316A	Condamine_R Cecil Wr	Condamine River	20/03/1973																					
422316A	Condamine_R Cecil Wr	Condamine River	2/04/1973	152	OK	125	222	OK	125	13	OK	125	58	OK	125									
422316A	Condamine_R Cecil Wr	Condamine River	9/05/1973	150	OK	125	223	OK	125	25	OK	125	54	OK	125									
422316A	Condamine_R Cecil Wr	Condamine River	19/06/1973	127	OK	125	210	OK	125	12	OK	125	75	OK	125									
422316A	Condamine_R Cecil Wr	Condamine River	19/06/1973																					
422316A	Condamine_R Cecil Wr	Condamine River	1/07/1973	97	OK	125	194	OK	125	30	OK	125	65	OK	125									
422316A	Condamine_R Cecil Wr	Condamine River	25/07/1973	97	OK	125	169	OK	125	217	OK	125	50	OK	125									
422316A	Condamine_R Cecil Wr	Condamine River	25/07/1973																					
422316A	Condamine_R Cecil Wr	Condamine River	31/10/1973	165	OK	125	282	OK	125				85	OK	125									
422316A	Condamine_R Cecil Wr	Condamine River	31/10/1973																					
422316A	Condamine_R Cecil Wr	Condamine River	17/12/1973	129	OK	125	224	OK	125				70	OK	125									
422316A	Condamine_R Cecil Wr	Condamine River	23/01/1974	70	OK	125	116	OK	125	224	OK	125	18	OK	135									
422316A	Condamine_R Cecil Wr	Condamine River	27/03/1974	88	OK	125	150	OK	125	72	OK	125	25	OK	125									
422316A	Condamine_R Cecil Wr	Condamine River	27/03/1974																					
422316A	Condamine_R Cecil Wr	Condamine River	1/07/1974	84	OK	125	142	OK	125	4	OK	125	36	OK	135									
422316A	Condamine_R Cecil Wr	Condamine River	17/09/1974	123	OK	125	218	OK	125	20	OK	125	72	OK	125									
422316A	Condamine_R Cecil Wr	Condamine River	17/09/1974																					
422316A	Condamine_R Cecil Wr	Condamine River	3/12/1974	176	OK	125	259	OK	125	7	OK	125	75	OK	125									
422316A	Condamine_R Cecil Wr	Condamine River	14/10/1975	161	OK	125	278	OK	125	10	OK	125	90	OK	125									
422316A	Condamine_R Cecil Wr	Condamine River	10/12/1975	101	OK	125	190	OK	125	20	OK	125	42	OK	125									
422316A	Condamine_R Cecil Wr	Condamine River	29/01/1976	95	OK	125	174	OK	125	98	OK	125	16	OK	125									
422316A	Condamine_R Cecil Wr	Condamine River	12/05/1976	167	OK	125	254	OK	125				64	OK	125									
422316A	Condamine_R Cecil Wr	Condamine River	12/05/1976	224	OK	125	313	OK	125	17	OK	125	72	OK	125									
422316A	Condamine_R Cecil Wr	Condamine River	30/06/1976	250	OK	125	359	OK	125	14	OK	125	94	OK	125									

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				Hardness as CaCO3 (mg/L)			Total Diss. Solids (mg/L)			Total Suspended Solids			Chloride as Cl (mg/L)			Nitrate as NO3(mg/L)			Nitrate + nitrite as N - soluble (mg/L)			Total Nitrogen (mg/L)		
422316A	Condamine_R Cecil Wr	Condamine River	25/08/1976	223	OK	125	336	OK	125	14	OK	125	103	OK	125	1.3	OK	135						
422316A	Condamine_R Cecil Wr	Condamine River	30/09/1976	183	OK	125	292	OK	125				93	OK	125	2.7	OK	135						
422316A	Condamine_R Cecil Wr	Condamine River	3/11/1977	191	OK	125	322	OK	125	39	OK	125	103	OK	125	2.7	OK	135						
422316A	Condamine_R Cecil Wr	Condamine River	14/03/1978	98	OK	125	213	OK	125	15	OK	125	78	OK	125	0.9	OK	135						
422316A	Condamine_R Cecil Wr	Condamine River	25/04/1978	132	OK	125	237	OK	125	3	OK	125	63	OK	125	1	OK	135						
422316A	Condamine_R Cecil Wr	Condamine River	27/07/1978	160	OK	125	301	OK	125	84	OK	125	100	OK	125	2.6	OK	135						
422316A	Condamine_R Cecil Wr	Condamine River	11/10/1978	137	OK	125	233	OK	125	12	OK	125	60	OK	125									
422316A	Condamine_R Cecil Wr	Condamine River	14/02/1979	122	OK	125	219	OK	125	16	OK	125	56	OK	125	0.6	OK	135						
422316A	Condamine_R Cecil Wr	Condamine River	14/02/1979																					
422316A	Condamine_R Cecil Wr	Condamine River	11/07/1979	105	OK	125	186	OK	125	35	OK	125	50	OK	125	3.5	OK	135						
422316A	Condamine_R Cecil Wr	Condamine River	11/07/1979																					
422316A	Condamine_R Cecil Wr	Condamine River	3/09/1979	236	OK	125	353	OK	125	1	OK	125	110	OK	125	0.1	OK	135						
422316A	Condamine_R Cecil Wr	Condamine River	12/09/1979	223	OK	125	347	OK	125	3	OK	125	110	OK	125	0.2	OK	135						
422316A	Condamine_R Cecil Wr	Condamine River	12/09/1979																					
422316A	Condamine_R Cecil Wr	Condamine River	30/01/1980	85	OK	125	148	OK	125	4490	OK	125	20	OK	125	2.6	OK	135						
422316A	Condamine_R Cecil Wr	Condamine River	30/01/1980																					
422316A	Condamine_R Cecil Wr	Condamine River	31/01/1980	81	OK	125	138	OK	125	920	OK	125	22	OK	135	0.5	OK	135						
422316A	Condamine_R Cecil Wr	Condamine River	2/07/1980	123	OK	125	216	OK	125	22	OK	125	60	OK	125	0.9	OK	135						
422316A	Condamine_R Cecil Wr	Condamine River	2/07/1980																					
422316A	Condamine_R Cecil Wr	Condamine River	1/07/1981	147	OK	125	225	OK	125	10	OK	125	60	OK	125									
422316A	Condamine_R Cecil Wr	Condamine River	1/07/1981																					
422316A	Condamine_R Cecil Wr	Condamine River	8/07/1982	161	OK	125	0	OK	125	10	OK	125	54	OK	125	0.4	OK	135						
422316A	Condamine_R Cecil Wr	Condamine River	28/09/1982	176	OK	125	260	OK	125	10	OK	125	65	OK	125	0.4	OK	135						
422316A	Condamine_R Cecil Wr	Condamine River	28/07/1983	143	OK	125	240	OK	125	20	OK	125	49	OK	125	1.9	OK	135						
422316A	Condamine_R Cecil Wr	Condamine River	29/05/1984	116	OK	125	290	OK	125	10	OK	125	80	OK	125	1	OK	135						
422316A	Condamine_R Cecil Wr	Condamine River	29/05/1984																					
422316A	Condamine_R Cecil Wr	Condamine River	9/01/1985	144	OK	125	270	OK	125	10	OK	125	74	OK	125	3.2	OK	135						
422316A	Condamine_R Cecil Wr	Condamine River	9/01/1985																					
422316A	Condamine_R Cecil Wr	Condamine River	14/05/1985	135	OK	125	250	OK	125	10	OK	125	73	OK	125	0.5	OK	135						
422316A	Condamine_R Cecil Wr	Condamine River	14/05/1985																					
422316A	Condamine_R Cecil Wr	Condamine River	22/10/1985	245	OK	125	390	OK	125	10	OK	125	130	OK	125	8.4	OK	135						
422316A	Condamine_R Cecil Wr	Condamine River	22/10/1985																					
422316A	Condamine_R Cecil Wr	Condamine River	8/10/1986	187	OK	125	340	OK	125	5	OK	125	110	OK	125	2.7	OK	135						
422316A	Condamine_R Cecil Wr	Condamine River	8/10/1986																					
422316A	Condamine_R Cecil Wr	Condamine River	14/01/1987	93	OK	125	230	OK	125	150	OK	125	81	OK	125	0.7	OK	135						
422316A	Condamine_R Cecil Wr	Condamine River	14/01/1987																					
422316A	Condamine_R Cecil Wr	Condamine River	2/04/1987	108	OK	125	220	OK	125	28	OK	125	64	OK	125	0.5	OK	135						
422316A	Condamine_R Cecil Wr	Condamine River	2/04/1987																					
422316A	Condamine_R Cecil Wr	Condamine River	18/06/1987	93	OK	125	170	OK	125	70	OK	125	38	OK	125	2	OK	135						
422316A	Condamine_R Cecil Wr	Condamine River	18/06/1987																					
422316A	Condamine_R Cecil Wr	Condamine River	3/09/1987	67	OK	125	140	OK	125	120	OK	125	37.5	OK	125	2.2	OK	135						
422316A	Condamine_R Cecil Wr	Condamine River	3/09/1987																					
422316A	Condamine_R Cecil Wr	Condamine River	5/11/1987	109	OK	125	210	OK	125	65	OK	125	50	OK	125	2.9	OK	135						
422316A	Condamine_R Cecil Wr	Condamine River	5/11/1987																					
422316A	Condamine_R Cecil Wr	Condamine River	6/04/1988	20	OK	151	72	OK	151	158	OK	125	16.5	OK	151	1.2	OK	151						
422316A	Condamine_R Cecil Wr	Condamine River	23/05/1988	44	OK	125	130	OK	125	2000	OK	125	9.8	OK	135	2.2	OK	135						
422316A	Condamine_R Cecil Wr	Condamine River	24/05/1988	130	OK	125	230	OK	125	39	OK	125	61	OK	125	1.3	OK	135						
422316A	Condamine_R Cecil Wr	Condamine River	24/05/1988																					
422316A	Condamine_R Cecil Wr	Condamine River	4/08/1988	124	OK	125	220	OK	125	95	OK	125	56	OK	125	2.3	OK	135						
422316A	Condamine_R Cecil Wr	Condamine River	4/08/1988																					
422316A	Condamine_R Cecil Wr	Condamine River	10/11/1988	132	OK	125	220	OK	125	35	OK	125	62	OK	125	0.5	OK	135						
422316A	Condamine_R Cecil Wr	Condamine River	10/11/1988																					
422316A	Condamine_R Cecil Wr	Condamine River	26/01/1989	107	OK	125	190	OK	125	10	OK	125	34	OK	125	9.8	OK	135						
422316A	Condamine_R Cecil Wr	Condamine River	26/01/1989																					
422316A	Condamine_R Cecil Wr	Condamine River	22/08/1989	206	OK	125	320	OK	125	5	OK	125	92	OK	125									

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				Hardness as CaCO3 (mg/L)			Total Diss. Solids (mg/L)			Total Suspended Solids			Chloride as Cl (mg/L)			Nitrate as NO3(mg/L)			Nitrate + nitrite as N - soluble (mg/L)			Total Nitrogen (mg/L)		
422316A	Condamine_R Cecil Wr	Condamine River	22/08/1989																					
422316A	Condamine_R Cecil Wr	Condamine River	28/03/1990	111	OK	125	204	OK	125	30	OK	125	46.9	OK	125									
422316A	Condamine_R Cecil Wr	Condamine River	28/03/1990																					
422316A	Condamine_R Cecil Wr	Condamine River	3/07/1990	147	OK	125	258	OK	125	26	OK	125	69.2	OK	125	1.5	OK	135						
422316A	Condamine_R Cecil Wr	Condamine River	3/07/1990																					
422316A	Condamine_R Cecil Wr	Condamine River	17/10/1990	229	OK	125	372	OK	125	21	OK	125	123	OK	125	1	OK	135						
422316A	Condamine_R Cecil Wr	Condamine River	17/10/1990																					
422316A	Condamine_R Cecil Wr	Condamine River	25/02/1992	83	OK	125	157	OK	125	106	OK	125	32.9	OK	125									
422316A	Condamine_R Cecil Wr	Condamine River	25/02/1992																					
422316A	Condamine_R Cecil Wr	Condamine River	2/07/1992	152	OK	125	256	OK	125	37	OK	125	77.9	OK	125									
422316A	Condamine_R Cecil Wr	Condamine River	2/07/1992																					
422316A	Condamine_R Cecil Wr	Condamine River	21/10/1992	166	OK	125	274	OK	125	3	OK	125	90.2	OK	125	0.4	OK	135						
422316A	Condamine_R Cecil Wr	Condamine River	21/10/1992																					
422316A	Condamine_R Cecil Wr	Condamine River	8/03/1994	28	OK	125	75	OK	125	330	OK	125	7.2	OK	135	2.6	OK	135						
422316A	Condamine_R Cecil Wr	Condamine River	8/03/1994																					
422316A	Condamine_R Cecil Wr	Condamine River	12/04/1994	84	OK	125	161	OK	125	15	OK	125	26.9	OK	125	1.5	OK	135						
422316A	Condamine_R Cecil Wr	Condamine River	16/05/1994	90	OK	125	164	OK	125	7	OK	125	27.1	OK	125									
422316A	Condamine_R Cecil Wr	Condamine River	15/06/1994	92	OK	125	167	OK	125	2	OK	125	28.3	OK	125	0.8	OK	135						
422316A	Condamine_R Cecil Wr	Condamine River	12/07/1994	96	OK	125	161	OK	125				28.4	OK	125									
422316A	Condamine_R Cecil Wr	Condamine River	14/07/1994																					
422316A	Condamine_R Cecil Wr	Condamine River	15/08/1994	98	OK	125	160	OK	125	5	OK	125	28.7	OK	125									
422316A	Condamine_R Cecil Wr	Condamine River	15/08/1994																					
422316A	Condamine_R Cecil Wr	Condamine River	20/09/1994	98	OK	125	165	OK	125	10	OK	125	29.6	OK	125	0.3	OK	135						
422316A	Condamine_R Cecil Wr	Condamine River	20/09/1994																					
422316A	Condamine_R Cecil Wr	Condamine River	11/10/1994	103	OK	125	171	OK	125	10	OK	125	30.9	OK	125	1.7	OK	135						
422316A	Condamine_R Cecil Wr	Condamine River	11/10/1994																					
422316A	Condamine_R Cecil Wr	Condamine River	28/11/1994	93.17	OK	130	162.1	OK	130	3	OK	130	32.51	OK	130	0.15	OK	130	0.0304	OK	130			
422316A	Condamine_R Cecil Wr	Condamine River	10/01/1995	86.8	OK	130	158.73	OK	130	8	OK	130	31.15	OK	130	3.49	OK	130	0.0109	OK	130			
422316A	Condamine_R Cecil Wr	Condamine River	15/02/1995	68.88	OK	130	145.97	OK	130	128	OK	130	22.84	OK	130	3.76	OK	130	0.0096	OK	130			
422316A	Condamine_R Cecil Wr	Condamine River	21/03/1995	76.49	OK	130	137.07	OK	130	29	OK	130	17.7	OK	130	3	OK	130	0.0196	OK	130			
422316A	Condamine_R Cecil Wr	Condamine River	11/04/1995	80.22	OK	130	144.52	OK	130	15	OK	130	17.73	OK	130	1.43	OK	130	0.0088	OK	130			
422316A	Condamine_R Cecil Wr	Condamine River	24/05/1995	83.18	OK	130	142.39	OK	130	25	OK	130	18.48	OK	130	0.2	OK	130	0.0195	OK	130			
422316A	Condamine_R Cecil Wr	Condamine River	27/06/1995	86.24	OK	130	144.58	OK	130	12	OK	130	19.2	OK	130	0.7	OK	130	0.0365	OK	130			
422316A	Condamine_R Cecil Wr	Condamine River	26/07/1995																					
422316A	Condamine_R Cecil Wr	Condamine River	13/08/1995																					
422316A	Condamine_R Cecil Wr	Condamine River	30/08/1995																					
422316A	Condamine_R Cecil Wr	Condamine River	25/09/1995	96	OK	130	150.35	OK	130	21	OK	130	20.82	OK	130	1.03	OK	130	0.514	OK	130			
422316A	Condamine_R Cecil Wr	Condamine River	26/09/1995	156.94	OK	130	223.08	OK	130	9	OK	130	28.9	OK	130	0.5	OK	130						
422316A	Condamine_R Cecil Wr	Condamine River	17/10/1995	99.71	OK	130	153.49	OK	130	5	OK	130	21.1	OK	130	0.4	OK	130						
422316A	Condamine_R Cecil Wr	Condamine River	11/12/1995	83.39	OK	130	144.45	OK	130	138	OK	130	24.36	OK	130	2.54	OK	130						
422316A	Condamine_R Cecil Wr	Condamine River	20/12/1995	76.59	OK	130	129.43	OK	130	155	OK	130	13.5	OK	130	4.3	OK	130	0.416	OK	130			
422316A	Condamine_R Cecil Wr	Condamine River	30/01/1996	94.69	OK	130	163.84	OK	130	1104	OK	130	23.83	OK	130	4.23	OK	130	0.586	OK	130			
422316A	Condamine_R Cecil Wr	Condamine River	5/02/1996																					
422316A	Condamine_R Cecil Wr	Condamine River	28/02/1996	104.12	OK	130	177.36	OK	130	40	OK	130	21.97	OK	130	1	OK	130	0.0125	OK	130			
422316A	Condamine_R Cecil Wr	Condamine River	27/03/1996																0.125	OK	130			
422316A	Condamine_R Cecil Wr	Condamine River	28/05/1996	106.86	OK	130	187.52	OK	130	61	OK	130	41.9	OK	130	1.6	OK	130						
422316A	Condamine_R Cecil Wr	Condamine River	19/06/1996	157.73	OK	130	250.5	OK	130	25	OK	130	64.05	OK	130	0	ND	130	0.0145	OK	130			
422316A	Condamine_R Cecil Wr	Condamine River	25/07/1996	211.31	OK	130	321.64	OK	130	8	OK	130	89.92	OK	130	0	ND	130	0.0124	OK	130			
422316A	Condamine_R Cecil Wr	Condamine River	17/09/1996																					
422316A	Condamine_R Cecil Wr	Condamine River	17/09/1996																0.598	OK	130			
422316A	Condamine_R Cecil Wr	Condamine River	3/12/1996																					
422316A	Condamine_R Cecil Wr	Condamine River	3/12/1996	126.6	OK	130	250.78	OK	130	16	OK	130	56.25	OK	130	9.63	OK	130	0.945	OK	130			
422316A	Condamine_R Cecil Wr	Condamine River	11/02/1997	115.72	OK	130	237	OK	130	15	OK	130	64.31	OK	130	0	ND	130	0.0292	OK	130			
422316A	Condamine_R Cecil Wr	Condamine River	25/03/1997																					
422316A	Condamine_R Cecil Wr	Condamine River	24/04/1997																					

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Station	Station Name	Receiving Creek/ River	Date	V2132.00	F2132.00	Q2132.00	V2169.00	F2169.00	Q2169.00	V2172.00	F2172.00	Q2172.00	V2311.00	F2311.00	Q2311.00	V2331.00	F2331.00	Q2331.00	V2343.00	F2343.00	Q2343.00	V2337.00	F2337.00	Q2337.00	
				Hardness as CaCO3 (mg/L)			Total Diss. Solids (mg/L)			Total Suspended Solids			Chloride as Cl (mg/L)			Nitrate as NO3(mg/L)			Nitrate + nitrite as N - soluble (mg/L)			Total Nitrogen (mg/L)			
422316A	Condamine_R Cecil Wr	Condamine River	24/04/1997																						
422316A	Condamine_R Cecil Wr	Condamine River	29/05/1997																						
422316A	Condamine_R Cecil Wr	Condamine River	20/06/1997	126.93	OK	130	180.08	OK	130	21	OK	130	28	OK	130	0.96	OK	130							
422316A	Condamine_R Cecil Wr	Condamine River	22/07/1997																						
422316A	Condamine_R Cecil Wr	Condamine River	25/09/1997																						
422316A	Condamine_R Cecil Wr	Condamine River	25/09/1997																						
422316A	Condamine_R Cecil Wr	Condamine River	25/11/1997																						
422316A	Condamine_R Cecil Wr	Condamine River	25/11/1997																						
422316A	Condamine_R Cecil Wr	Condamine River	25/11/1997	76	OK	130	153.72	OK	130	69	OK	130	37.2	OK	130	2.2	OK	130	0.231	OK	130				
422316A	Condamine_R Cecil Wr	Condamine River	28/04/1998																						
422316A	Condamine_R Cecil Wr	Condamine River	7/10/1998	94.95	OK	130	201.78	OK	130	45	OK	130	56.45	OK	130	3.01	OK	130	0.424	OK	130	1.1919	OK	130	
422316A	Condamine_R Cecil Wr	Condamine River	18/02/1999	71.45	OK	130	134.52	OK	130	80	OK	130	21.17	OK	130	1.44	OK	130	0.15	OK	130	0.8137	OK	130	
422316A	Condamine_R Cecil Wr	Condamine River	19/03/1999																						
422316A	Condamine_R Cecil Wr	Condamine River	16/06/1999	110.83	OK	130	190.76	OK	130	22	OK	130	45.09	OK	130	1.05	OK	130	0.0615	OK	130	0.5676	OK	130	
422316A	Condamine_R Cecil Wr	Condamine River	29/06/1999																						
422316A	Condamine_R Cecil Wr	Condamine River	29/06/1999																						
422316A	Condamine_R Cecil Wr	Condamine River	1/09/1999	114.69	OK	130	203.2	OK	130	10	OK	130	57.5	OK	130	0.76	OK	130	0.0026	OK	130	0.3598	OK	130	
422316A	Condamine_R Cecil Wr	Condamine River	12/11/1999																						
422316A	Condamine_R Cecil Wr	Condamine River	17/11/1999																						
422316A	Condamine_R Cecil Wr	Condamine River	14/01/2000																						
422316A	Condamine_R Cecil Wr	Condamine River	24/01/2000																						
422316A	Condamine_R Cecil Wr	Condamine River	27/01/2000																						
422316A	Condamine_R Cecil Wr	Condamine River	27/01/2000	130.38	OK	130	226.29	OK	130	77	OK	130	45.66	OK	130	3.91	OK	130				1.2754	OK	130	
422316A	Condamine_R Cecil Wr	Condamine River	21/02/2000	94.18	OK	130	183.2	OK	130	102	OK	130	43.01	OK	130	1.1	OK	130	0.1349	OK	130	0.7618	OK	130	
422316A	Condamine_R Cecil Wr	Condamine River	19/06/2000	145	OK	130	250	OK	130	20	OK	130	68	OK	130	0.5	<	130	0.009	OK	130	0.4227	OK	130	
422316A	Condamine_R Cecil Wr	Condamine River	5/09/2000																						
422316A	Condamine_R Cecil Wr	Condamine River	21/12/2000																						
422316A	Condamine_R Cecil Wr	Condamine River	5/01/2001																						
422316A	Condamine_R Cecil Wr	Condamine River	5/01/2001																						
422316A	Condamine_R Cecil Wr	Condamine River	18/01/2001																						
422316A	Condamine_R Cecil Wr	Condamine River	25/01/2001																				0.8188	OK	130
422316A	Condamine_R Cecil Wr	Condamine River	1/02/2001																						
422316A	Condamine_R Cecil Wr	Condamine River	1/02/2001	79.28	OK	130	165.48	OK	130	263	OK	130	42.49	OK	130	2.45	OK	130				1.3751	OK	130	
422316A	Condamine_R Cecil Wr	Condamine River	6/02/2001																				2.175	OK	130
422316A	Condamine_R Cecil Wr	Condamine River	8/02/2001																				1.2583	OK	130
422316A	Condamine_R Cecil Wr	Condamine River	27/02/2001																						
422316A	Condamine_R Cecil Wr	Condamine River	17/03/2001	95.2	OK	130	163.11	OK	130	56	OK	130	30.73	OK	130	1.36	OK	130	0.1556	OK	130	0.6866	OK	130	
422316A	Condamine_R Cecil Wr	Condamine River	20/03/2001																						
422316A	Condamine_R Cecil Wr	Condamine River	17/04/2001																				0.7473	OK	130
422316A	Condamine_R Cecil Wr	Condamine River	13/06/2001	91.58	OK	130	150.61	OK	130	20	OK	130	22.28	OK	130	0.52	OK	130	0.0453	OK	130	0.485	OK	130	
422316A	Condamine_R Cecil Wr	Condamine River	11/07/2001																						
422316A	Condamine_R Cecil Wr	Condamine River	9/11/2001	107.27	OK	130	167.69	OK	130	19	OK	130	26.44	OK	130	0.44	OK	130	0.0045	OK	130	0.6326	OK	130	
422316A	Condamine_R Cecil Wr	Condamine River	10/04/2002																						
422316A	Condamine_R Cecil Wr	Condamine River	17/04/2002	44.25	OK	130	109.62	OK	130	174	OK	130	19.2	OK	130	4.4	OK	130	0.5829	OK	130	1.8875	OK	130	
422316A	Condamine_R Cecil Wr	Condamine River	26/09/2002																						
422316A	Condamine_R Cecil Wr	Condamine River	21/11/2002																						
422316A	Condamine_R Cecil Wr	Condamine River	8/05/2003																						
422316A	Condamine_R Cecil Wr	Condamine River	5/06/2003																						
422316A	Condamine_R Cecil Wr	Condamine River	6/11/2003																						
422316A	Condamine_R Cecil Wr	Condamine River	10/03/2004	92	OK	130	170	OK	130	40	OK	130	23	OK	130	0.8	OK	130				1	OK	130	
422316A	Condamine_R Cecil Wr	Condamine River	11/03/2004	70	OK	130	130	OK	130	600	OK	130	17	<	130	2.6	OK	130	0.38	OK	130	1.7	OK	130	
422316A	Condamine_R Cecil Wr	Condamine River	20/12/2005	72	OK	130	143	OK	130	66	OK	130	14	OK	130	2.7	OK	130				1.302	OK	10	
422316A	Condamine_R Cecil Wr	Condamine River	15/03/2006	50	OK	130	118	OK	130	160	OK	130	9	OK	130	1.2	OK	130				0.8938	OK	130	
422316A	Condamine_R Cecil Wr	Condamine River	29/08/2006	57	OK	10	120	OK	10	144	OK	10	11	OK	10	1.4	OK	10							
422316A	Condamine_R Cecil Wr	Condamine River	1/07/2009																						

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Station	Station Name	Receiving Creek/ River	Date	V2132.00	F2132.00	Q2132.00	V2169.00	F2169.00	Q2169.00	V2172.00	F2172.00	Q2172.00	V2311.00	F2311.00	Q2311.00	V2331.00	F2331.00	Q2331.00	V2343.00	F2343.00	Q2343.00	V2337.00	F2337.00	Q2337.00	
				Hardness as CaCO3 (mg/L)			Total Diss. Solids (mg/L)			Total Suspended Solids			Chloride as Cl (mg/L)			Nitrate as NO3(mg/L)			Nitrate + nitrite as N - soluble (mg/L)			Total Nitrogen (mg/L)			
422322A	Rocky_Ck Pittsworth	Condamine River	26/09/1963	583	OK	125	966	OK	125				312	OK	125										
422322A	Rocky_Ck Pittsworth	Condamine River	30/08/1971	329	OK	125	630	OK	125				200	OK	125	8	OK	135							
422322A	Rocky_Ck Pittsworth	Condamine River	5/05/1983	45	OK	125	140	OK	125	100	OK	125	23	OK	135	3.3	OK	135							
422322A	Rocky_Ck Pittsworth	Condamine River	4/12/1996	131.79	OK	130	271.18	OK	130	8870	OK	130	51.52	OK	130	1.83	OK	130							
422322A	Rocky_Ck Pittsworth	Condamine River	4/12/1996	80.83	OK	130	178.46	OK	130	5180	OK	130	26.57	OK	130	7.34	OK	130							
422323A	Tummalville	Condamine River	11/03/1963	122	OK	125	172	OK	125				32	OK	125										
422323A	Tummalville	Condamine River	28/05/1963	85	OK	125	228	OK	125				40	OK	125										
422323A	Tummalville	Condamine River	1/08/1963	175	OK	125	310	OK	125				76	OK	125										
422323A	Tummalville	Condamine River	26/09/1963	216	OK	125	400	OK	125				114	OK	125										
422323A	Tummalville	Condamine River	31/10/1963	187	OK	125	290	OK	125				120	OK	125										
422323A	Tummalville	Condamine River	16/01/1964	143	OK	125	259	OK	125				60	OK	125										
422323A	Tummalville	Condamine River	11/03/1964	105	OK	125	226	OK	125				16	OK	125	0.3	OK	135							
422323A	Tummalville	Condamine River	13/03/1964	114	OK	125	210	OK	151				28	OK	125	0.2	OK	135							
422323A	Tummalville	Condamine River	17/07/1964	115	OK	125	284	OK	151				84	OK	125										
422323A	Tummalville	Condamine River	17/12/1964	169	OK	125	420	OK	125				160	OK	125										
422323A	Tummalville	Condamine River	26/03/1971	131	OK	125	201	OK	125				46	OK	125										
422323A	Tummalville	Condamine River	26/03/1971																						
422323A	Tummalville	Condamine River	1/06/1971	148	OK	151	262	OK	151				60	OK	151										
422323A	Tummalville	Condamine River	17/06/1971	195	OK	125	293	OK	125				80	OK	125										
422323A	Tummalville	Condamine River	21/07/1971	201	OK	125	300	OK	125				95	OK	125										
422323A	Tummalville	Condamine River	21/07/1971																						
422323A	Tummalville	Condamine River	1/09/1971	208	OK	125	299	OK	125				90	OK	125										
422323A	Tummalville	Condamine River	20/10/1971	159	OK	125	257	OK	125				95	OK	125										
422323A	Tummalville	Condamine River	16/12/1971	86	OK	125	188	OK	125				65	OK	125										
422323A	Tummalville	Condamine River	27/01/1972	114	OK	125	219	OK	125				70	OK	125										
422323A	Tummalville	Condamine River	15/03/1972	95	OK	125	183	OK	125				60	OK	125										
422323A	Tummalville	Condamine River	13/07/1972	103	OK	125	182	OK	125				55	OK	125										
422323A	Tummalville	Condamine River	8/09/1972	41	OK	125	232	OK	125				80	OK	125										
422323A	Tummalville	Condamine River	25/10/1972	110	OK	125	184	OK	125				62	OK	125										
422323A	Tummalville	Condamine River	7/12/1972	115	OK	125	189	OK	125				52	OK	125										
422323A	Tummalville	Condamine River	7/12/1972																						
422323A	Tummalville	Condamine River	9/01/1973	82	OK	125	149	OK	125				40	OK	125										
422323A	Tummalville	Condamine River	25/01/1973	100	OK	125	149	OK	125				36	OK	125										
422323A	Tummalville	Condamine River	4/05/1973	135	OK	125	199	OK	125	22	OK	125	62	OK	125										
422323A	Tummalville	Condamine River	4/05/1973																						
422323A	Tummalville	Condamine River	19/06/1973	123	OK	125	236	OK	125	7	OK	125	85	OK	125										
422323A	Tummalville	Condamine River	19/06/1973																						
422323A	Tummalville	Condamine River	25/07/1973	82	OK	125	185	OK	125	278	OK	125	50	OK	125										
422323A	Tummalville	Condamine River	25/07/1973																						
422323A	Tummalville	Condamine River	19/08/1973	209	OK	125	352	OK	125	25	OK	125	110	OK	125										
422323A	Tummalville	Condamine River	19/08/1973																						
422323A	Tummalville	Condamine River	31/10/1973	114	OK	125	208	OK	125				66	OK	125										
422323A	Tummalville	Condamine River	31/10/1973																						
422323A	Tummalville	Condamine River	20/12/1973	95	OK	125	195	OK	125	11	OK	125	60	OK	125										
422323A	Tummalville	Condamine River	28/03/1974	99	OK	125	163	OK	125	86	OK	125	35	OK	125										
422323A	Tummalville	Condamine River	29/08/1974	110	OK	125	210	OK	125				70	OK	125										
422323A	Tummalville	Condamine River	10/06/1975	197	OK	125	292	OK	125	21	OK	125	70	OK	125										
422323A	Tummalville	Condamine River	14/10/1975	161	OK	125	274	OK	125	15	OK	125	90	OK	125										
422323A	Tummalville	Condamine River	8/12/1975	101	OK	125	214	OK	125	2210	OK	125	72	OK	125	8	OK	135							
422323A	Tummalville	Condamine River	11/12/1975	117	OK	125	200	OK	125	52	OK	125	44	OK	125										
422323A	Tummalville	Condamine River	26/08/1976	236	OK	125	369	OK	125	18	OK	125	112	OK	125	1.3	OK	135							
422323A	Tummalville	Condamine River	9/02/1978	83	OK	125	192	OK	125	13	OK	125	66	OK	125	0.4	OK	135							
422323A	Tummalville	Condamine River	6/04/1978	157	OK	125	270	OK	125	7	OK	125	82	OK	125	0.6	OK	135							
422323A	Tummalville	Condamine River	16/02/1979	83	OK	125	153	OK	125	180	OK	125	28	OK	125	1.2	OK	135							
422323A	Tummalville	Condamine River	16/07/1979	129	OK	125	211	OK	125	40	OK	125	55	OK	125	2	OK	135							

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Station	Station Name	Receiving Creek/ River	Date	V2132.00	F2132.00	Q2132.00	V2169.00	F2169.00	Q2169.00	V2172.00	F2172.00	Q2172.00	V2311.00	F2311.00	Q2311.00	V2331.00	F2331.00	Q2331.00	V2343.00	F2343.00	Q2343.00	V2337.00	F2337.00	Q2337.00
				Hardness as CaCO3 (mg/L)			Total Diss. Solids (mg/L)			Total Suspended Solids			Chloride as Cl (mg/L)			Nitrate as NO3(mg/L)			Nitrate + nitrite as N - soluble (mg/L)			Total Nitrogen (mg/L)		
422323A	Tummalville	Condamine River	16/07/1979																					
422323A	Tummalville	Condamine River	1/02/1980	130	OK	125	223	OK	125	4220	OK	125	40	OK	125	5	OK	135						
422323A	Tummalville	Condamine River	1/02/1980																					
422323A	Tummalville	Condamine River	16/04/1980	94	OK	125	228	OK	125	10	OK	125	84	OK	125	0.4	OK	135						
422323A	Tummalville	Condamine River	16/04/1980																					
422323A	Tummalville	Condamine River	3/07/1980	197	OK	125	308	OK	125	10	OK	125	94	OK	125	0.1	OK	135						
422323A	Tummalville	Condamine River	3/07/1980																					
422323A	Tummalville	Condamine River	11/09/1980	221	OK	125	408	OK	125	6	OK	125	150	OK	125									
422323A	Tummalville	Condamine River	8/04/1981	137	OK	125	220	OK	125	100	OK	125	36	OK	125	2	OK	135						
422323A	Tummalville	Condamine River	8/04/1981																					
422323A	Tummalville	Condamine River	2/07/1981	137	OK	125	208	OK	125	10	OK	125	48	OK	125	1	OK	135						
422323A	Tummalville	Condamine River	2/07/1981																					
422323A	Tummalville	Condamine River	15/09/1981	250	OK	125	383	OK	125	10	OK	125	127	OK	125									
422323A	Tummalville	Condamine River	7/05/1982	143	OK	125	220	OK	125	10	OK	125	42	OK	125	0.5	OK	135						
422323A	Tummalville	Condamine River	30/06/1982	215	OK	125	300	OK	125	9	OK	125	73	OK	125	0.4	OK	135						
422323A	Tummalville	Condamine River	19/11/1982	223	OK	125	390	OK	125	9	OK	125	115	OK	125	0.4	OK	135						
422323A	Tummalville	Condamine River	19/11/1982																					
422323A	Tummalville	Condamine River	3/02/1983	94	OK	125	220	OK	125	10	OK	125	71	OK	125	1.5	OK	135						
422323A	Tummalville	Condamine River	3/02/1983																					
422323A	Tummalville	Condamine River	4/05/1983	43	OK	125	130	OK	125	1200	OK	125	20	OK	125	4.1	OK	135						
422323A	Tummalville	Condamine River	11/05/1983	60	OK	125	140	OK	125	200	OK	125	25	OK	125	1.6	OK	135						
422323A	Tummalville	Condamine River	2/06/1983	65	OK	125	130	OK	125	150	OK	125	29	OK	125	1.8	OK	135						
422323A	Tummalville	Condamine River	27/07/1983	138	OK	125	250	OK	125	10	OK	125	79	OK	125	0.9	OK	135						
422323A	Tummalville	Condamine River	12/10/1983	145	OK	125	260	OK	125	15	OK	125	78	OK	125	1.3	OK	135						
422323A	Tummalville	Condamine River	12/10/1983																					
422323A	Tummalville	Condamine River	16/12/1983	98	OK	125	200	OK	125	50	OK	125	47	OK	125	1.4	OK	135						
422323A	Tummalville	Condamine River	16/12/1983																					
422323A	Tummalville	Condamine River	31/05/1984	206	OK	125	320	OK	125	5	OK	125	93	OK	125									
422323A	Tummalville	Condamine River	31/05/1984																					
422323A	Tummalville	Condamine River	11/10/1984	233	OK	125	380	OK	125	10	OK	125	110	OK	125									
422323A	Tummalville	Condamine River	11/10/1984																					
422323A	Tummalville	Condamine River	12/03/1985	127	OK	125	230	OK	125	40	OK	125	65	OK	125	1	OK	135						
422323A	Tummalville	Condamine River	12/03/1985																					
422323A	Tummalville	Condamine River	14/05/1985	183	OK	125	290	OK	125	10	OK	125	85	OK	125	0.5	OK	135						
422323A	Tummalville	Condamine River	14/05/1985																					
422323A	Tummalville	Condamine River	29/07/1985	156	OK	125	250	OK	125	60	OK	125	74	OK	125	2	OK	135						
422323A	Tummalville	Condamine River	29/07/1985																					
422323A	Tummalville	Condamine River	22/10/1985	262	OK	125	430	OK	125	10	OK	125	150	OK	125	0.5	OK	135						
422323A	Tummalville	Condamine River	22/10/1985																					
422323A	Tummalville	Condamine River	3/07/1986	269	OK	125	450	OK	125	15	OK	125	130	OK	125	2.9	OK	135						
422323A	Tummalville	Condamine River	3/07/1986																					
422323A	Tummalville	Condamine River	7/10/1986	107	OK	125	250	OK	125	60	OK	125	87	OK	125									
422323A	Tummalville	Condamine River	7/10/1986																					
422323A	Tummalville	Condamine River	13/01/1987	89	OK	125	180	OK	125	960	OK	125	42.5	OK	125	3.5	OK	135						
422323A	Tummalville	Condamine River	13/01/1987																					
422323A	Tummalville	Condamine River	2/04/1987	113	OK	125	210	OK	125	56	OK	125	58	OK	125	0.5	OK	135						
422323A	Tummalville	Condamine River	2/04/1987																					
422323A	Tummalville	Condamine River	15/06/1987	79	OK	125	150	OK	125	80	OK	125	32	OK	125	1.5	OK	135						
422323A	Tummalville	Condamine River	15/06/1987																					
422323A	Tummalville	Condamine River	2/09/1987	118	OK	125	210	OK	125	77	OK	125	70	OK	125	0.6	OK	135						
422323A	Tummalville	Condamine River	2/09/1987																					
422323A	Tummalville	Condamine River	4/11/1987	131	OK	125	220	OK	125	66	OK	125	48.5	OK	125	1.4	OK	135						
422323A	Tummalville	Condamine River	4/11/1987																					
422323A	Tummalville	Condamine River	18/05/1988	134	OK	125	240	OK	125	177	OK	125	66	OK	125	1.2	OK	135						
422323A	Tummalville	Condamine River	18/05/1988																					

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Station	Station Name	Receiving Creek/ River	Date	V2132.00	F2132.00	Q2132.00	V2169.00	F2169.00	Q2169.00	V2172.00	F2172.00	Q2172.00	V2311.00	F2311.00	Q2311.00	V2331.00	F2331.00	Q2331.00	V2343.00	F2343.00	Q2343.00	V2337.00	F2337.00	Q2337.00
				Hardness as CaCO3 (mg/L)			Total Diss. Solids (mg/L)			Total Suspended Solids			Chloride as Cl (mg/L)			Nitrate as NO3(mg/L)			Nitrate + nitrite as N - soluble (mg/L)			Total Nitrogen (mg/L)		
422323A	Tummalville	Condamine River	9/02/1989	71	OK	125	150	OK	125	100	OK	125	39	OK	125	2.1	OK	135						
422323A	Tummalville	Condamine River	9/02/1989																					
422323A	Tummalville	Condamine River	23/08/1989	221	OK	125	330	OK	125	90	OK	125	87	OK	125	1.2	OK	135						
422323A	Tummalville	Condamine River	23/08/1989																					
422323A	Tummalville	Condamine River	13/07/1990	181	OK	125	290	OK	125	9	OK	125	83.5	OK	125									
422323A	Tummalville	Condamine River	13/07/1990																					
422323A	Tummalville	Condamine River	1/1/1990	160	OK	125	273	OK	125	20	OK	125	87	OK	125	0.9	OK	135						
422323A	Tummalville	Condamine River	19/02/1992	79	OK	125	153	OK	125	167	OK	125	34.7	OK	125									
422323A	Tummalville	Condamine River	10/07/1992	230	OK	125	357	OK	125	28	OK	125	108.4	OK	125									
422323A	Tummalville	Condamine River	26/10/1992	91	OK	125	216	OK	125	12	OK	125	76.1	OK	125	0.2	OK	135						
422323A	Tummalville	Condamine River	26/10/1992																					
422323A	Tummalville	Condamine River	10/02/1993	81	OK	125	207	OK	125	45	OK	125	71	OK	125	0.3	OK	135						
422323A	Tummalville	Condamine River	10/02/1993																					
422323A	Tummalville	Condamine River	25/02/1993																					
422323A	Tummalville	Condamine River	10/06/1993	93	OK	125	231	OK	125	95	OK	125	83.6	OK	125	1.2	OK	135						
422323A	Tummalville	Condamine River	10/06/1993																					
422323A	Tummalville	Condamine River	9/03/1994	184	OK	125	329	OK	125	161	OK	125	89.7	OK	125	2.8	OK	135						
422323A	Tummalville	Condamine River	9/03/1994																					
422323A	Tummalville	Condamine River	14/07/1994	101	OK	125	158	OK	125	32	OK	125	32.5	OK	125	0.8	OK	135						
422323A	Tummalville	Condamine River	14/07/1994																					
422323A	Tummalville	Condamine River	3/04/1995																					
422323A	Tummalville	Condamine River	3/04/1995	77.55	OK	130	132.41	OK	130	180	OK	130	20.17	OK	130	1.28	OK	130						
422323A	Tummalville	Condamine River	29/08/1995	122.12	OK	130	184.69	OK	130	40	OK	130	30.06	OK	130	1.95	OK	130						
422323A	Tummalville	Condamine River	29/08/1995																					
422323A	Tummalville	Condamine River	13/09/1995																					
422323A	Tummalville	Condamine River	15/09/1995																					
422323A	Tummalville	Condamine River	22/11/1995																					
422323A	Tummalville	Condamine River	29/11/1995																					
422323A	Tummalville	Condamine River	29/11/1995																					
422323A	Tummalville	Condamine River	8/01/1996	70.06	OK	130	132.38	OK	130	418	OK	130	21.16	OK	130	1.92	OK	130						
422323A	Tummalville	Condamine River	1/02/1996																					
422323A	Tummalville	Condamine River	24/02/1996																					
422323A	Tummalville	Condamine River	24/02/1996																					
422323A	Tummalville	Condamine River	17/07/1996																					
422323A	Tummalville	Condamine River	18/09/1996																					
422323A	Tummalville	Condamine River	23/10/1996																					
422323A	Tummalville	Condamine River	24/10/1996																					
422323A	Tummalville	Condamine River	20/12/1996	97.64	OK	130	211.29	OK	130	248	OK	130	60.93	OK	130	2.53	OK	130						
422323A	Tummalville	Condamine River	25/03/1997																					
422323A	Tummalville	Condamine River	18/04/1997																					
422323A	Tummalville	Condamine River	18/04/1997																					
422323A	Tummalville	Condamine River	18/04/1997																					
422323A	Tummalville	Condamine River	18/04/1997																					
422323A	Tummalville	Condamine River	24/04/1997																					
422323A	Tummalville	Condamine River	29/05/1997																					
422323A	Tummalville	Condamine River	5/06/1997																					
422323A	Tummalville	Condamine River	24/07/1997	123.66	OK	130	224.37	OK	130	13	OK	130	66.53	OK	130	0.1	OK	130						
422323A	Tummalville	Condamine River	17/09/1997																					
422323A	Tummalville	Condamine River	17/09/1997																					
422323A	Tummalville	Condamine River	27/11/1997	127.97	OK	130	237.17	OK	130	32	OK	130	67.56	OK	130	0.49	OK	130						
422323A	Tummalville	Condamine River	27/11/1997																					
422323A	Tummalville	Condamine River	30/04/1998																					
422323A	Tummalville	Condamine River	17/07/1998																					
422323A	Tummalville	Condamine River	11/08/1998																					
422323A	Tummalville	Condamine River	6/10/1998																					

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Station	Station Name	Receiving Creek/ River	Date	V2132.00	F2132.00	Q2132.00	V2169.00	F2169.00	Q2169.00	V2172.00	F2172.00	Q2172.00	V2311.00	F2311.00	Q2311.00	V2331.00	F2331.00	Q2331.00	V2343.00	F2343.00	Q2343.00	V2337.00	F2337.00	Q2337.00
				Hardness as CaCO3 (mg/L)			Total Diss. Solids (mg/L)			Total Suspended Solids			Chloride as Cl (mg/L)			Nitrate as NO3(mg/L)			Nitrate + nitrite as N - soluble (mg/L)			Total Nitrogen (mg/L)		
422323A	Tummalville	Condamine River	11/01/1999							65	OK	130							0.39	OK	130	1.1	OK	130
422323A	Tummalville	Condamine River	22/02/1999	72.61	OK	130	133.83	OK	130	51	OK	130	19.93	OK	130	1.68	OK	130				0.7219	OK	130
422323A	Tummalville	Condamine River	16/03/1999																					
422323A	Tummalville	Condamine River	19/03/1999																					
422323A	Tummalville	Condamine River	12/04/1999							35	OK	130				0.2	OK	130				0.53	OK	130
422323A	Tummalville	Condamine River	16/06/1999	73.68	OK	130	164.14	OK	130	36	OK	130	49.79	OK	130	0.97	OK	130				0.7203	OK	130
422323A	Tummalville	Condamine River	2/07/1999																					
422323A	Tummalville	Condamine River	12/07/1999							40	OK	130				0.93	OK	130				1.7	OK	130
422323A	Tummalville	Condamine River	11/08/1999	100.27	OK	130	182.29	OK	130	21	OK	130	49.87	OK	130	0.6	OK	130				0.4513	OK	130
422323A	Tummalville	Condamine River	10/11/1999																					
422323A	Tummalville	Condamine River	16/11/1999																					
422323A	Tummalville	Condamine River	29/02/2000	138.06	OK	130	238.4	OK	130	20	OK	130	59.3	OK	130	1.28	OK	130				0.4836	OK	130
422323A	Tummalville	Condamine River	2/03/2000																					
422323A	Tummalville	Condamine River	19/06/2000	74	OK	130	170	OK	130	60	OK	130	52	OK	130	1	OK	130				0.7554	OK	130
422323A	Tummalville	Condamine River	13/09/2000																					
422323A	Tummalville	Condamine River	9/01/2001																					
422323A	Tummalville	Condamine River	14/02/2001																					
422323A	Tummalville	Condamine River	14/02/2001	80.23	OK	130	141.52	OK	130	98	OK	130	22.54	OK	130	1.77	OK	130				0.831	OK	130
422323A	Tummalville	Condamine River	13/06/2001	91.73	OK	130	172.09	OK	130	20	OK	130	51.05	OK	130	0.58	OK	130				0.4828	OK	130
422323A	Tummalville	Condamine River	18/07/2001																					
422323A	Tummalville	Condamine River	12/02/2002																					
422323A	Tummalville	Condamine River	21/11/2002																					
422323A	Tummalville	Condamine River	7/05/2003																					
422323A	Tummalville	Condamine River	31/07/2003																					
422323A	Tummalville	Condamine River	15/12/2003																					
422323A	Tummalville	Condamine River	9/03/2004	66	OK	130	130	OK	130	500	OK	130	19	OK	130	2.4	OK	130				2	OK	130
422323A	Tummalville	Condamine River	11/03/2004	61	OK	130	120	OK	130	150	<	130	21	OK	130	3.4	OK	130				1.7	OK	130
422323A	Tummalville	Condamine River	21/09/2005	97	OK	130	160	OK	130	115	OK	130	26	OK	130	2.5	OK	130				1.309	OK	130
422323A	Tummalville	Condamine River	7/02/2006	102	OK	10	164	OK	10	88	OK	10	20	OK	10	0.9	OK	10				1.23	OK	10
422323A	Tummalville	Condamine River	29/04/2009																					
422333A	Condamine_R Loudouns	Condamine River	18/06/1963	124	OK	125	226	OK	125	226	OK	125	51	OK	125									
422333A	Condamine_R Loudouns	Condamine River	18/03/1971	136	OK	125	203	OK	125				60	OK	125									
422333A	Condamine_R Loudouns	Condamine River	18/06/1971	236	OK	125	406	OK	125				140	OK	125									
422333A	Condamine_R Loudouns	Condamine River	21/07/1971	260	OK	125	479	OK	125				170	OK	125	12	OK	135						
422333A	Condamine_R Loudouns	Condamine River	31/08/1971	226	OK	125	396	OK	125				145	OK	125	6	OK	135						
422333A	Condamine_R Loudouns	Condamine River	19/10/1971	245	OK	125	414	OK	125				160	OK	125									
422333A	Condamine_R Loudouns	Condamine River	18/11/1971	307	OK	125	503	OK	125				176	OK	125									
422333A	Condamine_R Loudouns	Condamine River	14/03/1972	128	OK	125	214	OK	125				68	OK	125									
422333A	Condamine_R Loudouns	Condamine River	22/08/1972	146	OK	125	283	OK	125				90	OK	125									
422333A	Condamine_R Loudouns	Condamine River	24/10/1972	150	OK	125	284	OK	125				100	OK	125									
422333A	Condamine_R Loudouns	Condamine River	16/03/1973	114	OK	125	183	OK	125				44	OK	125									
422333A	Condamine_R Loudouns	Condamine River	9/05/1973	192	OK	125	274	OK	125	17	OK	125	74	OK	125	1.1	OK	135						
422333A	Condamine_R Loudouns	Condamine River	19/06/1973	150	OK	125	252	OK	125	3	OK	125	80	OK	125									
422333A	Condamine_R Loudouns	Condamine River	25/07/1973	135	OK	125	273	OK	125	151	OK	125	100	OK	125									
422333A	Condamine_R Loudouns	Condamine River	18/09/1973	186	OK	125	352	OK	125	17	OK	125	142	OK	125									
422333A	Condamine_R Loudouns	Condamine River	30/10/1973	180	OK	125	330	OK	125				110	OK	125									
422333A	Condamine_R Loudouns	Condamine River	27/03/1974	103	OK	125	174	OK	125	80	OK	125	40	OK	125									
422333A	Condamine_R Loudouns	Condamine River	27/03/1974																					
422333A	Condamine_R Loudouns	Condamine River	12/09/1974	173	OK	125	296	OK	125	20	OK	125	100	OK	125									
422333A	Condamine_R Loudouns	Condamine River	24/08/1976	312	OK	125	508	OK	125	2	OK	125	192	OK	125	7.1	OK	135						
422333A	Condamine_R Loudouns	Condamine River	5/04/1978	296	OK	125	478	OK	125	7	OK	125	170	OK	125	4	OK	135						
422333A	Condamine_R Loudouns	Condamine River	10/10/1978	188	OK	125	346	OK	125	18	OK	125	112	OK	125	4.1	OK	135						
422333A	Condamine_R Loudouns	Condamine River	10/07/1979	189	OK	125	336	OK	125	39	OK	125	128	OK	125	6.4	OK	135						
422333A	Condamine_R Loudouns	Condamine River	10/07/1979																					
422333A	Condamine_R Loudouns	Condamine River	11/09/1979	379	OK	125	684	OK	125	1	OK	125	280	OK	125	16	OK	135						

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Station	Station Name	Receiving Creek/ River	Date	V2132.00	F2132.00	Q2132.00	V2169.00	F2169.00	Q2169.00	V2172.00	F2172.00	Q2172.00	V2311.00	F2311.00	Q2311.00	V2331.00	F2331.00	Q2331.00	V2343.00	F2343.00	Q2343.00	V2337.00	F2337.00	Q2337.00
				Hardness as CaCO3 (mg/L)			Total Diss. Solids (mg/L)			Total Suspended Solids			Chloride as Cl (mg/L)			Nitrate as NO3(mg/L)			Nitrate + nitrite as N - soluble (mg/L)			Total Nitrogen (mg/L)		
422333A	Condamine_R Loudouns	Condamine River	11/09/1979																					
422333A	Condamine_R Loudouns	Condamine River	13/09/1979	153	OK	125	288	OK	125	1	OK	125	98	OK	125	0.1	OK	135						
422333A	Condamine_R Loudouns	Condamine River	31/01/1980	92	OK	125	160	OK	125	1350	OK	125	26	OK	135	3.2	OK	135						
422333A	Condamine_R Loudouns	Condamine River	2/07/1980	189	OK	125	412	OK	125	24	OK	125	152	OK	125	10	OK	135						
422333A	Condamine_R Loudouns	Condamine River	2/07/1980																					
422333A	Condamine_R Loudouns	Condamine River	28/05/1984	222	OK	125	390	OK	125	5	OK	125	135	OK	125	4.4	OK	135						
422333A	Condamine_R Loudouns	Condamine River	28/05/1984																					
422333A	Condamine_R Loudouns	Condamine River	10/10/1984	260	OK	125	480	OK	125	5	OK	125	200	OK	125	1.5	OK	135						
422333A	Condamine_R Loudouns	Condamine River	10/10/1984																					
422333A	Condamine_R Loudouns	Condamine River	9/01/1985	279	OK	125	540	OK	125	10	OK	125	210	OK	125	1.8	OK	135						
422333A	Condamine_R Loudouns	Condamine River	9/01/1985																					
422333A	Condamine_R Loudouns	Condamine River	13/05/1985	328	OK	125	690	OK	125	10	OK	125	270	OK	125	13	OK	135						
422333A	Condamine_R Loudouns	Condamine River	13/05/1985																					
422333A	Condamine_R Loudouns	Condamine River	24/07/1985	155	OK	125	260	OK	125	20	OK	125	74	OK	125	4	OK	135						
422333A	Condamine_R Loudouns	Condamine River	24/07/1985																					
422333A	Condamine_R Loudouns	Condamine River	21/10/1985	351	OK	125	680	OK	125	10	OK	125	270	OK	125	12	OK	135						
422333A	Condamine_R Loudouns	Condamine River	21/10/1985																					
422333A	Condamine_R Loudouns	Condamine River	6/01/1986	256	OK	125	500	OK	125	10	OK	125	180	OK	125	2.2	OK	135						
422333A	Condamine_R Loudouns	Condamine River	6/01/1986																					
422333A	Condamine_R Loudouns	Condamine River	2/07/1986	265	OK	125	520	OK	125				215	OK	125	4.6	OK	135						
422333A	Condamine_R Loudouns	Condamine River	2/07/1986																					
422333A	Condamine_R Loudouns	Condamine River	9/10/1986	411	OK	125	840	OK	125	15	OK	125	345	OK	125	2.9	OK	135						
422333A	Condamine_R Loudouns	Condamine River	15/01/1987	49	OK	125	120	OK	125	650	OK	125	18	OK	125									
422333A	Condamine_R Loudouns	Condamine River	15/01/1987																					
422333A	Condamine_R Loudouns	Condamine River	3/04/1987	169	OK	125	360	OK	125	33	OK	125	120	OK	125	0.9	OK	135						
422333A	Condamine_R Loudouns	Condamine River	3/04/1987																					
422333A	Condamine_R Loudouns	Condamine River	18/06/1987	90	OK	125	170	OK	125	120	OK	125	35	OK	125	2.8	OK	135						
422333A	Condamine_R Loudouns	Condamine River	18/06/1987																					
422333A	Condamine_R Loudouns	Condamine River	3/09/1987	70	OK	125	160	OK	125	154	OK	125	45.5	OK	125	3.6	OK	135						
422333A	Condamine_R Loudouns	Condamine River	3/09/1987																					
422333A	Condamine_R Loudouns	Condamine River	5/11/1987	51	OK	125	130	OK	125	800	OK	125	24	OK	125	4	OK	135						
422333A	Condamine_R Loudouns	Condamine River	5/11/1987																					
422333A	Condamine_R Loudouns	Condamine River	7/03/1988	92	OK	125	190	OK	125	96	OK	125	40	OK	125	4.1	OK	135						
422333A	Condamine_R Loudouns	Condamine River	25/05/1988	175	OK	125	320	OK	125	53	OK	125	105	OK	125	6.1	OK	135						
422333A	Condamine_R Loudouns	Condamine River	25/05/1988																					
422333A	Condamine_R Loudouns	Condamine River	25/08/1988	148	OK	125	270	OK	125	66	OK	125	83	OK	125	2.3	OK	135						
422333A	Condamine_R Loudouns	Condamine River	27/01/1989	149	OK	125	270	OK	125	10	OK	125	81	OK	125									
422333A	Condamine_R Loudouns	Condamine River	27/01/1989																					
422333A	Condamine_R Loudouns	Condamine River	6/09/1989	283	OK	125	480	OK	125	5	OK	125	205	OK	125	1.4	OK	135						
422333A	Condamine_R Loudouns	Condamine River	6/09/1989																					
422333A	Condamine_R Loudouns	Condamine River	7/12/1989	103	OK	125	187	OK	125	1072	OK	125	38	OK	125	5.9	OK	135						
422333A	Condamine_R Loudouns	Condamine River	3/07/1990	159	OK	125	284	OK	125	26	OK	125	80.8	OK	125	4.2	OK	135						
422333A	Condamine_R Loudouns	Condamine River	3/07/1990																					
422333A	Condamine_R Loudouns	Condamine River	16/10/1990	298	OK	125	585	OK	125	53	OK	125	239.6	OK	125	7.8	OK	135						
422333A	Condamine_R Loudouns	Condamine River	16/10/1990																					
422333A	Condamine_R Loudouns	Condamine River	14/02/1992	70	OK	125	143	OK	125	884	OK	125	28.5	OK	125	1.9	OK	135						
422333A	Condamine_R Loudouns	Condamine River	1/07/1992	230	OK	125	417	OK	125	26	OK	125	131.6	OK	125	9.1	OK	135						
422333A	Condamine_R Loudouns	Condamine River	1/07/1992																					
422333A	Condamine_R Loudouns	Condamine River	4/03/1994																					
422333A	Condamine_R Loudouns	Condamine River	12/04/1994	91	OK	125	187	OK	125	25	OK	125	39.4	OK	125	1.4	OK	135						
422333A	Condamine_R Loudouns	Condamine River	16/05/1994	103	OK	125	206	OK	125	27	OK	125	47.4	OK	125	0.2	OK	135						
422333A	Condamine_R Loudouns	Condamine River	15/06/1994	105	OK	125	212	OK	125	11	OK	125	46.4	OK	125	1.7	OK	135						
422333A	Condamine_R Loudouns	Condamine River	12/07/1994	118	OK	125	232	OK	125				54.5	OK	125	0.6	OK	135						
422333A	Condamine_R Loudouns	Condamine River	13/07/1994																					
422333A	Condamine_R Loudouns	Condamine River	15/08/1994	142	OK	125	288	OK	125	4	OK	125	79.7	OK	125									

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Station	Station Name	Receiving Creek/ River	Date	V2132.00	F2132.00	Q2132.00	V2169.00	F2169.00	Q2169.00	V2172.00	F2172.00	Q2172.00	V2311.00	F2311.00	Q2311.00	V2331.00	F2331.00	Q2331.00	V2343.00	F2343.00	Q2343.00	V2337.00	F2337.00	Q2337.00
				Hardness as CaCO3 (mg/L)			Total Diss. Solids (mg/L)			Total Suspended Solids			Chloride as Cl (mg/L)			Nitrate as NO3(mg/L)			Nitrate + nitrite as N - soluble (mg/L)			Total Nitrogen (mg/L)		
422333A	Condamine_R Loudouns	Condamine River	15/08/1994																					
422333A	Condamine_R Loudouns	Condamine River	20/09/1994	168	OK	125	362	OK	125				115.4	OK	125	0.9	OK	135						
422333A	Condamine_R Loudouns	Condamine River	20/09/1994																					
422333A	Condamine_R Loudouns	Condamine River	11/10/1994	181	OK	125	390	OK	125	9	OK	125	129.3	OK	125	2.4	OK	135						
422333A	Condamine_R Loudouns	Condamine River	11/10/1994																					
422333A	Condamine_R Loudouns	Condamine River	28/11/1994	203.75	OK	130	465.45	OK	130	8	OK	130	170.4	OK	130	0.57	OK	130	0.0238	OK	130			
422333A	Condamine_R Loudouns	Condamine River	5/12/1994																					
422333A	Condamine_R Loudouns	Condamine River	10/01/1995	217.3	OK	130	510.18	OK	130	10	OK	130	186.7	OK	130	5.69	OK	130	0.0719	OK	130			
422333A	Condamine_R Loudouns	Condamine River	15/02/1995	207.75	OK	130	515.09	OK	130	9	OK	130	194.64	OK	130	7.46	OK	130	0.0233	OK	130			
422333A	Condamine_R Loudouns	Condamine River	21/03/1995	79.38	OK	130	146.95	OK	130	59	OK	130	21.9	OK	130	1.8	OK	130	0.126	OK	130			
422333A	Condamine_R Loudouns	Condamine River	28/03/1995																					
422333A	Condamine_R Loudouns	Condamine River	11/04/1995	80.22	OK	130	143.92	OK	130	22	OK	130	15.91	OK	130	1.63	OK	130	0.0102	OK	130			
422333A	Condamine_R Loudouns	Condamine River	24/05/1995	87.16	OK	130	150.72	OK	130	11	OK	130	16.3	OK	130	0	ND	130						
422333A	Condamine_R Loudouns	Condamine River	27/06/1995	137	OK	130	268.94	OK	130	7	OK	130	64.9	OK	130	2.2	OK	130	0.137	OK	130			
422333A	Condamine_R Loudouns	Condamine River	26/07/1995	240.65	OK	130	551.87	OK	130	14	OK	130	180.53	OK	130	1.11	OK	130	0.124	OK	130			
422333A	Condamine_R Loudouns	Condamine River	14/08/1995																					
422333A	Condamine_R Loudouns	Condamine River	30/08/1995	246.45	OK	130	567.93	OK	130	0	ND	130	190	OK	130	0	ND	130	0.0146	OK	130			
422333A	Condamine_R Loudouns	Condamine River	25/09/1995	249.98	OK	130	583.29	OK	130	10	OK	130	200.1	OK	130	0.58	OK	130	0.191	OK	130			
422333A	Condamine_R Loudouns	Condamine River	17/10/1995	247.92	OK	130	591.99	OK	130	5	OK	130	206.8	OK	130	0	ND	130	0.0075	OK	130			
422333A	Condamine_R Loudouns	Condamine River	20/12/1995	72.54	OK	130	139.32	OK	130	315	OK	130	13	OK	130	4.3	OK	130	0.447	OK	130			
422333A	Condamine_R Loudouns	Condamine River	30/01/1996	88.41	OK	130	166.65	OK	130	1468	OK	130	31.18	OK	130	5.12	OK	130	0.666	OK	130			
422333A	Condamine_R Loudouns	Condamine River	5/02/1996																					
422333A	Condamine_R Loudouns	Condamine River	6/02/1996																					
422333A	Condamine_R Loudouns	Condamine River	28/02/1996	109.99	OK	130	191.38	OK	130	52	OK	130	27.04	OK	130	0.94	OK	130	0.0308	OK	130			
422333A	Condamine_R Loudouns	Condamine River	27/03/1996																0.0386	OK	130			
422333A	Condamine_R Loudouns	Condamine River	29/05/1996	113.31	OK	130	197.62	OK	130	84	OK	130	44.1	OK	130	2.1	OK	130						
422333A	Condamine_R Loudouns	Condamine River	19/06/1996	179.07	OK	130	320.34	OK	130	47	OK	130	92.91	OK	130	6.5	OK	130	1.329	OK	130			
422333A	Condamine_R Loudouns	Condamine River	25/07/1996	217.21	OK	130	361.61	OK	130	13	OK	130	106.1	OK	130	4.78	OK	130	1.05	OK	130			
422333A	Condamine_R Loudouns	Condamine River	16/09/1996																1.24	OK	130			
422333A	Condamine_R Loudouns	Condamine River	16/09/1996																					
422333A	Condamine_R Loudouns	Condamine River	24/10/1996																					
422333A	Condamine_R Loudouns	Condamine River	19/12/1996																					
422333A	Condamine_R Loudouns	Condamine River	19/12/1996	88.88	OK	130	172.49	OK	130	477	OK	130	38.27	OK	130	5.48	OK	130	1.063	OK	130			
422333A	Condamine_R Loudouns	Condamine River	7/01/1997																					
422333A	Condamine_R Loudouns	Condamine River	16/01/1997																					
422333A	Condamine_R Loudouns	Condamine River	16/01/1997																					
422333A	Condamine_R Loudouns	Condamine River	11/02/1997	53.57	OK	130	131.44	OK	130	177	OK	130	35.29	OK	130	1.85	OK	130	0.142	OK	130			
422333A	Condamine_R Loudouns	Condamine River	25/02/1997																					
422333A	Condamine_R Loudouns	Condamine River	25/02/1997	73.68	OK	130	141.05	OK	130	87	OK	130	20.6	OK	130	2.5	OK	130	0.673	OK	130			
422333A	Condamine_R Loudouns	Condamine River	23/04/1997	126.15	OK	130	215.12	OK	130	17	OK	130	41.77	OK	130	0	ND	130	0.0015	OK	130			
422333A	Condamine_R Loudouns	Condamine River	16/05/1997																					
422333A	Condamine_R Loudouns	Condamine River	27/05/1997	334.66	OK	130	746.97	OK	130	26	OK	130	283.28	OK	130	0.9	OK	130						
422333A	Condamine_R Loudouns	Condamine River	21/07/1997																					
422333A	Condamine_R Loudouns	Condamine River	24/11/1997																					
422333A	Condamine_R Loudouns	Condamine River	24/11/1997	131.7	OK	130	265.65	OK	130	98	OK	130	67.51	OK	130	4.58	OK	130	0.684	OK	130			
422333A	Condamine_R Loudouns	Condamine River	18/12/1997																					
422333A	Condamine_R Loudouns	Condamine River	28/04/1998																					
422333A	Condamine_R Loudouns	Condamine River	7/10/1998	113.31	OK	130	235.72	OK	130	60	OK	130	65.17	OK	130	3.79	OK	130	0.571	OK	130	1.4829	OK	130
422333A	Condamine_R Loudouns	Condamine River	11/01/1999							10	OK	130							0.002	<	130	0.75	OK	130
422333A	Condamine_R Loudouns	Condamine River	18/02/1999	100.61	OK	130	185.43	OK	130	155	OK	130	45.32	OK	130	2.29	OK	130	0.255	OK	130	0.9644	OK	130
422333A	Condamine_R Loudouns	Condamine River	22/03/1999																					
422333A	Condamine_R Loudouns	Condamine River	12/04/1999							55	OK	130							0.004	OK	130	0.87	OK	130
422333A	Condamine_R Loudouns	Condamine River	16/06/1999	161.46	OK	130	341.4	OK	130	11	OK	130	107.5	OK	130	2.86	OK	130	0.282	OK	130	1.0717	OK	130
422333A	Condamine_R Loudouns	Condamine River	29/06/1999																					

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				Hardness as CaCO3 (mg/L)			Total Diss. Solids (mg/L)			Total Suspended Solids			Chloride as Cl (mg/L)			Nitrate as NO3(mg/L)			Nitrate + nitrite as N - soluble (mg/L)			Total Nitrogen (mg/L)		
422333A	Condamine_R Loudouns	Condamine River	12/07/1999							100	OK	130							0.8	OK	130	1.5	OK	130
422333A	Condamine_R Loudouns	Condamine River	1/09/1999	113.37	OK	130	207.57	OK	130	13	OK	130	58.17	OK	130	1.23	OK	130	0.0015	OK	130	0.6008	OK	130
422333A	Condamine_R Loudouns	Condamine River	21/02/2000	136.74	OK	130	250.42	OK	130	23	OK	130	59.49	OK	130	1.1	OK	130	0.0044	OK	130	0.6845	OK	130
422333A	Condamine_R Loudouns	Condamine River	21/02/2000																					
422333A	Condamine_R Loudouns	Condamine River	19/06/2000	215	OK	130	500	OK	130	10	OK	130	175	OK	130	1	OK	130	0.0044	OK	130	0.7768	OK	130
422333A	Condamine_R Loudouns	Condamine River	25/08/2000																					
422333A	Condamine_R Loudouns	Condamine River	25/01/2001																			1.3475	OK	130
422333A	Condamine_R Loudouns	Condamine River	6/02/2001	56.51	OK	130	151.29	OK	130	940	OK	130	32.53	OK	130	2.91	OK	130	0.35	OK	130	2.46	OK	130
422333A	Condamine_R Loudouns	Condamine River	6/02/2001																			2.176	OK	130
422333A	Condamine_R Loudouns	Condamine River	8/02/2001																					
422333A	Condamine_R Loudouns	Condamine River	8/02/2001																			2.241	OK	130
422333A	Condamine_R Loudouns	Condamine River	20/03/2001																					
422333A	Condamine_R Loudouns	Condamine River	17/04/2001																			0.8923	OK	130
422333A	Condamine_R Loudouns	Condamine River	14/05/2001																					
422333A	Condamine_R Loudouns	Condamine River	13/06/2001	113.97	OK	130	214.87	OK	130	10	OK	130	48.22	OK	130	0.56	OK	130	0.0015	OK	130	0.586	OK	130
422333A	Condamine_R Loudouns	Condamine River	11/11/2001																			3.698	OK	130
422333A	Condamine_R Loudouns	Condamine River	12/11/2001																			3.822	OK	130
422333A	Condamine_R Loudouns	Condamine River	13/11/2001																			3.242	OK	130
422333A	Condamine_R Loudouns	Condamine River	13/11/2001																					
422333A	Condamine_R Loudouns	Condamine River	8/08/2002																					
422333A	Condamine_R Loudouns	Condamine River	11/03/2004	94	OK	130	230	OK	130	190	OK	130	50	<	130	7.6	OK	130	1.4	OK	130	2.4	OK	130
422333A	Condamine_R Loudouns	Condamine River	12/03/2004	160	OK	130	280	OK	130	10	<	130	70	OK	130	7.7	OK	130				1.2	OK	130
422333A	Condamine_R Loudouns	Condamine River	3/03/2005	186	OK	130	407	OK	130	91	OK	130	113	OK	130	2	OK	130				1.6	OK	130
422333A	Condamine_R Loudouns	Condamine River	21/12/2005	66	OK	130	141	OK	130	106	OK	130	16	OK	130	2.6	OK	130				1.286	OK	10
422333A	Condamine_R Loudouns	Condamine River	15/03/2006	63	OK	130	138	OK	130	9	OK	130	15	OK	130	1.2	OK	130				0.8402	OK	130
422333A	Condamine_R Loudouns	Condamine River	5/05/2006	64	OK	130	138	OK	130	120	OK	130	17	OK	130	1	OK	130						
422333A	Condamine_R Loudouns	Condamine River	12/11/2006							264	OK	10												
422333A	Condamine_R Loudouns	Condamine River	24/10/2008																0.1209	OK	10	1.7604	OK	10
422333A	Condamine_R Loudouns	Condamine River	1/07/2009																					
422345A	Lone Pine	Condamine River (north branch)	11/07/1979	76	OK	125	204	OK	125	340	OK	125	30	OK	125	11	OK	135						
422345A	Lone Pine	Condamine River (north branch)	7/02/1980	108	OK	125	288	OK	125	10	OK	125	48	OK	125	6.3	OK	135						
422345A	Lone Pine	Condamine River (north branch)	8/02/1980	89	OK	125	202	OK	125	10	OK	125	16	OK	125	4.2	OK	135						
422345A	Lone Pine	Condamine River (north branch)	11/02/1981																					
422345A	Lone Pine	Condamine River (north branch)	19/02/1981																					
422345A	Lone Pine	Condamine River (north branch)	6/04/1981	47	OK	125	108	OK	125	200	OK	125	7	OK	125	4	OK	135						
422345A	Lone Pine	Condamine River (north branch)	15/04/1981																					
422345A	Lone Pine	Condamine River (north branch)	28/07/1983	156	OK	125	330	OK	125	10	OK	125	105	OK	125	0.5	OK	135						
422345A	Lone Pine	Condamine River (north branch)	11/10/1983	180	OK	125	400	OK	125	10	OK	125	125	OK	125	0.7	OK	135						
422345A	Lone Pine	Condamine River (north branch)	29/05/1984																					
422345A	Lone Pine	Condamine River (north branch)	21/06/1984																					
422345A	Lone Pine	Condamine River (north branch)	8/08/1984	98	OK	125	250	OK	125	10	OK	125	53	OK	125	8.2	OK	135						
422345A	Lone Pine	Condamine River (north branch)	13/01/1987	61	OK	125	160	OK	125	280	OK	125	17	OK	125	3.6	OK	135						
422345A	Lone Pine	Condamine River (north branch)	18/02/1988																					
422345A	Lone Pine	Condamine River (north branch)	17/05/1988	287	OK	125	650	OK	125	10	OK	125	270	OK	125	0.5	OK	135						
422345A	Lone Pine	Condamine River (north branch)	1/08/1988	237	OK	125	510	OK	125	12	OK	125	190	OK	125	0.5	OK	135						
422345A	Lone Pine	Condamine River (north branch)	8/02/1989	127	OK	125	240	OK	125	5	OK	125	55	OK	125									
422345A	Lone Pine	Condamine River (north branch)	11/07/1989																					
422345A	Lone Pine	Condamine River (north branch)	31/07/1989																					
422345A	Lone Pine	Condamine River (north branch)	22/08/1989	179	OK	125	280	OK	125	20	OK	125	85	OK	125									
422345A	Lone Pine	Condamine River (north branch)	8/12/1989	74	OK	125	144	OK	125	264	OK	125	14.2	OK	125	2.9	OK	135						
422345A	Lone Pine	Condamine River (north branch)	30/03/1990	116	OK	125	200	OK	125	52	OK	125	44.9	OK	135	0.6	OK	135						
422345A	Lone Pine	Condamine River (north branch)	2/07/1990	188	OK	125	416	OK	125	44	OK	125	141	OK	125	3	OK	135						
422345A	Lone Pine	Condamine River (north branch)	17/10/1990	220	OK	125	367	OK	125	28	OK	125	117	OK	125	3.9	OK	135						

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Station	Station Name	Receiving Creek/ River	Date	V2132.00	F2132.00	Q2132.00	V2169.00	F2169.00	Q2169.00	V2172.00	F2172.00	Q2172.00	V2311.00	F2311.00	Q2311.00	V2331.00	F2331.00	Q2331.00	V2343.00	F2343.00	Q2343.00	V2337.00	F2337.00	Q2337.00	
				Hardness as CaCO3 (mg/L)			Total Diss. Solids (mg/L)			Total Suspended Solids			Chloride as Cl (mg/L)			Nitrate as NO3(mg/L)			Nitrate + nitrite as N - soluble (mg/L)			Total Nitrogen (mg/L)			
422345A	Lone Pine	Condamine River (north branch)	6/06/1991																						
422345A	Lone Pine	Condamine River (north branch)	30/10/1991																						
422345A	Lone Pine	Condamine River (north branch)	20/02/1992	71	OK	125	143	OK	125	242	OK	125	18	OK	125										
422345A	Lone Pine	Condamine River (north branch)	3/07/1992	149	OK	125	247	OK	125	39	OK	125	60.7	OK	125	0.2	OK	135							
422345A	Lone Pine	Condamine River (north branch)	21/10/1992	125	OK	125	259	OK	125	65	OK	125	88.2	OK	125	1.3	OK	135							
422345A	Lone Pine	Condamine River (north branch)	8/02/1993	100	OK	125	229	OK	125	33	OK	125	73	OK	125	0.5	OK	135							
422345A	Lone Pine	Condamine River (north branch)	9/06/1993																						
422345A	Lone Pine	Condamine River (north branch)	27/10/1993																						
422345A	Lone Pine	Condamine River (north branch)	8/03/1994	39	OK	125	96	OK	125	445	OK	125	5.6	OK	125	2.3	OK	135							
422345A	Lone Pine	Condamine River (north branch)	14/07/1994	94	OK	125	185	OK	125	23	OK	125	21.5	OK	125	0.7	OK	135							
422345A	Lone Pine	Condamine River (north branch)	8/12/1994	179.19	OK	130	369.31	OK	130	12	OK	130	90.47	OK	130	1.64	OK	130							
422345A	Lone Pine	Condamine River (north branch)	29/03/1995																						
422345A	Lone Pine	Condamine River (north branch)	29/03/1995	102.8	OK	130	183.15	OK	130	5	OK	130	21.32	OK	130	0.41	OK	130							
422345A	Lone Pine	Condamine River (north branch)	29/08/1995	131.95	OK	130	227.48	OK	130	0	ND	130	30.19	OK	130	0.76	OK	130							
422345A	Lone Pine	Condamine River (north branch)	30/11/1995																						
422345A	Lone Pine	Condamine River (north branch)	30/11/1995																						
422345A	Lone Pine	Condamine River (north branch)	2/02/1996																						
422345A	Lone Pine	Condamine River (north branch)	2/02/1996	74	OK	130	150	OK	130	370	OK	130	10	OK	130	2.6	OK	130							
422345A	Lone Pine	Condamine River (north branch)	28/05/1996	249.68	OK	130	545.19	OK	130	16	OK	130	211	OK	130	1.5	OK	130							
422345A	Lone Pine	Condamine River (north branch)	17/09/1996	135	OK	130	260	OK	130	30	OK	130	64	OK	130	1.4	OK	130							
422345A	Lone Pine	Condamine River (north branch)	24/10/1996																						
422345A	Lone Pine	Condamine River (north branch)	6/12/1996	143.08	OK	130	257.98	OK	130	37	OK	130	52.8	OK	130	1.7	OK	130							
422345A	Lone Pine	Condamine River (north branch)	8/01/1997																						
422345A	Lone Pine	Condamine River (north branch)	11/02/1997	106.66	OK	130	212.67	OK	130	52	OK	130	50.86	OK	130	1.97	OK	130							
422345A	Lone Pine	Condamine River (north branch)	25/03/1997																						
422345A	Lone Pine	Condamine River (north branch)	18/04/1997																						
422345A	Lone Pine	Condamine River (north branch)	29/05/1997																						
422345A	Lone Pine	Condamine River (north branch)	22/07/1997																						
422345A	Lone Pine	Condamine River (north branch)	25/09/1997																						
422345A	Lone Pine	Condamine River (north branch)	27/11/1997	93.03	OK	130	178.27	OK	130	143	OK	130	38.52	OK	130	3.41	OK	130							
422345A	Lone Pine	Condamine River (north branch)	29/04/1998																						
422345A	Lone Pine	Condamine River (north branch)	29/04/1998																						
422345A	Lone Pine	Condamine River (north branch)	23/09/1998	61.56	OK	130	141.77	OK	130	236	OK	130	12.52	OK	130	8.49	OK	130					2.7827	OK	130
422345A	Lone Pine	Condamine River (north branch)	18/02/1999	70.86	OK	130	129.87	OK	130	85	OK	130	15.78	OK	130	1.24	OK	130					0.817	OK	130
422345A	Lone Pine	Condamine River (north branch)	18/03/1999																						
422345A	Lone Pine	Condamine River (north branch)	29/03/1999																						
422345A	Lone Pine	Condamine River (north branch)	16/06/1999	114.95	OK	130	216.35	OK	130	58	OK	130	65.85	OK	130	1.65	OK	130					0.6141	OK	130
422345A	Lone Pine	Condamine River (north branch)	1/09/1999	84.34	OK	130	157.77	OK	130	45	OK	130	38.17	OK	130	1.75	OK	130					0.8696	OK	130
422345A	Lone Pine	Condamine River (north branch)	1/11/1999																						
422345A	Lone Pine	Condamine River (north branch)	1/11/1999																						
422345A	Lone Pine	Condamine River (north branch)	21/12/1999																						
422345A	Lone Pine	Condamine River (north branch)	29/02/2000	118.49	OK	130	208.79	OK	130	62	OK	130	46.06	OK	130	1.7	OK	130					0.6321	OK	130
422345A	Lone Pine	Condamine River (north branch)	16/03/2000																						
422345A	Lone Pine	Condamine River (north branch)	19/06/2000	125	OK	130	220	OK	130	60	OK	130	66	OK	130	0.5	<	130					0.4412	OK	130
422345A	Lone Pine	Condamine River (north branch)	8/09/2000																						
422345A	Lone Pine	Condamine River (north branch)	22/09/2000																						
422345A	Lone Pine	Condamine River (north branch)	14/02/2001	80.47	OK	130	145.43	OK	130	230	OK	130	19.34	OK	130	2.09	OK	130					1.365	OK	130
422345A	Lone Pine	Condamine River (north branch)	13/06/2001	104.69	OK	130	173.78	OK	130	29	OK	130	39.77	OK	130	0.58	OK	130					0.416	OK	130
422345A	Lone Pine	Condamine River (north branch)	11/07/2001																						
422345A	Lone Pine	Condamine River (north branch)	18/07/2001																						
422345A	Lone Pine	Condamine River (north branch)	14/08/2001																						
422345A	Lone Pine	Condamine River (north branch)	12/12/2001																						
422345A	Lone Pine	Condamine River (north branch)	14/06/2002																						
422345A	Lone Pine	Condamine River (north branch)	21/11/2002																						
422345A	Lone Pine	Condamine River (north branch)	8/05/2003																						

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Station	Station Name	Receiving Creek/ River	Date	V2132.00	F2132.00	Q2132.00	V2169.00	F2169.00	Q2169.00	V2172.00	F2172.00	Q2172.00	V2311.00	F2311.00	Q2311.00	V2331.00	F2331.00	Q2331.00	V2343.00	F2343.00	Q2343.00	V2337.00	F2337.00	Q2337.00	
				Hardness as CaCO3 (mg/L)			Total Diss. Solids (mg/L)			Total Suspended Solids			Chloride as Cl (mg/L)			Nitrate as NO3(mg/L)			Nitrate + nitrite as N - soluble (mg/L)			Total Nitrogen (mg/L)			
422345A	Lone Pine	Condamine River (north branch)	31/07/2003																						
422345A	Lone Pine	Condamine River (north branch)	11/03/2004	105	OK	130	200	OK	130	130	OK	130	28	<	130	2.4	OK	130					1.5	OK	130
422345A	Lone Pine	Condamine River (north branch)	20/12/2005	116	OK	130	188	OK	130	135	OK	130	25	OK	130	2	OK	130					1.093	OK	10
422345A	Lone Pine	Condamine River (north branch)	21/03/2006	140	OK	130	220	OK	130	27	OK	130	20	OK	130	0.5	<	130					1.3743	OK	130
422345A	Lone Pine	Condamine River (north branch)	28/04/2009																						
422346A	N Condamine_R Kurlaw	Condamine River (north branch)	11/07/1979	84	OK	125	219	OK	125	180	OK	125	37	OK	125	17	OK	135							
422346A	N Condamine_R Kurlaw	Condamine River (north branch)	11/07/1979																						
422346A	N Condamine_R Kurlaw	Condamine River (north branch)	11/02/1980	93	OK	125	225	OK	125	10	OK	125	20	OK	125	3.6	OK	135							
422346A	N Condamine_R Kurlaw	Condamine River (north branch)	11/02/1980																						
422346A	N Condamine_R Kurlaw	Condamine River (north branch)	9/02/1981	58	OK	125	194	OK	125	500	OK	125	21	OK	125	8.5	OK	135							
422346A	N Condamine_R Kurlaw	Condamine River (north branch)	19/02/1981	81	OK	125	194	OK	125	80	OK	125	13	OK	125	2	OK	135							
422346A	N Condamine_R Kurlaw	Condamine River (north branch)	19/02/1981																						
422346A	N Condamine_R Kurlaw	Condamine River (north branch)	1/07/1981	77	OK	125	167	OK	125	30	OK	125	13	OK	125	1	OK	135							
422346A	N Condamine_R Kurlaw	Condamine River (north branch)	13/12/1983	85	OK	125	250	OK	125	10	OK	125	42	OK	125	43	OK	135							
422346A	N Condamine_R Kurlaw	Condamine River (north branch)	13/12/1983																						
422347A	Pampas Bridge	Condamine River (north branch)	6/02/1980	92	OK	125	199	OK	125	10	OK	125	8	OK	125	3.2	OK	135							
422347A	Pampas Bridge	Condamine River (north branch)	7/02/1980	73	OK	125	152	OK	125	10	OK	125	9	OK	125	1.6	OK	135							
422347A	Pampas Bridge	Condamine River (north branch)	7/02/1980																						
422347A	Pampas Bridge	Condamine River (north branch)	8/02/1980	105	OK	125	182	OK	125	10	OK	125	10	OK	125	2.6	OK	135							
422347A	Pampas Bridge	Condamine River (north branch)	8/02/1980																						
422347A	Pampas Bridge	Condamine River (north branch)	11/02/1980	85	OK	125	186	OK	125	10	OK	125	12	OK	125	2.1	OK	135							
422347A	Pampas Bridge	Condamine River (north branch)	11/02/1980																						
422347A	Pampas Bridge	Condamine River (north branch)	9/02/1981	62	OK	125	157	OK	125	500	OK	125	11	OK	125	2	OK	135							
422347A	Pampas Bridge	Condamine River (north branch)	9/02/1981																						
422347A	Pampas Bridge	Condamine River (north branch)	29/08/2006	188	OK	10	319	OK	10	221	OK	10	59	OK	10	11	OK	10							
422348A	Christians	Condamine River (north branch)	7/02/1980	115	OK	125	195	OK	125	10	OK	125	10	OK	125	7.6	OK	135							
422348A	Christians	Condamine River (north branch)	7/02/1980																						
422348A	Christians	Condamine River (north branch)	7/04/1981	34	OK	125	90	OK	125	100	OK	125	5	OK	135	7	OK	135							
422339A	Jimbour_Ck Bunginie	Jimbour Creek	9/01/1973	290	OK	125	702	OK	125				295	OK	125										
422339A	Jimbour_Ck Bunginie	Jimbour Creek	24/01/1973	405	OK	125	976	OK	125				435	OK	125										
422339A	Jimbour_Ck Bunginie	Jimbour Creek	18/09/1973	456	OK	125	866	OK	125	24	OK	125	354	OK	125										
422339A	Jimbour_Ck Bunginie	Jimbour Creek	18/09/1973																						
422339A	Jimbour_Ck Bunginie	Jimbour Creek	30/10/1973	423	OK	125	909	OK	125	72	OK	125	420	OK	125										
422339A	Jimbour_Ck Bunginie	Jimbour Creek	30/10/1973																						
422339A	Jimbour_Ck Bunginie	Jimbour Creek	11/09/1974	1105	OK	125	2754	OK	125	100	OK	125	1420	OK	125										
422339A	Jimbour_Ck Bunginie	Jimbour Creek	24/08/1976	613	OK	125	1390	OK	125				655	OK	125	4.4	OK	135							
422339A	Jimbour_Ck Bunginie	Jimbour Creek	30/01/1980	67	OK	125	147	OK	125	1300	OK	125	20	OK	125	5	OK	135							
422339A	Jimbour_Ck Bunginie	Jimbour Creek	30/01/1980																						
422339A	Jimbour_Ck Bunginie	Jimbour Creek	21/01/1988	31	OK	151	100	OK	151	148	OK	125	21	OK	151	1.2	OK	151							
422339A	Jimbour_Ck Bunginie	Jimbour Creek	25/05/1988	546	OK	125	1140	OK	125	16	OK	125	495	OK	125	1	OK	135							
422339A	Jimbour_Ck Bunginie	Jimbour Creek	25/05/1988																						
422339A	Jimbour_Ck Bunginie	Jimbour Creek	4/08/1988	480	OK	125	990	OK	125	10	OK	125	425	OK	125	0.5	OK	135							
422339A	Jimbour_Ck Bunginie	Jimbour Creek	4/08/1988																						
422339A	Jimbour_Ck Bunginie	Jimbour Creek	6/09/1989	677	OK	125	1520	OK	125	120	OK	125	720	OK	125	2	OK	135							
422339A	Jimbour_Ck Bunginie	Jimbour Creek	6/09/1989																						
422339A	Jimbour_Ck Bunginie	Jimbour Creek	3/07/1990	534	OK	125	1093	OK	125				447	OK	125										
422339A	Jimbour_Ck Bunginie	Jimbour Creek	3/07/1990																						
422339A	Jimbour_Ck Bunginie	Jimbour Creek	16/10/1990	775	OK	125	1714	OK	125	56	OK	125	787.9	OK	125										
422339A	Jimbour_Ck Bunginie	Jimbour Creek	16/10/1990																						
422339A	Jimbour_Ck Bunginie	Jimbour Creek	1/07/1992	2219	OK	125	6029	OK	125	18	OK	125	3019.6	OK	125										
422339A	Jimbour_Ck Bunginie	Jimbour Creek	1/07/1992																						
422339A	Jimbour_Ck Bunginie	Jimbour Creek	14/08/1995																						
422339A	Jimbour_Ck Bunginie	Jimbour Creek	26/09/1995	1365.85	OK	130	3414.4	OK	130	10	OK	130	1856	OK	130	0	ND	130							

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Station	Station Name	Receiving Creek/ River	Date	V2132.00	F2132.00	Q2132.00	V2169.00	F2169.00	Q2169.00	V2172.00	F2172.00	Q2172.00	V2311.00	F2311.00	Q2311.00	V2331.00	F2331.00	Q2331.00	V2343.00	F2343.00	Q2343.00	V2337.00	F2337.00	Q2337.00	
				Hardness as CaCO3 (mg/L)			Total Diss. Solids (mg/L)			Total Suspended Solids			Chloride as Cl (mg/L)			Nitrate as NO3(mg/L)			Nitrate + nitrite as N - soluble (mg/L)			Total Nitrogen (mg/L)			
422339A	Jimbour_Ck Bunginie	Jimbour Creek	26/05/1997	710.25	OK	130	1634.38	OK	130	17	OK	130	774.84	OK	130	1.48	OK	130							
422339A	Jimbour_Ck Bunginie	Jimbour Creek	24/11/1997	493.64	OK	130	1137.54	OK	130	10	OK	130	548.55	OK	130	1.59	OK	130							
422339A	Jimbour_Ck Bunginie	Jimbour Creek	18/02/1999							20	OK	130							0.002	<	130	0.86	OK	130	
422339A	Jimbour_Ck Bunginie	Jimbour Creek	18/10/1999																0	ND	130	0.53	OK	130	
422326A	Gowrie_Ck Cranley	Oakey Creek	16/03/1971	208	OK	125	0	OK	125				145	OK	125	3	OK	135							
422326A	Gowrie_Ck Cranley	Oakey Creek	31/05/1971	199	OK	125	0	OK	125				130	OK	125	8	OK	135							
422326A	Gowrie_Ck Cranley	Oakey Creek	19/07/1971	208	OK	125	0	OK	125				144	OK	125	5	OK	135							
422326A	Gowrie_Ck Cranley	Oakey Creek	30/08/1971	228	OK	125	0	OK	125				170	OK	125	7	OK	135							
422326A	Gowrie_Ck Cranley	Oakey Creek	18/10/1971	214	OK	125	0	OK	125				125	OK	125										
422326A	Gowrie_Ck Cranley	Oakey Creek	13/03/1972	300	OK	125	0	OK	125				217	OK	125										
422326A	Gowrie_Ck Cranley	Oakey Creek	19/06/1972	466	OK	125	0	OK	125				395	OK	125	27	OK	135							
422326A	Gowrie_Ck Cranley	Oakey Creek	21/08/1972	322	OK	125	0	OK	125				260	OK	125	16	OK	135							
422326A	Gowrie_Ck Cranley	Oakey Creek	23/10/1972	391	OK	125	0	OK	125				300	OK	125	10	OK	135							
422326A	Gowrie_Ck Cranley	Oakey Creek	8/01/1973	275	OK	125	0	OK	125				200	OK	125										
422326A	Gowrie_Ck Cranley	Oakey Creek	16/03/1973	236	OK	125	364	OK	125				168	OK	125										
422326A	Gowrie_Ck Cranley	Oakey Creek	8/05/1973	383	OK	125	522	OK	125	6	OK	125	235	OK	125	14.6	OK	135							
422326A	Gowrie_Ck Cranley	Oakey Creek	18/06/1973	362	OK	125	536	OK	125	3	OK	125	253	OK	125	16.4	OK	135							
422326A	Gowrie_Ck Cranley	Oakey Creek	24/07/1973	166	OK	125	331	OK	125	40	OK	125	136	OK	125	12.4	OK	135							
422326A	Gowrie_Ck Cranley	Oakey Creek	17/09/1973	354	OK	125	550	OK	125	24	OK	125	256	OK	125	11	OK	135							
422326A	Gowrie_Ck Cranley	Oakey Creek	29/10/1973	83	OK	125	151	OK	125	397	OK	125	60	OK	135										
422326A	Gowrie_Ck Cranley	Oakey Creek	21/01/1974	210	OK	125	361	OK	125	35	OK	125	135	OK	125	8.7	OK	135							
422326A	Gowrie_Ck Cranley	Oakey Creek	25/03/1974	221	OK	125	399	OK	125	30	OK	125	160	OK	125										
422326A	Gowrie_Ck Cranley	Oakey Creek	16/09/1974	263	OK	125	436	OK	125	40	OK	125	185	OK	125	10.6	OK	135							
422326A	Gowrie_Ck Cranley	Oakey Creek	24/02/1976	183	OK	125	337	OK	125	55	OK	125	144	OK	125	20	OK	135							
422326A	Gowrie_Ck Cranley	Oakey Creek	23/08/1976	243	OK	125	428	OK	125	17	OK	125	171	OK	125	18	OK	135							
422326A	Gowrie_Ck Cranley	Oakey Creek	9/07/1979	254	OK	125	442	OK	125	10	OK	125	180	OK	125	20	OK	135							
422326A	Gowrie_Ck Cranley	Oakey Creek	10/09/1979	310	OK	125	521	OK	125	5	OK	125	230	OK	125	16	OK	135							
422326A	Gowrie_Ck Cranley	Oakey Creek	29/01/1980	201	OK	125	368	OK	125	25	OK	125	134	OK	125	11	OK	135							
422326A	Gowrie_Ck Cranley	Oakey Creek	14/04/1980	326	OK	125	564	OK	125	10	OK	125	240	OK	125	16	OK	135							
422326A	Gowrie_Ck Cranley	Oakey Creek	1/07/1980	265	OK	125	496	OK	125	10	OK	125	196	OK	125	17	OK	135							
422326A	Gowrie_Ck Cranley	Oakey Creek	8/09/1980	301	OK	125	515	OK	125	9	OK	125	216	OK	125	15	OK	135							
422326A	Gowrie_Ck Cranley	Oakey Creek	30/01/1981	334	OK	125	635	OK	125	10	OK	125	284	OK	125	16	OK	135							
422326A	Gowrie_Ck Cranley	Oakey Creek	10/04/1981	213	OK	125	385	OK	125	10	OK	125	132	OK	125	12	OK	135							
422326A	Gowrie_Ck Cranley	Oakey Creek	29/06/1981	226	OK	125	401	OK	125	10	OK	125	150	OK	125	13	OK	135							
422326A	Gowrie_Ck Cranley	Oakey Creek	14/09/1981	260	OK	125	436	OK	125	10	OK	125	173	OK	125	12	OK	135							
422326A	Gowrie_Ck Cranley	Oakey Creek	23/11/1982	259	OK	125	460	OK	125	10	OK	125	165	OK	125	8.8	OK	135							
422326A	Gowrie_Ck Cranley	Oakey Creek	2/02/1983	329	OK	125	640	OK	125	9	OK	125	265	OK	125	5.6	OK	135							
422326A	Gowrie_Ck Cranley	Oakey Creek	17/05/1983	206	OK	125	360	OK	125	10	OK	125	130	OK	125	10.5	OK	135							
422326A	Gowrie_Ck Cranley	Oakey Creek	12/07/1983	218	OK	125	400	OK	125	10	OK	125	160	OK	125	14	OK	135							
422326A	Gowrie_Ck Cranley	Oakey Creek	12/12/1983	195	OK	125	360	OK	125	10	OK	125	135	OK	125	12	OK	135							
422326A	Gowrie_Ck Cranley	Oakey Creek	5/03/1984	212	OK	125	360	OK	125	5	OK	125	120	OK	125	9	OK	135							
422326A	Gowrie_Ck Cranley	Oakey Creek	28/05/1984	233	OK	125	400	OK	125	5	OK	125	150	OK	125	13	OK	135							
422326A	Gowrie_Ck Cranley	Oakey Creek	10/10/1984	239	OK	125	430	OK	125	5	OK	125	175	OK	125	9.3	OK	135							
422326A	Gowrie_Ck Cranley	Oakey Creek	8/01/1985	165	OK	125	310	OK	125	10	OK	125	110	OK	125	6.2	OK	135							
422326A	Gowrie_Ck Cranley	Oakey Creek	11/03/1985	116	OK	125	250	OK	125	30	OK	125	95	OK	125	7.5	OK	135							
422326A	Gowrie_Ck Cranley	Oakey Creek	24/07/1985	255	OK	125	450	OK	125	20	OK	125	170	OK	125	18	OK	135							
422326A	Gowrie_Ck Cranley	Oakey Creek	21/10/1985	258	OK	125	430	OK	125	10	OK	125	175	OK	125	12	OK	135							
422326A	Gowrie_Ck Cranley	Oakey Creek	6/01/1986	246	OK	125	390	OK	125	10	OK	125	170	OK	125	6.8	OK	135							
422326A	Gowrie_Ck Cranley	Oakey Creek	1/04/1986	271	OK	125	480	OK	125	10	OK	125	200	OK	125	13.5	OK	135							
422326A	Gowrie_Ck Cranley	Oakey Creek	1/07/1986	304	OK	125	520	OK	125	10	OK	125	230	OK	125	7.3	OK	135							
422326A	Gowrie_Ck Cranley	Oakey Creek	19/09/1986	405	OK	125	850	OK	125	40	OK	125	410	OK	125	27	OK	135							
422326A	Gowrie_Ck Cranley	Oakey Creek	19/12/1986	338	OK	125	540	OK	125	20	OK	125	265	OK	125	7.7	OK	135							
422326A	Gowrie_Ck Cranley	Oakey Creek	6/03/1987	349	OK	125	570	OK	125	11	OK	125	255	OK	125	12	OK	135							

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Station	Station Name	Receiving Creek/ River	Date	V2132.00	F2132.00	Q2132.00	V2169.00	F2169.00	Q2169.00	V2172.00	F2172.00	Q2172.00	V2311.00	F2311.00	Q2311.00	V2331.00	F2331.00	Q2331.00	V2343.00	F2343.00	Q2343.00	V2337.00	F2337.00	Q2337.00
				Hardness as CaCO ₃ (mg/L)			Total Diss. Solids (mg/L)			Total Suspended Solids			Chloride as Cl (mg/L)			Nitrate as NO ₃ (mg/L)			Nitrate + nitrite as N - soluble (mg/L)			Total Nitrogen (mg/L)		
422326A	Gowrie_Ck Cranley	Oakey Creek	20/05/1987	322	OK	125	530	OK	125	12	OK	125	220	OK	125	20	OK	135						
422326A	Gowrie_Ck Cranley	Oakey Creek	4/09/1987	306	OK	125	500	OK	125	10	OK	125	205	OK	125	12.5	OK	135						
422326A	Gowrie_Ck Cranley	Oakey Creek	6/11/1987	287	OK	125	480	OK	125	10	OK	125	215	OK	125	4.1	OK	135						
422326A	Gowrie_Ck Cranley	Oakey Creek	11/03/1988	257	OK	125	430	OK	125	5	OK	125	180	OK	125	11	OK	135						
422326A	Gowrie_Ck Cranley	Oakey Creek	13/05/1988	219	OK	125	390	OK	125	26	OK	125	150	OK	125	12.5	OK	135						
422326A	Gowrie_Ck Cranley	Oakey Creek	5/08/1988	225	OK	125	410	OK	125	15	OK	125	155	OK	125	8.7	OK	135						
422326A	Gowrie_Ck Cranley	Oakey Creek	14/12/1988																					
422326A	Gowrie_Ck Cranley	Oakey Creek	5/06/1989																					
422326A	Gowrie_Ck Cranley	Oakey Creek	16/08/1989																					
422326A	Gowrie_Ck Cranley	Oakey Creek	27/10/1989	58	OK	125	120	OK	125	20	OK	125	37	OK	125	4.3	OK	135						
422326A	Gowrie_Ck Cranley	Oakey Creek	16/07/1990	223	OK	125	423	OK	125	7	OK	125	168.1	OK	125	11.9	OK	135						
422326A	Gowrie_Ck Cranley	Oakey Creek	18/10/1990	231	OK	125	409	OK	125	25	OK	125	161.5	OK	125	4.3	OK	135						
422326A	Gowrie_Ck Cranley	Oakey Creek	11/03/1991																					
422326A	Gowrie_Ck Cranley	Oakey Creek	19/11/1991																					
422326A	Gowrie_Ck Cranley	Oakey Creek	6/03/1992	166	OK	125	330	OK	125	36	OK	125	140	OK	125									
422326A	Gowrie_Ck Cranley	Oakey Creek	14/07/1992	263	OK	125	453	OK	125	25	OK	125	189.3	OK	125	10.7	OK	135						
422326A	Gowrie_Ck Cranley	Oakey Creek	19/10/1992	149	OK	125	259	OK	125	11	OK	125	87.5	OK	125	5.4	OK	135						
422326A	Gowrie_Ck Cranley	Oakey Creek	11/02/1993	216	OK	125	355	OK	125	8	OK	125	122	OK	125	4.7	OK	135						
422326A	Gowrie_Ck Cranley	Oakey Creek	3/03/1993																					
422326A	Gowrie_Ck Cranley	Oakey Creek	8/06/1993																					
422326A	Gowrie_Ck Cranley	Oakey Creek	8/06/1993	131	OK	125	222	OK	125	22	OK	125	80.5	OK	125	6.9	OK	135						
422326A	Gowrie_Ck Cranley	Oakey Creek	20/10/1993																					
422326A	Gowrie_Ck Cranley	Oakey Creek	20/10/1993																					
422326A	Gowrie_Ck Cranley	Oakey Creek	16/03/1994																					
422326A	Gowrie_Ck Cranley	Oakey Creek	13/07/1994																					
422326A	Gowrie_Ck Cranley	Oakey Creek	5/12/1994																					
422326A	Gowrie_Ck Cranley	Oakey Creek	1/09/1995																					
422326A	Gowrie_Ck Cranley	Oakey Creek	30/01/1996																					
422326A	Gowrie_Ck Cranley	Oakey Creek	30/05/1996																					
422326A	Gowrie_Ck Cranley	Oakey Creek	4/09/1996																					
422326A	Gowrie_Ck Cranley	Oakey Creek	6/01/1997																					
422326A	Gowrie_Ck Cranley	Oakey Creek	14/04/1997																					
422326A	Gowrie_Ck Cranley	Oakey Creek	3/06/1997	216.38	OK	130	345.29	OK	130	2	OK	130	117.55	OK	130	9.82	OK	130						
422326A	Gowrie_Ck Cranley	Oakey Creek	28/07/1997																					
422326A	Gowrie_Ck Cranley	Oakey Creek	7/08/1997																					
422326A	Gowrie_Ck Cranley	Oakey Creek	17/11/1997	96.78	OK	130	166.98	OK	130	18	OK	130	50.71	OK	130	4.02	OK	130						
422326A	Gowrie_Ck Cranley	Oakey Creek	26/09/1998	130.59	OK	130	232.78	OK	130	4	OK	130	73.51	OK	130	6.94	OK	130				1.6793	OK	130
422326A	Gowrie_Ck Cranley	Oakey Creek	11/01/1999							50	OK	130				0.002	OK	130				2.5	OK	130
422326A	Gowrie_Ck Cranley	Oakey Creek	12/04/1999							5	OK	130				2	OK	130				2.1	OK	130
422326A	Gowrie_Ck Cranley	Oakey Creek	15/06/1999	197.51	OK	130	323.13	OK	130	3	OK	130	103.5	OK	130	10.12	OK	130				2.2967	OK	130
422326A	Gowrie_Ck Cranley	Oakey Creek	12/07/1999							10	OK	130				1.8	OK	130				2.1	OK	130
422326A	Gowrie_Ck Cranley	Oakey Creek	1/09/1999	170.69	OK	130	300.15	OK	130	18	OK	130	106.54	OK	130	7.95	OK	130				2.16	OK	130
422326A	Gowrie_Ck Cranley	Oakey Creek	11/10/1999													1.71	OK	130				2	OK	130
422326A	Gowrie_Ck Cranley	Oakey Creek	19/10/1999																					
422326A	Gowrie_Ck Cranley	Oakey Creek	25/10/1999																					
422326A	Gowrie_Ck Cranley	Oakey Creek	26/10/1999																					
422326A	Gowrie_Ck Cranley	Oakey Creek	26/10/1999																					
422326A	Gowrie_Ck Cranley	Oakey Creek	16/02/2000																					
422326A	Gowrie_Ck Cranley	Oakey Creek	16/02/2000																					
422326A	Gowrie_Ck Cranley	Oakey Creek	19/04/2000																					
422326A	Gowrie_Ck Cranley	Oakey Creek	9/05/2000																					
422326A	Gowrie_Ck Cranley	Oakey Creek	19/06/2000	190	OK	130	300	OK	130	10	<	130	90	OK	130	7.7	OK	130				1.7932	OK	130
422326A	Gowrie_Ck Cranley	Oakey Creek	25/09/2000	221.85	OK	130	347.31	OK	130	3	OK	130	106.1	OK	130	5.56	OK	130	0.96	OK	130	1.2	OK	130
422326A	Gowrie_Ck Cranley	Oakey Creek	25/09/2000																					
422326A	Gowrie_Ck Cranley	Oakey Creek	8/01/2001																					

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Station	Station Name	Receiving Creek/ River	Date	V2132.00	F2132.00	Q2132.00	V2169.00	F2169.00	Q2169.00	V2172.00	F2172.00	Q2172.00	V2311.00	F2311.00	Q2311.00	V2331.00	F2331.00	Q2331.00	V2343.00	F2343.00	Q2343.00	V2337.00	F2337.00	Q2337.00
				Hardness as CaCO3 (mg/L)			Total Diss. Solids (mg/L)			Total Suspended Solids			Chloride as Cl (mg/L)			Nitrate as NO3(mg/L)			Nitrate + nitrite as N - soluble (mg/L)			Total Nitrogen (mg/L)		
422326A	Gowrie_Ck Cranley	Oakey Creek	1/02/2001	19.19	OK	130	40.43	OK	130	151	OK	130	5.95	OK	130	2.47	OK	130				1.0545	OK	130
422326A	Gowrie_Ck Cranley	Oakey Creek	6/02/2001	162.74	OK	130	287.01	OK	130	9	OK	130	67.66	OK	130	9.76	OK	130	2.1139	OK	130	2.493	OK	130
422326A	Gowrie_Ck Cranley	Oakey Creek	31/05/2001																					
422326A	Gowrie_Ck Cranley	Oakey Creek	18/06/2001																					
422326A	Gowrie_Ck Cranley	Oakey Creek	24/10/2001																					
422326A	Gowrie_Ck Cranley	Oakey Creek	17/04/2002																					
422326A	Gowrie_Ck Cranley	Oakey Creek	17/04/2002	135.94	OK	130	223.37	OK	130	5	OK	130	60.09	OK	130	4.17	OK	130				1.2248	OK	130
422326A	Gowrie_Ck Cranley	Oakey Creek	22/04/2002																					
422326A	Gowrie_Ck Cranley	Oakey Creek	2/07/2002																					
422326A	Gowrie_Ck Cranley	Oakey Creek	16/07/2002																					
422326A	Gowrie_Ck Cranley	Oakey Creek	9/09/2002																					
422326A	Gowrie_Ck Cranley	Oakey Creek	21/11/2002																					
422326A	Gowrie_Ck Cranley	Oakey Creek	10/12/2002	33.19	OK	130	70.1	OK	130	50	OK	130	15.28	OK	130	2.6	OK	130				0.8443	OK	130
422326A	Gowrie_Ck Cranley	Oakey Creek	5/12/2003	13.5	OK	130	32	OK	130	490	OK	130	6	>	130	2.5	OK	130				1.2	OK	130
422326A	Gowrie_Ck Cranley	Oakey Creek	5/12/2003	16.5	OK	130	40	OK	130	180	OK	130	8	OK	130	1.9	OK	130				0.86	OK	130
422326A	Gowrie_Ck Cranley	Oakey Creek	8/12/2003	93	OK	130	170	OK	130	20	OK	130	41	<	130	6.2	OK	130				1.4	OK	130
422326A	Gowrie_Ck Cranley	Oakey Creek	10/03/2004	37.5	OK	130	87	OK	130	190	OK	130	14	<	130	9.8	OK	130				2	OK	130
422326A	Gowrie_Ck Cranley	Oakey Creek	25/01/2005	41	OK	130	79	OK	130	12	OK	130	18	OK	130	2.4	OK	130				0.72	OK	130
422326A	Gowrie_Ck Cranley	Oakey Creek	22/07/2005	145	OK	130	304	OK	130	9	OK	130	85	OK	130	5.9	OK	130				1.475	OK	130
422326A	Gowrie_Ck Cranley	Oakey Creek	22/09/2005	168	OK	130	269	OK	130	9	OK	130	70	OK	130	3.8	OK	130				1.01	OK	130
422326A	Gowrie_Ck Cranley	Oakey Creek	22/08/2006	191	OK	131	292	OK	131	10	OK	131	81	OK	131	3.7	OK	131				1.0457	OK	10
422326A	Gowrie_Ck Cranley	Oakey Creek	26/08/2006	198	OK	10	297	OK	10	7	OK	10	82	OK	10	4.9	OK	10						
422326A	Gowrie_Ck Cranley	Oakey Creek	14/01/2009																					
422326A	Gowrie_Ck Cranley	Oakey Creek	27/04/2009																					
422326A	Gowrie_Ck Cranley	Oakey Creek	14/09/2009																					
422330A	Oakey_Ck Oakey	Oakey Creek	8/03/1971	299	OK	125	554	OK	125				275	OK	125									
422330A	Oakey_Ck Oakey	Oakey Creek	8/03/1971	515	OK	125	963	OK	125				500	OK	125									
422330A	Oakey_Ck Oakey	Oakey Creek	18/10/1971	265	OK	125	489	OK	125				225	OK	125									
422330A	Oakey_Ck Oakey	Oakey Creek	8/01/1973	131	OK	125	237	OK	125				90	OK	125									
422330A	Oakey_Ck Oakey	Oakey Creek	26/01/1973	191	OK	125	306	OK	125				140	OK	125									
422330A	Oakey_Ck Oakey	Oakey Creek	24/07/1973	150	OK	151	611	OK	151	16	OK	125	328	OK	151	3.6	OK	151						
422330A	Oakey_Ck Oakey	Oakey Creek	17/09/1973	187	OK	125	386	OK	125	56	OK	125	176	OK	125									
422330A	Oakey_Ck Oakey	Oakey Creek	13/10/1975	364	OK	125	660	OK	125	10	OK	125	335	OK	125									
422330A	Oakey_Ck Oakey	Oakey Creek	29/12/1975	42	OK	125	106	OK	125	108	OK	125	24	OK	125									
422330A	Oakey_Ck Oakey	Oakey Creek	29/12/1975	231	OK	125	443	OK	125	33	OK	125	204	OK	125									
422330A	Oakey_Ck Oakey	Oakey Creek	23/08/1976	888	OK	125	1690	OK	125	5	OK	125	925	OK	125	2.7	OK	135						
422332A	Gowrie_Ck Oakey	Oakey Creek	15/03/1971	278	OK	125	0	OK	125				200	OK	125	10	OK	135						
422332A	Gowrie_Ck Oakey	Oakey Creek	31/05/1971	277	OK	125							190	OK	125	12	OK	135						
422332A	Gowrie_Ck Oakey	Oakey Creek	31/05/1971																					
422332A	Gowrie_Ck Oakey	Oakey Creek	19/07/1971	206	OK	125	0	OK	125				156	OK	125	11	OK	135						
422332A	Gowrie_Ck Oakey	Oakey Creek	19/07/1971																					
422332A	Gowrie_Ck Oakey	Oakey Creek	30/08/1971	329	OK	125	0	OK	125				200	OK	125	8	OK	135						
422332A	Gowrie_Ck Oakey	Oakey Creek	30/08/1971																					
422332A	Gowrie_Ck Oakey	Oakey Creek	18/10/1971	275	OK	151							110	OK	151									
422332A	Gowrie_Ck Oakey	Oakey Creek	13/03/1972	279	OK	125	0	OK	125				200	OK	125									
422332A	Gowrie_Ck Oakey	Oakey Creek	21/08/1972	343	OK	125	0	OK	125				335	OK	125	48	OK	135						
422332A	Gowrie_Ck Oakey	Oakey Creek	23/10/1972	207	OK	125							204	OK	125	12	OK	135						
422332A	Gowrie_Ck Oakey	Oakey Creek	8/05/1973	374	OK	125	622	OK	125	22	OK	125	240	OK	125	35.4	OK	135						
422332A	Gowrie_Ck Oakey	Oakey Creek	8/05/1973																					
422332A	Gowrie_Ck Oakey	Oakey Creek	17/09/1973	281	OK	125	497	OK	125	43	OK	125	224	OK	125	9	OK	135						
422332A	Gowrie_Ck Oakey	Oakey Creek	17/09/1973																					
422332A	Gowrie_Ck Oakey	Oakey Creek	29/10/1973	275	OK	125	574	OK	125	385	OK	125	200	OK	125									
422332A	Gowrie_Ck Oakey	Oakey Creek	21/01/1974	255	OK	125	449	OK	125	115	OK	125	185	OK	125	16	OK	135						
422332A	Gowrie_Ck Oakey	Oakey Creek	12/09/1974	253	OK	125	551	OK	125	40	OK	125	205	OK	125	44.4	OK	135						
422332A	Gowrie_Ck Oakey	Oakey Creek	13/10/1975	240	OK	125	480	OK	125	75	OK	125	180	OK	125	24	OK	135						

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				Hardness as CaCO3 (mg/L)			Total Diss. Solids (mg/L)			Total Suspended Solids			Chloride as Cl (mg/L)			Nitrate as NO3(mg/L)			Nitrate + nitrite as N - soluble (mg/L)			Total Nitrogen (mg/L)		
422332A	Gowrie_Ck Oakey	Oakey Creek	8/12/1975	298	OK	125	634	OK	125	90	OK	125	225	OK	125	42	OK	135						
422332A	Gowrie_Ck Oakey	Oakey Creek	25/02/1976	188	OK	125	355	OK	125	89	OK	125	108	OK	125	22	OK	135						
422332A	Gowrie_Ck Oakey	Oakey Creek	9/10/1978	311	OK	125	591	OK	125	10	OK	125	280	OK	125	0.2	OK	135						
422332A	Gowrie_Ck Oakey	Oakey Creek	9/07/1979	323	OK	125	693	OK	125	40	OK	125	240	OK	125	65	OK	135						
422332A	Gowrie_Ck Oakey	Oakey Creek	9/07/1979	982	OK	125	1920	OK	125	59	OK	125	1090	OK	125	7.5	OK	135						
422332A	Gowrie_Ck Oakey	Oakey Creek	9/07/1979																					
422332A	Gowrie_Ck Oakey	Oakey Creek	10/09/1979	364	OK	125	858	OK	125				310	OK	125	70	OK	135						
422332A	Gowrie_Ck Oakey	Oakey Creek	10/09/1979																					
422332A	Gowrie_Ck Oakey	Oakey Creek	29/01/1980	98	OK	125	209	OK	125	670	OK	125	58	OK	125	19	OK	135						
422332A	Gowrie_Ck Oakey	Oakey Creek	29/01/1980																					
422332A	Gowrie_Ck Oakey	Oakey Creek	14/04/1980	421	OK	125	1040	OK	125	40	OK	125	435	OK	125	48	OK	135						
422332A	Gowrie_Ck Oakey	Oakey Creek	14/04/1980																					
422332A	Gowrie_Ck Oakey	Oakey Creek	1/07/1980	342	OK	125	801	OK	125	10	OK	125	290	OK	125	62	OK	135						
422332A	Gowrie_Ck Oakey	Oakey Creek	1/07/1980																					
422332A	Gowrie_Ck Oakey	Oakey Creek	30/01/1981	349	OK	125	785	OK	125	26	OK	125	304	OK	125	35	OK	135						
422332A	Gowrie_Ck Oakey	Oakey Creek	30/01/1981																					
422332A	Gowrie_Ck Oakey	Oakey Creek	26/08/2006	326	OK	10	1090	OK	10	15	OK	10	352	OK	10	4.8	OK	10						
422350A	Oakey_Ck Fairview	Oakey Creek	18/06/1963	216	OK	125	400	OK	125				114	OK	125									
422350A	Oakey_Ck Fairview	Oakey Creek	25/09/1963	429	OK	125	800	OK	125				328	OK	125									
422350A	Oakey_Ck Fairview	Oakey Creek	22/07/1964	373	OK	125							280	OK	125	2.4	OK	135						
422350A	Oakey_Ck Fairview	Oakey Creek	8/12/1964	407	OK	125	860	OK	125				340	OK	125									
422350A	Oakey_Ck Fairview	Oakey Creek	10/05/1965	407	OK	125							284	OK	125									
422350A	Oakey_Ck Fairview	Oakey Creek	21/10/1965	381	OK	125							272	OK	125									
422350A	Oakey_Ck Fairview	Oakey Creek	16/10/1980	471	OK	125	1040	OK	125	10	OK	125	448	OK	125	3	OK	135						
422350A	Oakey_Ck Fairview	Oakey Creek	29/01/1981	266	OK	125	502	OK	125	10	OK	125	199	OK	125	1	OK	135						
422350A	Oakey_Ck Fairview	Oakey Creek	8/02/1981	134	OK	125	200	OK	125	9000	OK	125	9	OK	125	4.5	OK	135						
422350A	Oakey_Ck Fairview	Oakey Creek	8/02/1981	84	OK	125	139	OK	125	900	OK	125	11	OK	125	3.5	OK	135						
422350A	Oakey_Ck Fairview	Oakey Creek	9/02/1981	64	OK	125	125	OK	125	500	OK	125	15	OK	125	4	OK	135						
422350A	Oakey_Ck Fairview	Oakey Creek	19/02/1981	214	OK	125	404	OK	125	250	OK	125	176	OK	125	3	OK	135						
422350A	Oakey_Ck Fairview	Oakey Creek	15/04/1981	180	OK	125	358	OK	125	10	OK	125	135	OK	125	5	OK	135						
422350A	Oakey_Ck Fairview	Oakey Creek	30/06/1981	352	OK	125	701	OK	125	10	OK	125	285	OK	125	31	OK	135						
422350A	Oakey_Ck Fairview	Oakey Creek	15/09/1981	322	OK	125	633	OK	125	20	OK	125	264	OK	125	16	OK	135						
422350A	Oakey_Ck Fairview	Oakey Creek	16/02/1982	357	OK	125	700	OK	125	10	OK	125	310	OK	125	3	OK	135						
422350A	Oakey_Ck Fairview	Oakey Creek	29/06/1982	450	OK	125	880	OK	125	10	OK	125	355	OK	125	34	OK	135						
422350A	Oakey_Ck Fairview	Oakey Creek	14/09/1982	391	OK	125	790	OK	125	9	OK	125	315	OK	125	32	OK	135						
422350A	Oakey_Ck Fairview	Oakey Creek	25/11/1982	473	OK	125	910	OK	125	20	OK	125	390	OK	125	1.8	OK	135						
422350A	Oakey_Ck Fairview	Oakey Creek	13/05/1983	123	OK	125	240	OK	125	30	OK	125	58	OK	125	5	OK	135						
422350A	Oakey_Ck Fairview	Oakey Creek	28/07/1983	423	OK	125	790	OK	125	10	OK	125	345	OK	125	24.5	OK	135						
422350A	Oakey_Ck Fairview	Oakey Creek	10/10/1983	484	OK	125	850	OK	125	10	OK	125	365	OK	125	16	OK	135						
422350A	Oakey_Ck Fairview	Oakey Creek	13/12/1983	364	OK	125	610	OK	125	20	OK	125	250	OK	125	6	OK	135						
422350A	Oakey_Ck Fairview	Oakey Creek	6/03/1984	324	OK	125	610	OK	125	10	OK	125	225	OK	125	15	OK	135						
422350A	Oakey_Ck Fairview	Oakey Creek	28/05/1984	440	OK	125	770	OK	125	5	OK	125	320	OK	125	11	OK	135						
422350A	Oakey_Ck Fairview	Oakey Creek	11/10/1984	497	OK	125	940	OK	125	10	OK	125	400	OK	125	13	OK	135						
422350A	Oakey_Ck Fairview	Oakey Creek	9/01/1985	345	OK	125	660	OK	125	10	OK	125	290	OK	125	2.4	OK	135						
422350A	Oakey_Ck Fairview	Oakey Creek	24/07/1985	321	OK	125	580	OK	125	20	OK	125	240	OK	125	11	OK	135						
422350A	Oakey_Ck Fairview	Oakey Creek	21/10/1985	214	OK	125	510	OK	125	70	OK	125	180	OK	125	27	OK	135						
422350A	Oakey_Ck Fairview	Oakey Creek	7/01/1986	361	OK	125	740	OK	125	30	OK	125	305	OK	125	4.3	OK	135						
422350A	Oakey_Ck Fairview	Oakey Creek	2/04/1986	254	OK	125	470	OK	125	40	OK	125	165	OK	125	1.2	OK	135						
422350A	Oakey_Ck Fairview	Oakey Creek	1/07/1986	417	OK	125	860	OK	125	10	OK	125	385	OK	125	9.7	OK	135						
422350A	Oakey_Ck Fairview	Oakey Creek	8/10/1986	493	OK	125	980	OK	125	35	OK	125	395	OK	125	12.5	OK	135						
422350A	Oakey_Ck Fairview	Oakey Creek	15/01/1987	381	OK	125	890	OK	125	30	OK	125	375	OK	125	2.4	OK	135						
422350A	Oakey_Ck Fairview	Oakey Creek	2/04/1987	437	OK	125	1080	OK	125	24	OK	125	470	OK	125	0.7	OK	135						
422350A	Oakey_Ck Fairview	Oakey Creek	19/06/1987	146	OK	125	370	OK	125	30	OK	125	110	OK	125	4.3	OK	135						
422350A	Oakey_Ck Fairview	Oakey Creek	3/09/1987	267	OK	125	630	OK	125	24	OK	125	235	OK	125	24	OK	135						
422350A	Oakey_Ck Fairview	Oakey Creek	5/11/1987	150	OK	125	300	OK	125	70	OK	125	81	OK	125	6	OK	135						

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				Hardness as CaCO3 (mg/L)			Total Diss. Solids (mg/L)			Total Suspended Solids			Chloride as Cl (mg/L)			Nitrate as NO3(mg/L)			Nitrate + nitrite as N - soluble (mg/L)			Total Nitrogen (mg/L)		
422350A	Oakey_Ck Fairview	Oakey Creek	8/03/1988	313	OK	125	650	OK	125	43	OK	125	250	OK	125	15.5	OK	135						
422350A	Oakey_Ck Fairview	Oakey Creek	25/05/1988	398	OK	125	800	OK	125	41	OK	125	330	OK	125	31	OK	135						
422350A	Oakey_Ck Fairview	Oakey Creek	4/08/1988	346	OK	125	630	OK	125	14	OK	125	265	OK	125	9.9	OK	135						
422350A	Oakey_Ck Fairview	Oakey Creek	10/11/1988	499	OK	125	970	OK	125	27	OK	125	430	OK	125	7.2	OK	135						
422350A	Oakey_Ck Fairview	Oakey Creek	26/01/1989	269	OK	125	490	OK	125	45	OK	125	170	OK	125	17	OK	135						
422350A	Oakey_Ck Fairview	Oakey Creek	6/09/1989	460	OK	125	870	OK	125	20	OK	125	395	OK	125	20	OK	135						
422350A	Oakey_Ck Fairview	Oakey Creek	7/12/1989	137	OK	125	222	OK	125	1772	OK	125	48.3	OK	125	9.4	OK	135						
422350A	Oakey_Ck Fairview	Oakey Creek	23/03/1990	289	OK	125	504	OK	125	58	OK	125	174	OK	125	0.9	OK	135						
422350A	Oakey_Ck Fairview	Oakey Creek	3/07/1990	386	OK	125	762	OK	125	11	OK	125	309	OK	125	28.8	OK	135						
422350A	Oakey_Ck Fairview	Oakey Creek	16/10/1990	412	OK	125	822	OK	125	30	OK	125	337.1	OK	125	8.8	OK	135						
422350A	Oakey_Ck Fairview	Oakey Creek	12/10/1992	292	OK	125	616	OK	125	39	OK	125	240.3	OK	125	5.8	OK	135						
422350A	Oakey_Ck Fairview	Oakey Creek	9/06/1993	203	OK	125	587	OK	125	45	OK	125	192.5	OK	125	7.6	OK	135						
422350A	Oakey_Ck Fairview	Oakey Creek	15/03/1994																					
422350A	Oakey_Ck Fairview	Oakey Creek	15/03/1994	164	OK	125	341	OK	125	112	OK	125	90.7	OK	125	12	OK	135						
422350A	Oakey_Ck Fairview	Oakey Creek	14/07/1994	356	OK	125	914	OK	125	44	OK	125	340.7	OK	125	17.7	OK	135						
422350A	Oakey_Ck Fairview	Oakey Creek	20/07/1994	374	OK	125	996	OK	125	51	OK	125	365.2	OK	125	26.5	OK	135						
422350A	Oakey_Ck Fairview	Oakey Creek	8/12/1994	419.14	OK	130	1573.59	OK	130	37	OK	130	694.4	OK	130	3.45	OK	130						
422350A	Oakey_Ck Fairview	Oakey Creek	28/03/1995																					
422350A	Oakey_Ck Fairview	Oakey Creek	28/03/1995	161.52	OK	130	330.76	OK	130	70	OK	130	78.19	OK	130	1.91	OK	130						
422350A	Oakey_Ck Fairview	Oakey Creek	5/05/1995	273.26	OK	130	684.48	OK	130	33	OK	130	231.4	OK	130	1.3	OK	130						
422350A	Oakey_Ck Fairview	Oakey Creek	14/08/1995	287.19	OK	130	876.32	OK	130	47	OK	130	294.1	OK	130	0	ND	130						
422350A	Oakey_Ck Fairview	Oakey Creek	18/08/1995																					
422350A	Oakey_Ck Fairview	Oakey Creek	7/09/1995																					
422350A	Oakey_Ck Fairview	Oakey Creek	13/09/1995																					
422350A	Oakey_Ck Fairview	Oakey Creek	20/09/1995																					
422350A	Oakey_Ck Fairview	Oakey Creek	4/11/1995	324.67	OK	130	989.15	OK	130	45	OK	130	353.8	OK	130	1.04	OK	130						
422350A	Oakey_Ck Fairview	Oakey Creek	12/12/1995																					
422350A	Oakey_Ck Fairview	Oakey Creek	6/02/1996																					
422350A	Oakey_Ck Fairview	Oakey Creek	28/05/1996																					
422350A	Oakey_Ck Fairview	Oakey Creek	29/05/1996																					
422350A	Oakey_Ck Fairview	Oakey Creek	13/06/1996																					
422350A	Oakey_Ck Fairview	Oakey Creek	20/06/1996																					
422350A	Oakey_Ck Fairview	Oakey Creek	16/09/1996																					
422350A	Oakey_Ck Fairview	Oakey Creek	16/09/1996																					
422350A	Oakey_Ck Fairview	Oakey Creek	7/10/1996																					
422350A	Oakey_Ck Fairview	Oakey Creek	31/10/1996																					
422350A	Oakey_Ck Fairview	Oakey Creek	18/11/1996	351.52	OK	130	788.3	OK	130	31	OK	130	300.3	OK	130	11.7	OK	130						
422350A	Oakey_Ck Fairview	Oakey Creek	7/01/1997	269.73	OK	130	540.37	OK	130	35	OK	130	178.37	OK	130	11.88	OK	130						
422350A	Oakey_Ck Fairview	Oakey Creek	25/03/1997																					
422350A	Oakey_Ck Fairview	Oakey Creek	23/04/1997	334.81	OK	130	721.13	OK	130	39	OK	130	259.46	OK	130	0	ND	130						
422350A	Oakey_Ck Fairview	Oakey Creek	29/05/1997																					
422350A	Oakey_Ck Fairview	Oakey Creek	21/07/1997	342.3	OK	130	878.05	OK	130	29	OK	130	314.64	OK	130	46.22	OK	130						
422350A	Oakey_Ck Fairview	Oakey Creek	25/09/1997																					
422350A	Oakey_Ck Fairview	Oakey Creek	13/11/1997																					
422350A	Oakey_Ck Fairview	Oakey Creek	24/11/1997	203.32	OK	130	417.92	OK	130	70	OK	130	119.24	OK	130	6.48	OK	130						
422350A	Oakey_Ck Fairview	Oakey Creek	28/04/1998																					
422350A	Oakey_Ck Fairview	Oakey Creek	21/05/1998	80.45	OK	130	191.5	OK	130	240	OK	130	35.17	OK	130	4.04	OK	130				2.0533	OK	130
422350A	Oakey_Ck Fairview	Oakey Creek	7/10/1998	214.81	OK	130	501.26	OK	130	55	OK	130	155.88	OK	130	17.41	OK	130				4.6646	OK	130
422350A	Oakey_Ck Fairview	Oakey Creek	19/11/1998	304.35	OK	130	773.87	OK	130	38	OK	130	283	OK	130	2.22	OK	130				1.2678	OK	130
422350A	Oakey_Ck Fairview	Oakey Creek	18/02/1999	200.21	OK	130	394.4	OK	130	98	OK	130	160.18	OK	130	3.37	OK	130				1.3152	OK	130
422350A	Oakey_Ck Fairview	Oakey Creek	22/03/1999																					
422350A	Oakey_Ck Fairview	Oakey Creek	16/06/1999	325.78	OK	130	746.86	OK	130	37	OK	130	274.06	OK	130	9.22	OK	130				2.6845	OK	130
422350A	Oakey_Ck Fairview	Oakey Creek	29/06/1999																					
422350A	Oakey_Ck Fairview	Oakey Creek	1/09/1999	323.95	OK	130	765.58	OK	130	39	OK	130	284.78	OK	130	14.32	OK	130				3.877	OK	130
422350A	Oakey_Ck Fairview	Oakey Creek	1/09/1999																					

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Station	Station Name	Receiving Creek/ River	Date	V2132.00	F2132.00	Q2132.00	V2169.00	F2169.00	Q2169.00	V2172.00	F2172.00	Q2172.00	V2311.00	F2311.00	Q2311.00	V2331.00	F2331.00	Q2331.00	V2343.00	F2343.00	Q2343.00	V2337.00	F2337.00	Q2337.00	
				Hardness as CaCO3 (mg/L)			Total Diss. Solids (mg/L)			Total Suspended Solids			Chloride as Cl (mg/L)			Nitrate as NO3(mg/L)			Nitrate + nitrite as N - soluble (mg/L)			Total Nitrogen (mg/L)			
422350A	Oakey_Ck Fairview	Oakey Creek	27/01/2000																						
422350A	Oakey_Ck Fairview	Oakey Creek	27/01/2000	202.62	OK	130	368.89	OK	130	67	OK	130	107.82	OK	130	2.23	OK	130					0.8421	OK	130
422350A	Oakey_Ck Fairview	Oakey Creek	2/02/2000																						
422350A	Oakey_Ck Fairview	Oakey Creek	21/02/2000	204.48	OK	130	429.74	OK	130	50	OK	130	145.73	OK	130	1.84	OK	130					0.8831	OK	130
422350A	Oakey_Ck Fairview	Oakey Creek	19/06/2000	215	OK	130	550	OK	130	60	OK	130	180	OK	130	11.5	OK	130					3.3901	OK	130
422350A	Oakey_Ck Fairview	Oakey Creek	24/08/2000																						
422350A	Oakey_Ck Fairview	Oakey Creek	1/12/2000																						
422350A	Oakey_Ck Fairview	Oakey Creek	5/02/2001																			3.817	OK	130	
422350A	Oakey_Ck Fairview	Oakey Creek	6/02/2001	115.45	OK	130	210.89	OK	130	784	OK	130	48.11	OK	130	5.73	OK	130	0.9113	OK	130		2.604	OK	130
422350A	Oakey_Ck Fairview	Oakey Creek	6/02/2001																						
422350A	Oakey_Ck Fairview	Oakey Creek	6/02/2001																			3.326	OK	130	
422350A	Oakey_Ck Fairview	Oakey Creek	8/02/2001																			2.2315	OK	130	
422350A	Oakey_Ck Fairview	Oakey Creek	17/04/2001																			1.2232	OK	130	
422350A	Oakey_Ck Fairview	Oakey Creek	29/05/2001	274.83	OK	130	723.37	OK	130	34	OK	130	246.16	OK	130	2.14	OK	130					1.1879	OK	130
422350A	Oakey_Ck Fairview	Oakey Creek	13/06/2001	173.43	OK	130	474.41	OK	130	21	OK	130	138.44	OK	130	6.59	OK	130					1.1483	OK	130
422350A	Oakey_Ck Fairview	Oakey Creek	12/07/2001																						
422350A	Oakey_Ck Fairview	Oakey Creek	20/08/2001																						
422350A	Oakey_Ck Fairview	Oakey Creek	15/10/2001	330.96	OK	130	917.67	OK	130	25	OK	130	337.48	OK	130	1.2	OK	130					1.2478	OK	130
422350A	Oakey_Ck Fairview	Oakey Creek	25/10/2001																						
422350A	Oakey_Ck Fairview	Oakey Creek	11/11/2001																			1.0363	OK	130	
422350A	Oakey_Ck Fairview	Oakey Creek	12/11/2001																			3.48	OK	130	
422350A	Oakey_Ck Fairview	Oakey Creek	13/11/2001																			2.436	OK	130	
422350A	Oakey_Ck Fairview	Oakey Creek	13/11/2001																						
422350A	Oakey_Ck Fairview	Oakey Creek	30/11/2001																						
422350A	Oakey_Ck Fairview	Oakey Creek	6/03/2002																						
422350A	Oakey_Ck Fairview	Oakey Creek	17/04/2002	113.84	OK	130	301.94	OK	130	67	OK	130	72.35	OK	130	1.55	OK	130					0.9441	OK	130
422350A	Oakey_Ck Fairview	Oakey Creek	15/05/2002	157.56	OK	130	325.97	OK	130	32	OK	130	80.62	OK	130	0.28	OK	130					0.5404	OK	130
422350A	Oakey_Ck Fairview	Oakey Creek	27/06/2002																						
422350A	Oakey_Ck Fairview	Oakey Creek	3/10/2002																						
422350A	Oakey_Ck Fairview	Oakey Creek	7/10/2002	417.24	OK	130	1084.34	OK	130	28	OK	130	403.02	OK	130	1.11	OK	130					1.3396	OK	130
422350A	Oakey_Ck Fairview	Oakey Creek	12/05/2003	116.73	OK	130	356.34	OK	130	50	OK	130	92.12	OK	130	1.78	OK	130					1.4276	OK	130
422350A	Oakey_Ck Fairview	Oakey Creek	12/10/2003	335	OK	130	1080	OK	130	30	OK	130	370	OK	130	1.2	OK	130					1.3	OK	130
422350A	Oakey_Ck Fairview	Oakey Creek	8/12/2003	110	OK	130	360	OK	130	400	OK	130	105	OK	130	2.6	OK	130					1.7	OK	130
422350A	Oakey_Ck Fairview	Oakey Creek	9/12/2003	94	OK	130	310	OK	130	220	OK	130	81	OK	130	7	OK	130					2.3	OK	130
422350A	Oakey_Ck Fairview	Oakey Creek	11/03/2004	105	OK	130	210	OK	130	210	OK	130	36	OK	130	6.2	OK	130					2.3	OK	130
422350A	Oakey_Ck Fairview	Oakey Creek	26/11/2004	147	OK	130	795	OK	130	62	OK	130	263	OK	130	2.7	OK	130					1.471	OK	130
422350A	Oakey_Ck Fairview	Oakey Creek	25/01/2005	147	OK	130	419	OK	130	38	OK	130	111	OK	130	1.2	OK	130					1.1	OK	130
422350A	Oakey_Ck Fairview	Oakey Creek	20/12/2005	143	OK	130	345	OK	130	48	OK	130	69	OK	130	2.1	OK	130					1.267	OK	10
422350A	Oakey_Ck Fairview	Oakey Creek	15/03/2006	192	OK	130	449	OK	130	30	OK	130	111	OK	130	0.5	<	130					1.1929	OK	130
422350A	Oakey_Ck Fairview	Oakey Creek	15/08/2006	358	OK	131	1110	OK	131	38	OK	131	347	OK	131	2	OK	131					1.1509	OK	10
422350A	Oakey_Ck Fairview	Oakey Creek	16/09/2009																						

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Station	Station Name	Receiving Creek/ River	Date	V2345.00	F2345.00	Q2345.00	V2351.50	F2351.50	Q2351.50	DO & Temp	F2351.50	Q2351.50	V2363.00	F2363.00	Q2363.00	V2401.00	F2401.00	Q2401.00	V2551.00	F2551.00	Q2551.00	V2574.00	F2574.00	Q2574.00
				Ammonia as N - soluble (mg/L)			Oxygen (Dissolved) (mg/L)FLD			DO (% saturation)			Total Phosphorus as P (mg/L)			Sulphate as SO4 (mg/L)			Boron as B (mg/L)			Cadmium as Cd total (ug/L)		
422314A	Condamine_R Range Br	Condamine River	24/09/1963																					
422314A	Condamine_R Range Br	Condamine River	28/04/1964													4	OK	125						
422314A	Condamine_R Range Br	Condamine River	21/07/1964													9	OK	125						
422314A	Condamine_R Range Br	Condamine River	8/12/1964													2	OK	125						
422314A	Condamine_R Range Br	Condamine River	14/09/1965													12	OK	125						
422314A	Condamine_R Range Br	Condamine River	8/08/1996													12.44	OK	130	0.1	OK	130			
422314A	Condamine_R Range Br	Condamine River	4/03/1997										0.5535	OK	130	2.8	OK	130	0	ND	130			
422314A	Condamine_R Range Br	Condamine River	22/05/1997										0.1769	OK	130	4	OK	130	0	ND	130			
422314A	Condamine_R Range Br	Condamine River	20/11/1997										0.4506	OK	130	6.19	OK	130	0.1	OK	130			
422314A	Condamine_R Range Br	Condamine River	18/02/1998										0.9833	OK	130	5.17	OK	130	0.1	OK	130			
422314A	Condamine_R Range Br	Condamine River	28/05/1998										0.7349	OK	130	6.88	OK	130	0.1	OK	130			
422314A	Condamine_R Range Br	Condamine River	16/03/2001	0.0026	OK	130							0.3145	OK	130	4.6	OK	130	0.06	OK	130			
422314A	Condamine_R Range Br	Condamine River	8/11/2001	0.002	OK	130							0.1414	OK	130	10.19	OK	130	0.09	OK	130			
422316A	Condamine_R Cecil Wr	Condamine River	27/05/1963																					
422316A	Condamine_R Cecil Wr	Condamine River	18/06/1963													18	OK	125						
422316A	Condamine_R Cecil Wr	Condamine River	1/08/1963																					
422316A	Condamine_R Cecil Wr	Condamine River	25/09/1963													2	OK	125						
422316A	Condamine_R Cecil Wr	Condamine River	17/12/1964																					
422316A	Condamine_R Cecil Wr	Condamine River	31/10/1965													8	OK	125						
422316A	Condamine_R Cecil Wr	Condamine River	1/06/1971																					
422316A	Condamine_R Cecil Wr	Condamine River	1/06/1971																					
422316A	Condamine_R Cecil Wr	Condamine River	20/07/1971													1	OK	125						
422316A	Condamine_R Cecil Wr	Condamine River	1/09/1971													3	OK	125						
422316A	Condamine_R Cecil Wr	Condamine River	18/10/1971													8	OK	125						
422316A	Condamine_R Cecil Wr	Condamine River	1/04/1972													3	OK	125						
422316A	Condamine_R Cecil Wr	Condamine River	30/06/1972																					
422316A	Condamine_R Cecil Wr	Condamine River	23/08/1972													2	OK	125						
422316A	Condamine_R Cecil Wr	Condamine River	30/09/1972																					
422316A	Condamine_R Cecil Wr	Condamine River	31/12/1972													1	OK	125						
422316A	Condamine_R Cecil Wr	Condamine River	21/01/1973																					
422316A	Condamine_R Cecil Wr	Condamine River	20/03/1973													3	OK	125						
422316A	Condamine_R Cecil Wr	Condamine River	20/03/1973																					
422316A	Condamine_R Cecil Wr	Condamine River	2/04/1973																					
422316A	Condamine_R Cecil Wr	Condamine River	9/05/1973																		0.04	OK	135	
422316A	Condamine_R Cecil Wr	Condamine River	19/06/1973																		0.03	OK	135	
422316A	Condamine_R Cecil Wr	Condamine River	19/06/1973																		0.04	OK	135	
422316A	Condamine_R Cecil Wr	Condamine River	19/06/1973																					
422316A	Condamine_R Cecil Wr	Condamine River	1/07/1973																		0.01	OK	135	
422316A	Condamine_R Cecil Wr	Condamine River	25/07/1973																		0.05	OK	135	
422316A	Condamine_R Cecil Wr	Condamine River	25/07/1973																					
422316A	Condamine_R Cecil Wr	Condamine River	31/10/1973																					
422316A	Condamine_R Cecil Wr	Condamine River	31/10/1973																					
422316A	Condamine_R Cecil Wr	Condamine River	17/12/1973																					
422316A	Condamine_R Cecil Wr	Condamine River	23/01/1974																					
422316A	Condamine_R Cecil Wr	Condamine River	27/03/1974																					
422316A	Condamine_R Cecil Wr	Condamine River	27/03/1974																					
422316A	Condamine_R Cecil Wr	Condamine River	1/07/1974																					
422316A	Condamine_R Cecil Wr	Condamine River	17/09/1974																					
422316A	Condamine_R Cecil Wr	Condamine River	17/09/1974																					
422316A	Condamine_R Cecil Wr	Condamine River	3/12/1974																					
422316A	Condamine_R Cecil Wr	Condamine River	14/10/1975													5.7	OK	125						
422316A	Condamine_R Cecil Wr	Condamine River	10/12/1975													2	OK	125						
422316A	Condamine_R Cecil Wr	Condamine River	29/01/1976													6	OK	125						
422316A	Condamine_R Cecil Wr	Condamine River	12/05/1976																					
422316A	Condamine_R Cecil Wr	Condamine River	12/05/1976																					
422316A	Condamine_R Cecil Wr	Condamine River	30/06/1976													10	OK	125						

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Station	Station Name	Receiving Creek/ River	Date	V2345.00	F2345.00	Q2345.00	V2351.50	F2351.50	Q2351.50	DO & Temp	F2351.50	Q2351.50	V2363.00	F2363.00	Q2363.00	V2401.00	F2401.00	Q2401.00	V2551.00	F2551.00	Q2551.00	V2574.00	F2574.00	Q2574.00
				Ammonia as N - soluble (mg/L)			Oxygen (Dissolved) (mg/L)FLD			DO (% saturation)			Total Phosphorus as P (mg/L)			Sulphate as SO4 (mg/L)			Boron as B (mg/L)			Cadmium as Cd total (ug/L)		
422316A	Condamine_R Cecil Wr	Condamine River	25/08/1976																					
422316A	Condamine_R Cecil Wr	Condamine River	30/09/1976													5	OK	125						
422316A	Condamine_R Cecil Wr	Condamine River	3/11/1977																					
422316A	Condamine_R Cecil Wr	Condamine River	14/03/1978																					
422316A	Condamine_R Cecil Wr	Condamine River	25/04/1978													6	OK	125						
422316A	Condamine_R Cecil Wr	Condamine River	27/07/1978													12	OK	125						
422316A	Condamine_R Cecil Wr	Condamine River	11/10/1978													7	OK	125						
422316A	Condamine_R Cecil Wr	Condamine River	14/02/1979													3.5	OK	125						
422316A	Condamine_R Cecil Wr	Condamine River	14/02/1979																					
422316A	Condamine_R Cecil Wr	Condamine River	11/07/1979													4.5	OK	125						
422316A	Condamine_R Cecil Wr	Condamine River	11/07/1979																					
422316A	Condamine_R Cecil Wr	Condamine River	3/09/1979													2	OK	125						
422316A	Condamine_R Cecil Wr	Condamine River	12/09/1979													2	OK	125						
422316A	Condamine_R Cecil Wr	Condamine River	12/09/1979																					
422316A	Condamine_R Cecil Wr	Condamine River	30/01/1980													5	OK	125						
422316A	Condamine_R Cecil Wr	Condamine River	30/01/1980																					
422316A	Condamine_R Cecil Wr	Condamine River	31/01/1980													2	OK	135						
422316A	Condamine_R Cecil Wr	Condamine River	2/07/1980													6	OK	125						
422316A	Condamine_R Cecil Wr	Condamine River	2/07/1980																					
422316A	Condamine_R Cecil Wr	Condamine River	1/07/1981													3	OK	125						
422316A	Condamine_R Cecil Wr	Condamine River	1/07/1981																					
422316A	Condamine_R Cecil Wr	Condamine River	8/07/1982													2	OK	125						
422316A	Condamine_R Cecil Wr	Condamine River	28/09/1982													1	OK	125						
422316A	Condamine_R Cecil Wr	Condamine River	28/07/1983													2.5	OK	125						
422316A	Condamine_R Cecil Wr	Condamine River	29/05/1984													4.1	OK	125						
422316A	Condamine_R Cecil Wr	Condamine River	29/05/1984																					
422316A	Condamine_R Cecil Wr	Condamine River	9/01/1985													9.7	OK	125	0.03	OK	135			
422316A	Condamine_R Cecil Wr	Condamine River	9/01/1985																					
422316A	Condamine_R Cecil Wr	Condamine River	14/05/1985													3.3	OK	125	0.02	OK	135			
422316A	Condamine_R Cecil Wr	Condamine River	14/05/1985																					
422316A	Condamine_R Cecil Wr	Condamine River	22/10/1985													4.8	OK	125	0.03	OK	135			
422316A	Condamine_R Cecil Wr	Condamine River	22/10/1985																					
422316A	Condamine_R Cecil Wr	Condamine River	8/10/1986													4.3	OK	125	0.03	OK	135			
422316A	Condamine_R Cecil Wr	Condamine River	8/10/1986																					
422316A	Condamine_R Cecil Wr	Condamine River	14/01/1987													4.6	OK	125	0.03	OK	135			
422316A	Condamine_R Cecil Wr	Condamine River	14/01/1987																					
422316A	Condamine_R Cecil Wr	Condamine River	2/04/1987													4.8	OK	125	0.04	OK	135			
422316A	Condamine_R Cecil Wr	Condamine River	2/04/1987																					
422316A	Condamine_R Cecil Wr	Condamine River	18/06/1987													4.6	OK	125	0.03	OK	135			
422316A	Condamine_R Cecil Wr	Condamine River	18/06/1987																					
422316A	Condamine_R Cecil Wr	Condamine River	3/09/1987													4.6	OK	125						
422316A	Condamine_R Cecil Wr	Condamine River	3/09/1987																					
422316A	Condamine_R Cecil Wr	Condamine River	5/11/1987													4.4	OK	125	0.03	OK	135			
422316A	Condamine_R Cecil Wr	Condamine River	5/11/1987																					
422316A	Condamine_R Cecil Wr	Condamine River	6/04/1988																					
422316A	Condamine_R Cecil Wr	Condamine River	23/05/1988													8.3	OK	135	0.03	OK	135			
422316A	Condamine_R Cecil Wr	Condamine River	24/05/1988													4.1	OK	125	0.01	OK	135			
422316A	Condamine_R Cecil Wr	Condamine River	24/05/1988																					
422316A	Condamine_R Cecil Wr	Condamine River	4/08/1988													4.2	OK	125	0.01	OK	135			
422316A	Condamine_R Cecil Wr	Condamine River	4/08/1988																					
422316A	Condamine_R Cecil Wr	Condamine River	10/11/1988													4.4	OK	125	0.02	OK	135			
422316A	Condamine_R Cecil Wr	Condamine River	10/11/1988																					
422316A	Condamine_R Cecil Wr	Condamine River	26/01/1989																0.02	OK	135			
422316A	Condamine_R Cecil Wr	Condamine River	26/01/1989																					
422316A	Condamine_R Cecil Wr	Condamine River	22/08/1989													4.9	OK	125	0.05	OK	135			

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Station	Station Name	Receiving Creek/ River	Date	V2345.00	F2345.00	Q2345.00	V2351.50	F2351.50	Q2351.50	DO & Temp	F2351.50	Q2351.50	V2363.00	F2363.00	Q2363.00	V2401.00	F2401.00	Q2401.00	V2551.00	F2551.00	Q2551.00	V2574.00	F2574.00	Q2574.00
				Ammonia as N - soluble (mg/L)			Oxygen (Dissolved) (mg/L)FLD			DO (% saturation)			Total Phosphorus as P (mg/L)			Sulphate as SO4 (mg/L)			Boron as B (mg/L)			Cadmium as Cd total (ug/L)		
422316A	Condamine_R Cecil Wr	Condamine River	22/08/1989																					
422316A	Condamine_R Cecil Wr	Condamine River	28/03/1990													4.9	OK	125	0.03	OK	135			
422316A	Condamine_R Cecil Wr	Condamine River	28/03/1990																					
422316A	Condamine_R Cecil Wr	Condamine River	3/07/1990													5.8	OK	125	0.02	OK	135			
422316A	Condamine_R Cecil Wr	Condamine River	3/07/1990																					
422316A	Condamine_R Cecil Wr	Condamine River	17/10/1990													4.2	OK	125	0.02	OK	135			
422316A	Condamine_R Cecil Wr	Condamine River	17/10/1990																					
422316A	Condamine_R Cecil Wr	Condamine River	25/02/1992													2.7	OK	125						
422316A	Condamine_R Cecil Wr	Condamine River	25/02/1992																					
422316A	Condamine_R Cecil Wr	Condamine River	2/07/1992													3.8	OK	125						
422316A	Condamine_R Cecil Wr	Condamine River	2/07/1992																					
422316A	Condamine_R Cecil Wr	Condamine River	21/10/1992													3.4	OK	125						
422316A	Condamine_R Cecil Wr	Condamine River	21/10/1992																					
422316A	Condamine_R Cecil Wr	Condamine River	8/03/1994													1.4	OK	135						
422316A	Condamine_R Cecil Wr	Condamine River	8/03/1994																					
422316A	Condamine_R Cecil Wr	Condamine River	12/04/1994													4.3	OK	125						
422316A	Condamine_R Cecil Wr	Condamine River	16/05/1994													4.5	OK	125						
422316A	Condamine_R Cecil Wr	Condamine River	15/06/1994													5.1	OK	125						
422316A	Condamine_R Cecil Wr	Condamine River	12/07/1994													4.3	OK	125						
422316A	Condamine_R Cecil Wr	Condamine River	14/07/1994																					
422316A	Condamine_R Cecil Wr	Condamine River	15/08/1994													4.3	OK	125						
422316A	Condamine_R Cecil Wr	Condamine River	15/08/1994																					
422316A	Condamine_R Cecil Wr	Condamine River	20/09/1994													3.9	OK	125						
422316A	Condamine_R Cecil Wr	Condamine River	20/09/1994																					
422316A	Condamine_R Cecil Wr	Condamine River	11/10/1994													3.5	OK	125						
422316A	Condamine_R Cecil Wr	Condamine River	11/10/1994																					
422316A	Condamine_R Cecil Wr	Condamine River	28/11/1994	0.0311	OK	130							0.0434	OK	130	2.81	OK	130	0	ND	130	0.8	OK	130
422316A	Condamine_R Cecil Wr	Condamine River	10/01/1995	0.0331	OK	130							0.0619	OK	130	2.63	OK	130	0	ND	130			
422316A	Condamine_R Cecil Wr	Condamine River	15/02/1995	0.0325	OK	130							0.45	OK	130	1.86	OK	130	0	ND	130			
422316A	Condamine_R Cecil Wr	Condamine River	21/03/1995	0.0705	OK	130							0.3737	OK	130	3.6	OK	130	0	ND	130	0	ND	130
422316A	Condamine_R Cecil Wr	Condamine River	11/04/1995	0.0792	OK	130	4.8	OK	130	56	OK	130	0.2116	OK	130	3.32	OK	130	0	ND	130			
422316A	Condamine_R Cecil Wr	Condamine River	24/05/1995	0.0294	OK	130	5	OK	130	56	OK	130	0.147	OK	130	3.72	OK	130	0	ND	130			
422316A	Condamine_R Cecil Wr	Condamine River	27/06/1995	0.0744	OK	130	5.6	OK	130	55	OK	130	0.0408	OK	130	3.4	OK	130	0	ND	130	0.5	OK	130
422316A	Condamine_R Cecil Wr	Condamine River	26/07/1995				6	OK	130	57	OK	130												
422316A	Condamine_R Cecil Wr	Condamine River	13/08/1995																					
422316A	Condamine_R Cecil Wr	Condamine River	30/08/1995				8.1	OK	130	90	OK	130												
422316A	Condamine_R Cecil Wr	Condamine River	25/09/1995	0.0321	OK	130	7.7	OK	130	91	OK	130	0.0518	OK	130	2.3	OK	130	0.1	OK	130	0.1	OK	130
422316A	Condamine_R Cecil Wr	Condamine River	26/09/1995													0	ND	130	0	ND	130			
422316A	Condamine_R Cecil Wr	Condamine River	17/10/1995	0.0757	OK	130	4.9	OK	130	57	OK	130	0.032	OK	130	2.5	OK	130	0	ND	130			
422316A	Condamine_R Cecil Wr	Condamine River	11/12/1995													5.39	OK	130	0	ND	130			
422316A	Condamine_R Cecil Wr	Condamine River	20/12/1995	0.0413	OK	130	5	OK	130	65	OK	130	0.7176	OK	130	1.7	OK	130	0	ND	130			
422316A	Condamine_R Cecil Wr	Condamine River	30/01/1996	0.089	OK	130	4.8	OK	130	63	OK	130	1.2333	OK	130	2.82	OK	130	0	ND	130			
422316A	Condamine_R Cecil Wr	Condamine River	5/02/1996																					
422316A	Condamine_R Cecil Wr	Condamine River	28/02/1996	0.0286	OK	130	3.4	OK	130	42	OK	130	0.259	OK	130	3.13	OK	130	0	ND	130			
422316A	Condamine_R Cecil Wr	Condamine River	27/03/1996	0.0429	OK	130	6.7	OK	130	82	OK	130	0.2937	OK	130									
422316A	Condamine_R Cecil Wr	Condamine River	28/05/1996				9.6	OK	130	101	OK	130	0.1984	OK	130	4.8	OK	130	0	ND	130			
422316A	Condamine_R Cecil Wr	Condamine River	19/06/1996	0.0178	OK	130	8.3	OK	130	85	OK	130	0.0952	OK	130	5.87	OK	130	0	ND	130			
422316A	Condamine_R Cecil Wr	Condamine River	25/07/1996	0.05	OK	130	8.5	OK	130	80	OK	130	0.038	OK	130	6.23	OK	130	0	ND	130			
422316A	Condamine_R Cecil Wr	Condamine River	17/09/1996																					
422316A	Condamine_R Cecil Wr	Condamine River	17/09/1996	0.0286	OK	130	11.9	OK	130	126	OK	130	0.2313	OK	130									
422316A	Condamine_R Cecil Wr	Condamine River	3/12/1996																					
422316A	Condamine_R Cecil Wr	Condamine River	3/12/1996	0.0267	OK	130							0.1613	OK	130	4.6	OK	130	0	ND	130			
422316A	Condamine_R Cecil Wr	Condamine River	11/02/1997	0.0627	OK	130	9.6	OK	130	130	OK	130	0.0642	OK	130	4.58	OK	130	0	ND	130			
422316A	Condamine_R Cecil Wr	Condamine River	25/03/1997																					
422316A	Condamine_R Cecil Wr	Condamine River	24/04/1997																					

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Station	Station Name	Receiving Creek/ River	Date	V2345.00	F2345.00	Q2345.00	V2351.50	F2351.50	Q2351.50	DO & Temp	F2351.50	Q2351.50	V2363.00	F2363.00	Q2363.00	V2401.00	F2401.00	Q2401.00	V2551.00	F2551.00	Q2551.00	V2574.00	F2574.00	Q2574.00
				Ammonia as N - soluble (mg/L)			Oxygen (Dissolved) (mg/L)FLD			DO (% saturation)			Total Phosphorus as P (mg/L)			Sulphate as SO4 (mg/L)			Boron as B (mg/L)			Cadmium as Cd total (ug/L)		
422316A	Condamine_R Cecil Wr	Condamine River	24/04/1997							3.2	OK	130												
422316A	Condamine_R Cecil Wr	Condamine River	29/05/1997																					
422316A	Condamine_R Cecil Wr	Condamine River	20/06/1997							8.2	OK	130	0.1081	OK	130	1.43	OK	130						
422316A	Condamine_R Cecil Wr	Condamine River	22/07/1997							9.3	OK	130												
422316A	Condamine_R Cecil Wr	Condamine River	25/09/1997																					
422316A	Condamine_R Cecil Wr	Condamine River	25/09/1997																					
422316A	Condamine_R Cecil Wr	Condamine River	25/11/1997																					
422316A	Condamine_R Cecil Wr	Condamine River	25/11/1997							8.3	OK	130												
422316A	Condamine_R Cecil Wr	Condamine River	25/11/1997	0.03	OK	130							0.2732	OK	130	4.92	OK	130	0	ND	130			
422316A	Condamine_R Cecil Wr	Condamine River	28/04/1998																					
422316A	Condamine_R Cecil Wr	Condamine River	7/10/1998	0.0047	OK	130							0.2509	OK	130	5.5	OK	130	0	ND	130			
422316A	Condamine_R Cecil Wr	Condamine River	18/02/1999	0.027	OK	130				6.6	OK	130	0.381	OK	130	2.05	OK	130	0	ND	130			
422316A	Condamine_R Cecil Wr	Condamine River	19/03/1999																					
422316A	Condamine_R Cecil Wr	Condamine River	16/06/1999	0.0445	OK	130				7.2	OK	130	0.1412	OK	130	3.28	OK	130	0	ND	130			
422316A	Condamine_R Cecil Wr	Condamine River	29/06/1999																					
422316A	Condamine_R Cecil Wr	Condamine River	29/06/1999																					
422316A	Condamine_R Cecil Wr	Condamine River	1/09/1999	0.0038	OK	130				8.3	OK	130	0.1268	OK	130	4.62	OK	130	0	ND	130			
422316A	Condamine_R Cecil Wr	Condamine River	12/11/1999																					
422316A	Condamine_R Cecil Wr	Condamine River	17/11/1999																					
422316A	Condamine_R Cecil Wr	Condamine River	14/01/2000																					
422316A	Condamine_R Cecil Wr	Condamine River	24/01/2000																					
422316A	Condamine_R Cecil Wr	Condamine River	27/01/2000																					
422316A	Condamine_R Cecil Wr	Condamine River	27/01/2000							10.4	OK	130	0.4363	OK	130	3.34	OK	130	0	ND	130			
422316A	Condamine_R Cecil Wr	Condamine River	21/02/2000	0.0462	OK	130				7.2	OK	130	0.3105	OK	130	3.41	OK	130	0	ND	130			
422316A	Condamine_R Cecil Wr	Condamine River	19/06/2000	0.0034	OK	130				7.4	OK	130	0.0612	OK	130	4	OK	130	0.1	<	130			
422316A	Condamine_R Cecil Wr	Condamine River	5/09/2000							9.4	OK	130												
422316A	Condamine_R Cecil Wr	Condamine River	21/12/2000																					
422316A	Condamine_R Cecil Wr	Condamine River	5/01/2001																					
422316A	Condamine_R Cecil Wr	Condamine River	5/01/2001																					
422316A	Condamine_R Cecil Wr	Condamine River	18/01/2001																					
422316A	Condamine_R Cecil Wr	Condamine River	25/01/2001										0.0914	OK	130									
422316A	Condamine_R Cecil Wr	Condamine River	1/02/2001																					
422316A	Condamine_R Cecil Wr	Condamine River	1/02/2001							4.5	OK	130	0.4995	OK	130	1.2	OK	130	0.08	OK	130			
422316A	Condamine_R Cecil Wr	Condamine River	6/02/2001										1.154	OK	130									
422316A	Condamine_R Cecil Wr	Condamine River	8/02/2001										0.6534	OK	130									
422316A	Condamine_R Cecil Wr	Condamine River	27/02/2001																					
422316A	Condamine_R Cecil Wr	Condamine River	17/03/2001	0.0378	OK	130							0.2397	OK	130	3.08	OK	130	0.03	OK	130			
422316A	Condamine_R Cecil Wr	Condamine River	20/03/2001																					
422316A	Condamine_R Cecil Wr	Condamine River	17/04/2001										0.2353	OK	130									
422316A	Condamine_R Cecil Wr	Condamine River	13/06/2001	0.0127	OK	130				2.3	OK	130	0.1318	OK	130	2.91	OK	130	0	ND	130			
422316A	Condamine_R Cecil Wr	Condamine River	11/07/2001							5.3	OK	130												
422316A	Condamine_R Cecil Wr	Condamine River	9/11/2001	0.0083	OK	130							0.0986	OK	130	3.14	OK	130	0.03	OK	130			
422316A	Condamine_R Cecil Wr	Condamine River	10/04/2002							1.8	OK	130												
422316A	Condamine_R Cecil Wr	Condamine River	17/04/2002	0.0085	OK	130							0.4028	OK	130	3.9	OK	130	0.14	OK	130			
422316A	Condamine_R Cecil Wr	Condamine River	26/09/2002							8.6	OK	130												
422316A	Condamine_R Cecil Wr	Condamine River	21/11/2002							6.5	OK	130												
422316A	Condamine_R Cecil Wr	Condamine River	8/05/2003							2.5	OK	130												
422316A	Condamine_R Cecil Wr	Condamine River	5/06/2003																					
422316A	Condamine_R Cecil Wr	Condamine River	6/11/2003																					
422316A	Condamine_R Cecil Wr	Condamine River	10/03/2004							3.9	OK	130	0.28	OK	130	3	OK	130	0.1	<	130			
422316A	Condamine_R Cecil Wr	Condamine River	11/03/2004	0.015	OK	130				5.5	OK	130	0.86	OK	130	3	<	130	0.1	<	130			
422316A	Condamine_R Cecil Wr	Condamine River	20/12/2005							1.4	OK	130	0.429	OK	10	2	OK	130	0.05	OK	130			
422316A	Condamine_R Cecil Wr	Condamine River	15/03/2006							8.2	OK	130	0.3191	OK	130	3.2	OK	130	0.07	OK	130			
422316A	Condamine_R Cecil Wr	Condamine River	29/08/2006													4.7	OK	10	0.05	OK	10			
422316A	Condamine_R Cecil Wr	Condamine River	1/07/2009																					

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Station	Station Name	Receiving Creek/ River	Date	V2345.00	F2345.00	Q2345.00	V2351.50	F2351.50	Q2351.50	DO & Temp	F2351.50	Q2351.50	V2363.00	F2363.00	Q2363.00	V2401.00	F2401.00	Q2401.00	V2551.00	F2551.00	Q2551.00	V2574.00	F2574.00	Q2574.00
				Ammonia as N - soluble (mg/L)			Oxygen (Dissolved) (mg/L)FLD			DO (% saturation)			Total Phosphorus as P (mg/L)			Sulphate as SO4 (mg/L)			Boron as B (mg/L)			Cadmium as Cd total (ug/L)		
422322A	Rocky_Ck Pittsworth	Condamine River	26/09/1963													6	OK	125						
422322A	Rocky_Ck Pittsworth	Condamine River	30/08/1971													163	OK	125						
422322A	Rocky_Ck Pittsworth	Condamine River	5/05/1983													3.6	OK	135	0.03	OK	135			
422322A	Rocky_Ck Pittsworth	Condamine River	4/12/1996										6.1073	OK	130	13.86	OK	130	0.3	OK	130			
422322A	Rocky_Ck Pittsworth	Condamine River	4/12/1996										7.2218	OK	130	7.95	OK	130	0.2	OK	130			
422323A	Tummalville	Condamine River	11/03/1963													3	OK	125						
422323A	Tummalville	Condamine River	28/05/1963																					
422323A	Tummalville	Condamine River	1/08/1963													3	OK	125						
422323A	Tummalville	Condamine River	26/09/1963																					
422323A	Tummalville	Condamine River	31/10/1963													1	OK	125						
422323A	Tummalville	Condamine River	16/01/1964																					
422323A	Tummalville	Condamine River	11/03/1964													3	OK	125						
422323A	Tummalville	Condamine River	13/03/1964													4	OK	125						
422323A	Tummalville	Condamine River	17/07/1964													10	OK	125						
422323A	Tummalville	Condamine River	17/12/1964																					
422323A	Tummalville	Condamine River	26/03/1971																					
422323A	Tummalville	Condamine River	26/03/1971																					
422323A	Tummalville	Condamine River	1/06/1971																					
422323A	Tummalville	Condamine River	17/06/1971																					
422323A	Tummalville	Condamine River	21/07/1971													1	OK	125						
422323A	Tummalville	Condamine River	21/07/1971																					
422323A	Tummalville	Condamine River	1/09/1971													2	OK	125						
422323A	Tummalville	Condamine River	20/10/1971																					
422323A	Tummalville	Condamine River	16/12/1971													1	OK	125						
422323A	Tummalville	Condamine River	27/01/1972																					
422323A	Tummalville	Condamine River	15/03/1972																					
422323A	Tummalville	Condamine River	13/07/1972																					
422323A	Tummalville	Condamine River	8/09/1972																					
422323A	Tummalville	Condamine River	25/10/1972													3	OK	125						
422323A	Tummalville	Condamine River	7/12/1972																					
422323A	Tummalville	Condamine River	7/12/1972																					
422323A	Tummalville	Condamine River	9/01/1973																					
422323A	Tummalville	Condamine River	25/01/1973																					
422323A	Tummalville	Condamine River	4/05/1973																0.03	OK	135			
422323A	Tummalville	Condamine River	4/05/1973																					
422323A	Tummalville	Condamine River	19/06/1973																0.03	OK	135			
422323A	Tummalville	Condamine River	19/06/1973																					
422323A	Tummalville	Condamine River	25/07/1973																0.05	OK	135			
422323A	Tummalville	Condamine River	25/07/1973																					
422323A	Tummalville	Condamine River	19/08/1973																					
422323A	Tummalville	Condamine River	19/08/1973																					
422323A	Tummalville	Condamine River	31/10/1973																					
422323A	Tummalville	Condamine River	31/10/1973																					
422323A	Tummalville	Condamine River	20/12/1973																					
422323A	Tummalville	Condamine River	28/03/1974																					
422323A	Tummalville	Condamine River	29/08/1974																					
422323A	Tummalville	Condamine River	10/06/1975																					
422323A	Tummalville	Condamine River	14/10/1975																					
422323A	Tummalville	Condamine River	8/12/1975													1.2	OK	125						
422323A	Tummalville	Condamine River	11/12/1975													3	OK	125						
422323A	Tummalville	Condamine River	26/08/1976																					
422323A	Tummalville	Condamine River	9/02/1978													10	OK	125						
422323A	Tummalville	Condamine River	6/04/1978													4	OK	125						
422323A	Tummalville	Condamine River	16/02/1979													3	OK	125						
422323A	Tummalville	Condamine River	16/07/1979													5	OK	125						

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Station	Station Name	Receiving Creek/ River	Date	V2345.00	F2345.00	Q2345.00	V2351.50	F2351.50	Q2351.50	DO & Temp	F2351.50	Q2351.50	V2363.00	F2363.00	Q2363.00	V2401.00	F2401.00	Q2401.00	V2551.00	F2551.00	Q2551.00	V2574.00	F2574.00	Q2574.00	
				Ammonia as N - soluble (mg/L)			Oxygen (Dissolved) (mg/L)FLD			DO (% saturation)			Total Phosphorus as P (mg/L)			Sulphate as SO4 (mg/L)			Boron as B (mg/L)			Cadmium as Cd total (ug/L)			
422323A	Tummalville	Condamine River	16/07/1979																						
422323A	Tummalville	Condamine River	1/02/1980													5	OK	125							
422323A	Tummalville	Condamine River	1/02/1980																						
422323A	Tummalville	Condamine River	16/04/1980													6	OK	125							
422323A	Tummalville	Condamine River	16/04/1980																						
422323A	Tummalville	Condamine River	3/07/1980													5	OK	125							
422323A	Tummalville	Condamine River	3/07/1980																						
422323A	Tummalville	Condamine River	11/09/1980													6	OK	125							
422323A	Tummalville	Condamine River	8/04/1981													3	OK	125							
422323A	Tummalville	Condamine River	8/04/1981																						
422323A	Tummalville	Condamine River	2/07/1981													3	OK	125							
422323A	Tummalville	Condamine River	2/07/1981																						
422323A	Tummalville	Condamine River	15/09/1981													4	OK	125							
422323A	Tummalville	Condamine River	7/05/1982													3.5	OK	125							
422323A	Tummalville	Condamine River	30/06/1982													3	OK	125							
422323A	Tummalville	Condamine River	19/11/1982													4.2	OK	125							
422323A	Tummalville	Condamine River	19/11/1982																						
422323A	Tummalville	Condamine River	3/02/1983													2.9	OK	125							
422323A	Tummalville	Condamine River	3/02/1983																						
422323A	Tummalville	Condamine River	4/05/1983													2.4	OK	125	0.03	OK	135				
422323A	Tummalville	Condamine River	11/05/1983													8.4	OK	125	0.02	OK	135				
422323A	Tummalville	Condamine River	2/06/1983													2.7	OK	125	0.02	OK	135				
422323A	Tummalville	Condamine River	27/07/1983													6	OK	125	0.02	OK	135				
422323A	Tummalville	Condamine River	12/10/1983													5.4	OK	125	0.02	OK	135				
422323A	Tummalville	Condamine River	12/10/1983																						
422323A	Tummalville	Condamine River	16/12/1983													2	OK	125	0.02	OK	135				
422323A	Tummalville	Condamine River	16/12/1983																						
422323A	Tummalville	Condamine River	31/05/1984													3.6	OK	125	0.02	OK	135				
422323A	Tummalville	Condamine River	31/05/1984																						
422323A	Tummalville	Condamine River	11/10/1984													8.5	OK	125	0.03	OK	135				
422323A	Tummalville	Condamine River	11/10/1984																						
422323A	Tummalville	Condamine River	12/03/1985													7.4	OK	125	0.02	OK	135				
422323A	Tummalville	Condamine River	12/03/1985																						
422323A	Tummalville	Condamine River	14/05/1985													2.4	OK	125	0.01	OK	135				
422323A	Tummalville	Condamine River	14/05/1985																						
422323A	Tummalville	Condamine River	29/07/1985													4.4	OK	125	0.02	OK	135				
422323A	Tummalville	Condamine River	29/07/1985																						
422323A	Tummalville	Condamine River	22/10/1985													5.5	OK	125	0.03	OK	135				
422323A	Tummalville	Condamine River	22/10/1985																						
422323A	Tummalville	Condamine River	3/07/1986													7.6	OK	125	0.01	OK	135				
422323A	Tummalville	Condamine River	3/07/1986																						
422323A	Tummalville	Condamine River	7/10/1986													6.4	OK	125	0.02	OK	135				
422323A	Tummalville	Condamine River	7/10/1986																						
422323A	Tummalville	Condamine River	13/01/1987													5.4	OK	125	0.03	OK	135				
422323A	Tummalville	Condamine River	13/01/1987																						
422323A	Tummalville	Condamine River	2/04/1987													6.4	OK	125	0.05	OK	135				
422323A	Tummalville	Condamine River	2/04/1987																						
422323A	Tummalville	Condamine River	15/06/1987													4.1	OK	125	0.02	OK	135				
422323A	Tummalville	Condamine River	15/06/1987																						
422323A	Tummalville	Condamine River	2/09/1987													3.2	OK	125							
422323A	Tummalville	Condamine River	2/09/1987																						
422323A	Tummalville	Condamine River	4/11/1987													2	OK	125	0.03	OK	135				
422323A	Tummalville	Condamine River	4/11/1987																						
422323A	Tummalville	Condamine River	18/05/1988													3.7	OK	125	0.01	OK	135				
422323A	Tummalville	Condamine River	18/05/1988																						

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Station	Station Name	Receiving Creek/ River	Date	V2345.00	F2345.00	Q2345.00	V2351.50	F2351.50	Q2351.50	DO & Temp	F2351.50	Q2351.50	V2363.00	F2363.00	Q2363.00	V2401.00	F2401.00	Q2401.00	V2551.00	F2551.00	Q2551.00	V2574.00	F2574.00	Q2574.00
				Ammonia as N - soluble (mg/L)			Oxygen (Dissolved) (mg/L)FLD			DO (% saturation)			Total Phosphorus as P (mg/L)			Sulphate as SO4 (mg/L)			Boron as B (mg/L)			Cadmium as Cd total (ug/L)		
422323A	Tummalville	Condamine River	9/02/1989													4	OK	125	0.02	OK	135			
422323A	Tummalville	Condamine River	9/02/1989																					
422323A	Tummalville	Condamine River	23/08/1989													4.3	OK	125	0.05	OK	135			
422323A	Tummalville	Condamine River	23/08/1989																					
422323A	Tummalville	Condamine River	13/07/1990													6.2	OK	125	0.03	OK	135			
422323A	Tummalville	Condamine River	13/07/1990																					
422323A	Tummalville	Condamine River	1/10/1990													4.3	OK	125	0.03	OK	135			
422323A	Tummalville	Condamine River	19/02/1992													3	OK	125						
422323A	Tummalville	Condamine River	10/07/1992													3.9	OK	125						
422323A	Tummalville	Condamine River	26/10/1992													3.8	OK	125						
422323A	Tummalville	Condamine River	26/10/1992																					
422323A	Tummalville	Condamine River	10/02/1993													2.3	OK	125						
422323A	Tummalville	Condamine River	10/02/1993																					
422323A	Tummalville	Condamine River	25/02/1993																					
422323A	Tummalville	Condamine River	10/06/1993													4.4	OK	125						
422323A	Tummalville	Condamine River	10/06/1993																					
422323A	Tummalville	Condamine River	9/03/1994													3.1	OK	125						
422323A	Tummalville	Condamine River	9/03/1994																					
422323A	Tummalville	Condamine River	14/07/1994													4.2	OK	125						
422323A	Tummalville	Condamine River	14/07/1994																					
422323A	Tummalville	Condamine River	3/04/1995																					
422323A	Tummalville	Condamine River	3/04/1995				11.2 OK		130	139	OK	130	0.4365	OK	130	3.76	OK	130	0	ND	130			
422323A	Tummalville	Condamine River	29/08/1995										0.119	OK	130	6.62	OK	130	0	ND	130			
422323A	Tummalville	Condamine River	29/08/1995				9.5 OK		130	119	OK	130												
422323A	Tummalville	Condamine River	13/09/1995																					
422323A	Tummalville	Condamine River	15/09/1995																					
422323A	Tummalville	Condamine River	22/11/1995																					
422323A	Tummalville	Condamine River	29/11/1995																					
422323A	Tummalville	Condamine River	29/11/1995																					
422323A	Tummalville	Condamine River	8/01/1996				6.7 OK		130	84	OK	130	0.7365	OK	130	3.7	OK	130	0	ND	130			
422323A	Tummalville	Condamine River	1/02/1996																					
422323A	Tummalville	Condamine River	24/02/1996										0.3075	OK	130									
422323A	Tummalville	Condamine River	24/02/1996				9.8 OK		130	103	OK	130												
422323A	Tummalville	Condamine River	17/07/1996																					
422323A	Tummalville	Condamine River	18/09/1996				9.3 OK		130	101	OK	130	0.2226	OK	130									
422323A	Tummalville	Condamine River	23/10/1996																					
422323A	Tummalville	Condamine River	24/10/1996																					
422323A	Tummalville	Condamine River	20/12/1996				6 OK		130	75	OK	130	0.3683	OK	130	5.23	OK	130	0	ND	130			
422323A	Tummalville	Condamine River	25/03/1997																					
422323A	Tummalville	Condamine River	18/04/1997																					
422323A	Tummalville	Condamine River	18/04/1997										0.1614	OK	130									
422323A	Tummalville	Condamine River	18/04/1997				7.6 OK		130	88	OK	130												
422323A	Tummalville	Condamine River	18/04/1997																					
422323A	Tummalville	Condamine River	24/04/1997																					
422323A	Tummalville	Condamine River	29/05/1997																					
422323A	Tummalville	Condamine River	5/06/1997																					
422323A	Tummalville	Condamine River	24/07/1997				8.7 OK		130	85	OK	130	0.0722	OK	130	2.82	OK	130	0	ND	130			
422323A	Tummalville	Condamine River	17/09/1997																					
422323A	Tummalville	Condamine River	17/09/1997																					
422323A	Tummalville	Condamine River	27/11/1997										0.2339	OK	130	5.57	OK	130	0	ND	130			
422323A	Tummalville	Condamine River	27/11/1997				8.4 OK		130	111	OK	130												
422323A	Tummalville	Condamine River	30/04/1998																					
422323A	Tummalville	Condamine River	17/07/1998																					
422323A	Tummalville	Condamine River	11/08/1998																					
422323A	Tummalville	Condamine River	6/10/1998																					

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Station	Station Name	Receiving Creek/ River	Date	V2345.00	F2345.00	Q2345.00	V2351.50	F2351.50	Q2351.50	DO & Temp	F2351.50	Q2351.50	V2363.00	F2363.00	Q2363.00	V2401.00	F2401.00	Q2401.00	V2551.00	F2551.00	Q2551.00	V2574.00	F2574.00	Q2574.00
				Ammonia as N - soluble (mg/L)			Oxygen (Dissolved) (mg/L)FLD			DO (% saturation)			Total Phosphorus as P (mg/L)			Sulphate as SO4 (mg/L)			Boron as B (mg/L)			Cadmium as Cd total (ug/L)		
422323A	Tummalville	Condamine River	11/01/1999	0.01	OK	130							0.51	OK	130									
422323A	Tummalville	Condamine River	22/02/1999				7.5	OK	130	97	OK	130	0.2998	OK	130	2.2	OK	130	0	ND	130			
422323A	Tummalville	Condamine River	16/03/1999																					
422323A	Tummalville	Condamine River	19/03/1999																					
422323A	Tummalville	Condamine River	12/04/1999	0.005	OK	130							0.25	OK	130									
422323A	Tummalville	Condamine River	16/06/1999				7.8	OK	130	73	OK	130	0.1696	OK	130	3.34	OK	130	0	ND	130			
422323A	Tummalville	Condamine River	2/07/1999																					
422323A	Tummalville	Condamine River	12/07/1999	0.044	OK	130							0.34	OK	130									
422323A	Tummalville	Condamine River	11/08/1999				8.3	OK	130	81	OK	130	0.1411	OK	130	4.12	OK	130	0	ND	130			
422323A	Tummalville	Condamine River	10/11/1999																					
422323A	Tummalville	Condamine River	16/11/1999																					
422323A	Tummalville	Condamine River	29/02/2000				5.8	OK	130	72	OK	130	0.1927	OK	130	4.27	OK	130	0	ND	130			
422323A	Tummalville	Condamine River	2/03/2000																					
422323A	Tummalville	Condamine River	19/06/2000				6.7	OK	130	69	OK	130	0.1379	OK	130	3	<	130	0.1	<	130			
422323A	Tummalville	Condamine River	13/09/2000				7.7	OK	130	80	OK	130												
422323A	Tummalville	Condamine River	9/01/2001																					
422323A	Tummalville	Condamine River	14/02/2001																					
422323A	Tummalville	Condamine River	14/02/2001				6.8	OK	130	80	OK	130	0.3016	OK	130	3.28	OK	130	0.05	OK	130			
422323A	Tummalville	Condamine River	13/06/2001				3.6	OK	130	38	OK	130	0.0835	OK	130	3.7	OK	130	0	ND	130			
422323A	Tummalville	Condamine River	18/07/2001				6.4	OK	130	58	OK	130												
422323A	Tummalville	Condamine River	12/02/2002																					
422323A	Tummalville	Condamine River	21/11/2002				8.5	OK	130	105	OK	130												
422323A	Tummalville	Condamine River	7/05/2003				9.6	OK	130	107	OK	130												
422323A	Tummalville	Condamine River	31/07/2003				11.5	OK	130	102	OK	130												
422323A	Tummalville	Condamine River	15/12/2003																					
422323A	Tummalville	Condamine River	9/03/2004				5.8	OK	130	72	OK	130	1.2	OK	130	3	OK	130	0.1	<	130			
422323A	Tummalville	Condamine River	11/03/2004				6.5	OK	130	81	OK	130	0.47	OK	130	3.1	<	130	0.05	<	130			
422323A	Tummalville	Condamine River	21/09/2005										0.239	OK	130	6.1	OK	130	0.09	OK	130			
422323A	Tummalville	Condamine River	7/02/2006				2.7	OK	130	35	OK	130	0.321	OK	10	1.5	OK	10	0.05	OK	10			
422323A	Tummalville	Condamine River	29/04/2009				9	OK	130	96	OK	130												
422333A	Condamine_R Loudouns	Condamine River	18/06/1963													14	OK	125						
422333A	Condamine_R Loudouns	Condamine River	18/03/1971																					
422333A	Condamine_R Loudouns	Condamine River	18/06/1971													17	OK	125						
422333A	Condamine_R Loudouns	Condamine River	21/07/1971													26	OK	125						
422333A	Condamine_R Loudouns	Condamine River	31/08/1971													13	OK	125						
422333A	Condamine_R Loudouns	Condamine River	19/10/1971													12	OK	125						
422333A	Condamine_R Loudouns	Condamine River	18/11/1971													10	OK	125						
422333A	Condamine_R Loudouns	Condamine River	14/03/1972																					
422333A	Condamine_R Loudouns	Condamine River	22/08/1972																					
422333A	Condamine_R Loudouns	Condamine River	24/10/1972																					
422333A	Condamine_R Loudouns	Condamine River	16/03/1973													2	OK	125						
422333A	Condamine_R Loudouns	Condamine River	9/05/1973																0.08	OK	135			
422333A	Condamine_R Loudouns	Condamine River	19/06/1973																0.05	OK	135			
422333A	Condamine_R Loudouns	Condamine River	25/07/1973																0.06	OK	135			
422333A	Condamine_R Loudouns	Condamine River	18/09/1973																					
422333A	Condamine_R Loudouns	Condamine River	30/10/1973																					
422333A	Condamine_R Loudouns	Condamine River	27/03/1974																					
422333A	Condamine_R Loudouns	Condamine River	27/03/1974																					
422333A	Condamine_R Loudouns	Condamine River	12/09/1974																					
422333A	Condamine_R Loudouns	Condamine River	24/08/1976													10	OK	125						
422333A	Condamine_R Loudouns	Condamine River	5/04/1978													9	OK	125						
422333A	Condamine_R Loudouns	Condamine River	10/10/1978													11	OK	125						
422333A	Condamine_R Loudouns	Condamine River	10/07/1979													8	OK	125						
422333A	Condamine_R Loudouns	Condamine River	10/07/1979																					
422333A	Condamine_R Loudouns	Condamine River	11/09/1979													24	OK	125						

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Station	Station Name	Receiving Creek/ River	Date	V2345.00	F2345.00	Q2345.00	V2351.50	F2351.50	Q2351.50	DO & Temp	F2351.50	Q2351.50	V2363.00	F2363.00	Q2363.00	V2401.00	F2401.00	Q2401.00	V2551.00	F2551.00	Q2551.00	V2574.00	F2574.00	Q2574.00	
				Ammonia as N - soluble (mg/L)			Oxygen (Dissolved) (mg/L)FLD			DO (% saturation)			Total Phosphorus as P (mg/L)			Sulphate as SO4 (mg/L)			Boron as B (mg/L)			Cadmium as Cd total (ug/L)			
422333A	Condamine_R Loudouns	Condamine River	11/09/1979																						
422333A	Condamine_R Loudouns	Condamine River	13/09/1979													2	OK	125							
422333A	Condamine_R Loudouns	Condamine River	31/01/1980													2	OK	135							
422333A	Condamine_R Loudouns	Condamine River	2/07/1980													19	OK	125							
422333A	Condamine_R Loudouns	Condamine River	2/07/1980																						
422333A	Condamine_R Loudouns	Condamine River	28/05/1984													6.4	OK	125							
422333A	Condamine_R Loudouns	Condamine River	28/05/1984																						
422333A	Condamine_R Loudouns	Condamine River	10/10/1984													17	OK	125							
422333A	Condamine_R Loudouns	Condamine River	10/10/1984																						
422333A	Condamine_R Loudouns	Condamine River	9/01/1985													23	OK	125	0.08	OK	135				
422333A	Condamine_R Loudouns	Condamine River	9/01/1985																						
422333A	Condamine_R Loudouns	Condamine River	13/05/1985													47	OK	125	0.1	OK	135				
422333A	Condamine_R Loudouns	Condamine River	13/05/1985																						
422333A	Condamine_R Loudouns	Condamine River	24/07/1985													7.7	OK	125	0.03	OK	135				
422333A	Condamine_R Loudouns	Condamine River	24/07/1985																						
422333A	Condamine_R Loudouns	Condamine River	21/10/1985													33	OK	125	0.1	OK	135				
422333A	Condamine_R Loudouns	Condamine River	21/10/1985																						
422333A	Condamine_R Loudouns	Condamine River	6/01/1986													16	OK	125	0.07	OK	135				
422333A	Condamine_R Loudouns	Condamine River	6/01/1986																						
422333A	Condamine_R Loudouns	Condamine River	2/07/1986													12	OK	125	0.03	OK	135				
422333A	Condamine_R Loudouns	Condamine River	2/07/1986																						
422333A	Condamine_R Loudouns	Condamine River	9/10/1986													60	OK	125	0.15	OK	135				
422333A	Condamine_R Loudouns	Condamine River	15/01/1987																						
422333A	Condamine_R Loudouns	Condamine River	15/01/1987																						
422333A	Condamine_R Loudouns	Condamine River	3/04/1987													11	OK	125	0.09	OK	135				
422333A	Condamine_R Loudouns	Condamine River	3/04/1987																						
422333A	Condamine_R Loudouns	Condamine River	18/06/1987													5.6	OK	125	0.04	OK	135				
422333A	Condamine_R Loudouns	Condamine River	18/06/1987																						
422333A	Condamine_R Loudouns	Condamine River	3/09/1987													7	OK	125							
422333A	Condamine_R Loudouns	Condamine River	3/09/1987																						
422333A	Condamine_R Loudouns	Condamine River	5/11/1987													3.3	OK	125	0.03	OK	135				
422333A	Condamine_R Loudouns	Condamine River	5/11/1987																						
422333A	Condamine_R Loudouns	Condamine River	7/03/1988													7.4	OK	125	0.04	OK	135				
422333A	Condamine_R Loudouns	Condamine River	25/05/1988													10	OK	125	0.02	OK	135				
422333A	Condamine_R Loudouns	Condamine River	25/05/1988																						
422333A	Condamine_R Loudouns	Condamine River	25/08/1988													4.1	OK	125	0.02	OK	135				
422333A	Condamine_R Loudouns	Condamine River	27/01/1989													2.4	OK	125	0.04	OK	135				
422333A	Condamine_R Loudouns	Condamine River	27/01/1989																						
422333A	Condamine_R Loudouns	Condamine River	6/09/1989													10	OK	125	0.06	OK	135				
422333A	Condamine_R Loudouns	Condamine River	6/09/1989																						
422333A	Condamine_R Loudouns	Condamine River	7/12/1989													6.1	OK	125	0.04	OK	135				
422333A	Condamine_R Loudouns	Condamine River	3/07/1990													8	OK	125							
422333A	Condamine_R Loudouns	Condamine River	3/07/1990																						
422333A	Condamine_R Loudouns	Condamine River	16/10/1990													29	OK	125	0.07	OK	135				
422333A	Condamine_R Loudouns	Condamine River	16/10/1990																						
422333A	Condamine_R Loudouns	Condamine River	14/02/1992													3.6	OK	125							
422333A	Condamine_R Loudouns	Condamine River	1/07/1992													19	OK	125							
422333A	Condamine_R Loudouns	Condamine River	1/07/1992																						
422333A	Condamine_R Loudouns	Condamine River	4/03/1994																						
422333A	Condamine_R Loudouns	Condamine River	12/04/1994													3.1	OK	125							
422333A	Condamine_R Loudouns	Condamine River	16/05/1994													8	OK	125							
422333A	Condamine_R Loudouns	Condamine River	15/06/1994													8.1	OK	125							
422333A	Condamine_R Loudouns	Condamine River	12/07/1994													10.7	OK	125							
422333A	Condamine_R Loudouns	Condamine River	13/07/1994																						
422333A	Condamine_R Loudouns	Condamine River	15/08/1994													17.3	OK	125							

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Station	Station Name	Receiving Creek/ River	Date	V2345.00	F2345.00	Q2345.00	V2351.50	F2351.50	Q2351.50	DO & Temp	F2351.50	Q2351.50	V2363.00	F2363.00	Q2363.00	V2401.00	F2401.00	Q2401.00	V2551.00	F2551.00	Q2551.00	V2574.00	F2574.00	Q2574.00
				Ammonia as N - soluble (mg/L)			Oxygen (Dissolved) (mg/L)FLD			DO (% saturation)			Total Phosphorus as P (mg/L)			Sulphate as SO4 (mg/L)			Boron as B (mg/L)			Cadmium as Cd total (ug/L)		
422333A	Condamine_R Loudouns	Condamine River	15/08/1994																					
422333A	Condamine_R Loudouns	Condamine River	20/09/1994													25.3	OK	125						
422333A	Condamine_R Loudouns	Condamine River	20/09/1994																					
422333A	Condamine_R Loudouns	Condamine River	11/10/1994													28.9	OK	125	0.1	OK	135			
422333A	Condamine_R Loudouns	Condamine River	11/10/1994																					
422333A	Condamine_R Loudouns	Condamine River	28/11/1994	0.0275	OK	130							0.0627	OK	130	35.32	OK	130	0	ND	130	1.1	OK	130
422333A	Condamine_R Loudouns	Condamine River	5/12/1994																					
422333A	Condamine_R Loudouns	Condamine River	10/01/1995	0.0224	OK	130							0.086	OK	130	37.29	OK	130	0.1	OK	130			
422333A	Condamine_R Loudouns	Condamine River	15/02/1995	0.305	OK	130							0.2114	OK	130	30.31	OK	130	0.1	OK	130			
422333A	Condamine_R Loudouns	Condamine River	21/03/1995	0.045	OK	130							0.4406	OK	130	3.6	OK	130	0	ND	130	0.3	OK	130
422333A	Condamine_R Loudouns	Condamine River	28/03/1995																					
422333A	Condamine_R Loudouns	Condamine River	11/04/1995	0.0708	OK	130	3.2	OK	130	35	OK	130	0.2923	OK	130	3.24	OK	130	0	ND	130			
422333A	Condamine_R Loudouns	Condamine River	24/05/1995				3.3	OK	130	35	OK	130				3.25	OK	130	0	ND	130			
422333A	Condamine_R Loudouns	Condamine River	27/06/1995	0.219	OK	130	6.7	OK	130	64	OK	130	0.1003	OK	130	13.9	OK	130	0.1	OK	130	0.7	OK	130
422333A	Condamine_R Loudouns	Condamine River	26/07/1995	0.094	OK	130	7.4	OK	130	70	OK	130	0.084	OK	130	43.12	OK	130	0.5	OK	130			
422333A	Condamine_R Loudouns	Condamine River	14/08/1995																					
422333A	Condamine_R Loudouns	Condamine River	30/08/1995	0.0409	OK	130	8.6	OK	130	91	OK	130	0.0388	OK	130	49.24	OK	130	0.6	OK	130			
422333A	Condamine_R Loudouns	Condamine River	25/09/1995	0.0407	OK	130	9	OK	130	104	OK	130	0.0274	OK	130	52.03	OK	130	0.6	OK	130	0.1	OK	130
422333A	Condamine_R Loudouns	Condamine River	17/10/1995	0.0191	OK	130	8.4	OK	130	100	OK	130	0.027	OK	130	51.6	OK	130	0.7	OK	130			
422333A	Condamine_R Loudouns	Condamine River	20/12/1995	0.0282	OK	130	5.1	OK	130	65	OK	130	0.7527	OK	130	2.5	OK	130	0	ND	130			
422333A	Condamine_R Loudouns	Condamine River	30/01/1996	0.0876	OK	130	5.1	OK	130	67	OK	130	1.4173	OK	130	3.51	OK	130	0.1	OK	130			
422333A	Condamine_R Loudouns	Condamine River	5/02/1996																					
422333A	Condamine_R Loudouns	Condamine River	6/02/1996																					
422333A	Condamine_R Loudouns	Condamine River	28/02/1996	0.0707	OK	130	2.2	OK	130	27	OK	130	0.2779	OK	130	3.5	OK	130	0	ND	130			
422333A	Condamine_R Loudouns	Condamine River	27/03/1996	0.0654	OK	130	5	OK	130	60	OK	130	0.4292	OK	130									
422333A	Condamine_R Loudouns	Condamine River	29/05/1996				9.2	OK	130	96	OK	130	0.2504	OK	130	5.9	OK	130	0	ND	130			
422333A	Condamine_R Loudouns	Condamine River	19/06/1996	0.0174	OK	130	9.7	OK	130	96	OK	130	0.2569	OK	130	15.1	OK	130	0.1	OK	130			
422333A	Condamine_R Loudouns	Condamine River	25/07/1996	0.0525	OK	130	5.7	OK	130	54	OK	130	0.1256	OK	130	12.96	OK	130	0.1	OK	130			
422333A	Condamine_R Loudouns	Condamine River	16/09/1996	0.045	OK	130	11.6	OK	130	129	OK	130	0.2513	OK	130									
422333A	Condamine_R Loudouns	Condamine River	16/09/1996																					
422333A	Condamine_R Loudouns	Condamine River	24/10/1996																					
422333A	Condamine_R Loudouns	Condamine River	19/12/1996				7.2	OK	130	90	OK	130												
422333A	Condamine_R Loudouns	Condamine River	19/12/1996	0.0221	OK	130							0.6172	OK	130	5.13	OK	130	0	ND	130			
422333A	Condamine_R Loudouns	Condamine River	7/01/1997																					
422333A	Condamine_R Loudouns	Condamine River	16/01/1997																					
422333A	Condamine_R Loudouns	Condamine River	16/01/1997																					
422333A	Condamine_R Loudouns	Condamine River	11/02/1997	0.0486	OK	130							0.5362	OK	130	5.36	OK	130	0	ND	130			
422333A	Condamine_R Loudouns	Condamine River	25/02/1997				5.5	OK	130	75	OK	130												
422333A	Condamine_R Loudouns	Condamine River	25/02/1997	0.0679	OK	130							0.6294	OK	130	3.1	OK	130	0	ND	130			
422333A	Condamine_R Loudouns	Condamine River	23/04/1997	0.0011	OK	130	2.4	OK	130	27	OK	130	0.2253	OK	130	5.4	OK	130	0.1	OK	130			
422333A	Condamine_R Loudouns	Condamine River	16/05/1997																					
422333A	Condamine_R Loudouns	Condamine River	27/05/1997				6.35	OK	130	65	OK	130	0.1359	OK	130	57.68	OK	130	1	OK	130			
422333A	Condamine_R Loudouns	Condamine River	21/07/1997				13.69	OK	130	130	OK	130												
422333A	Condamine_R Loudouns	Condamine River	24/11/1997																					
422333A	Condamine_R Loudouns	Condamine River	24/11/1997	0.0245	OK	130							0.7971	OK	130	13.44	OK	130	0.3	OK	130			
422333A	Condamine_R Loudouns	Condamine River	18/12/1997																					
422333A	Condamine_R Loudouns	Condamine River	28/04/1998																					
422333A	Condamine_R Loudouns	Condamine River	7/10/1998	0.0125	OK	130	6.8	OK	130	84	OK	130	0.3152	OK	130	10.01	OK	130	0.1	OK	130			
422333A	Condamine_R Loudouns	Condamine River	11/01/1999	0.01	OK	130							0.18	OK	130									
422333A	Condamine_R Loudouns	Condamine River	18/02/1999	0.0157	OK	130	5.1	OK	130	70	OK	130	0.5	OK	130	3.55	OK	130	0	ND	130			
422333A	Condamine_R Loudouns	Condamine River	22/03/1999																					
422333A	Condamine_R Loudouns	Condamine River	12/04/1999	0.005	OK	130							0.32	OK	130									
422333A	Condamine_R Loudouns	Condamine River	16/06/1999	0.007	OK	130	6.5	OK	130	65	OK	130	0.2655	OK	130	21.28	OK	130	0.5	OK	130			
422333A	Condamine_R Loudouns	Condamine River	29/06/1999																					

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				Ammonia as N - soluble (mg/L)			Oxygen (Dissolved) (mg/L)FLD			DO (% saturation)			Total Phosphorus as P (mg/L)			Sulphate as SO4 (mg/L)			Boron as B (mg/L)			Cadmium as Cd total (ug/L)			
422333A	Condamine_R Loudouns	Condamine River	12/07/1999	0.13	OK	130							0.45	OK	130										
422333A	Condamine_R Loudouns	Condamine River	1/09/1999	0.0033	OK	130	6.5	OK	130	70	OK	130	0.1861	OK	130	5.36	OK	130	0	ND	130				
422333A	Condamine_R Loudouns	Condamine River	21/02/2000	0.0107	OK	130							0.3229	OK	130	5.85	OK	130	0.1	OK	130				
422333A	Condamine_R Loudouns	Condamine River	21/02/2000				7.5	OK	130	94	OK	130													
422333A	Condamine_R Loudouns	Condamine River	19/06/2000	0.0079	OK	130	12.4	OK	130	114	OK	130	0.217	OK	130	33	<	130	0.5	OK	130				
422333A	Condamine_R Loudouns	Condamine River	25/08/2000				8.6	OK	130	83	OK	130													
422333A	Condamine_R Loudouns	Condamine River	25/01/2001										0.1314	OK	130										
422333A	Condamine_R Loudouns	Condamine River	6/02/2001	0.037	OK	130							0.99	OK	130	7.19	OK	130	0.06	OK	130				
422333A	Condamine_R Loudouns	Condamine River	6/02/2001										0.9078	OK	130										
422333A	Condamine_R Loudouns	Condamine River	8/02/2001																						
422333A	Condamine_R Loudouns	Condamine River	8/02/2001										1.1911	OK	130										
422333A	Condamine_R Loudouns	Condamine River	20/03/2001																						
422333A	Condamine_R Loudouns	Condamine River	17/04/2001										0.2736	OK	130										
422333A	Condamine_R Loudouns	Condamine River	14/05/2001																						
422333A	Condamine_R Loudouns	Condamine River	13/06/2001	0.0086	OK	130	2.5	OK	130	26	OK	130	0.1068	OK	130	11.66	OK	130	0	ND	130				
422333A	Condamine_R Loudouns	Condamine River	11/11/2001										1.5472	OK	130										
422333A	Condamine_R Loudouns	Condamine River	12/11/2001										1.6376	OK	130										
422333A	Condamine_R Loudouns	Condamine River	13/11/2001										1.2446	OK	130										
422333A	Condamine_R Loudouns	Condamine River	13/11/2001																						
422333A	Condamine_R Loudouns	Condamine River	8/08/2002																						
422333A	Condamine_R Loudouns	Condamine River	11/03/2004	0.14	OK	130	3.5	OK	130	44	OK	130	0.78	OK	130	26	<	130	0.5	OK	130				
422333A	Condamine_R Loudouns	Condamine River	12/03/2004				5.9	OK	130	75	OK	130	0.45	OK	130	8	<	130	0.1	<	130				
422333A	Condamine_R Loudouns	Condamine River	3/03/2005				6.2	OK	130	83	OK	130	0.21	OK	130	36	OK	130	0.8	<	130				
422333A	Condamine_R Loudouns	Condamine River	21/12/2005				3.9	OK	130	58	OK	130	0.428	OK	10	3.9	OK	130	0.09	OK	130				
422333A	Condamine_R Loudouns	Condamine River	15/03/2006				4.6	OK	130	60	OK	130	0.1682	OK	130	1.7	OK	130	0.08	OK	130				
422333A	Condamine_R Loudouns	Condamine River	5/05/2006													2.1	OK	130	0.07	OK	130				
422333A	Condamine_R Loudouns	Condamine River	12/11/2006																						
422333A	Condamine_R Loudouns	Condamine River	24/10/2008	0.0111	OK	10							0.3315	OK	10										
422333A	Condamine_R Loudouns	Condamine River	1/07/2009																						
422345A	Lone Pine	Condamine River (north branch)	11/07/1979													5.8	OK	125							
422345A	Lone Pine	Condamine River (north branch)	7/02/1980													5.5	OK	125							
422345A	Lone Pine	Condamine River (north branch)	8/02/1980													9	OK	125							
422345A	Lone Pine	Condamine River (north branch)	11/02/1981																						
422345A	Lone Pine	Condamine River (north branch)	19/02/1981																						
422345A	Lone Pine	Condamine River (north branch)	6/04/1981													7	OK	125							
422345A	Lone Pine	Condamine River (north branch)	15/04/1981																						
422345A	Lone Pine	Condamine River (north branch)	28/07/1983													7.3	OK	125	0.05	OK	135				
422345A	Lone Pine	Condamine River (north branch)	11/10/1983													4.9	OK	125	0.05	OK	135				
422345A	Lone Pine	Condamine River (north branch)	29/05/1984																						
422345A	Lone Pine	Condamine River (north branch)	21/06/1984																						
422345A	Lone Pine	Condamine River (north branch)	8/08/1984													9.5	OK	125	0.04	OK	135				
422345A	Lone Pine	Condamine River (north branch)	13/01/1987													3.7	OK	125	0.06	OK	135				
422345A	Lone Pine	Condamine River (north branch)	18/02/1988																						
422345A	Lone Pine	Condamine River (north branch)	17/05/1988													7.6	OK	125	0.06	OK	135				
422345A	Lone Pine	Condamine River (north branch)	1/08/1988													11	OK	125	0.05	OK	135				
422345A	Lone Pine	Condamine River (north branch)	8/02/1989													2.6	OK	125	0.03	OK	135				
422345A	Lone Pine	Condamine River (north branch)	11/07/1989																						
422345A	Lone Pine	Condamine River (north branch)	31/07/1989																						
422345A	Lone Pine	Condamine River (north branch)	22/08/1989													5.3	OK	125	0.05	OK	135				
422345A	Lone Pine	Condamine River (north branch)	8/12/1989													4.2	OK	125	0.02	OK	135				
422345A	Lone Pine	Condamine River (north branch)	30/03/1990													4.2	OK	135	0.02	OK	135				
422345A	Lone Pine	Condamine River (north branch)	2/07/1990													9.2	OK	125	0.03	OK	135				
422345A	Lone Pine	Condamine River (north branch)	17/10/1990													6.6	OK	125	0.04	OK	135				

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				Ammonia as N - soluble (mg/L)			Oxygen (Dissolved) (mg/L)FLD			DO (% saturation)			Total Phosphorus as P (mg/L)			Sulphate as SO4 (mg/L)			Boron as B (mg/L)			Cadmium as Cd total (ug/L)		
422345A	Lone Pine	Condamine River (north branch)	6/06/1991																					
422345A	Lone Pine	Condamine River (north branch)	30/10/1991																					
422345A	Lone Pine	Condamine River (north branch)	20/02/1992													2.2	OK	125						
422345A	Lone Pine	Condamine River (north branch)	3/07/1992													5.1	OK	125						
422345A	Lone Pine	Condamine River (north branch)	21/10/1992													5.5	OK	125						
422345A	Lone Pine	Condamine River (north branch)	8/02/1993													2.3	OK	125						
422345A	Lone Pine	Condamine River (north branch)	9/06/1993																					
422345A	Lone Pine	Condamine River (north branch)	27/10/1993																					
422345A	Lone Pine	Condamine River (north branch)	8/03/1994													3.4	OK	125						
422345A	Lone Pine	Condamine River (north branch)	14/07/1994													0.8	OK	125						
422345A	Lone Pine	Condamine River (north branch)	8/12/1994										0.2563	OK	130	0.73	OK	130	0.1	OK	130			
422345A	Lone Pine	Condamine River (north branch)	29/03/1995																					
422345A	Lone Pine	Condamine River (north branch)	29/03/1995				1.9	OK	130	24	OK	130	0.538	OK	130	2.35	OK	130	0	ND	130			
422345A	Lone Pine	Condamine River (north branch)	29/08/1995				1.9	OK	130	19	OK	130	0.0388	OK	130	0	ND	130	0	ND	130			
422345A	Lone Pine	Condamine River (north branch)	30/11/1995																					
422345A	Lone Pine	Condamine River (north branch)	30/11/1995																					
422345A	Lone Pine	Condamine River (north branch)	2/02/1996																					
422345A	Lone Pine	Condamine River (north branch)	2/02/1996				5.3	OK	130	72	OK	130	0.55	OK	130	3	OK	130	0.1	<	130			
422345A	Lone Pine	Condamine River (north branch)	28/05/1996				8.2	OK	130	84	OK	130	0.1391	OK	130	10.5	OK	130	0.1	OK	130			
422345A	Lone Pine	Condamine River (north branch)	17/09/1996				11.9	OK	130	126	OK	130	0.2106	OK	130	9	OK	130	0.1	<	130			
422345A	Lone Pine	Condamine River (north branch)	24/10/1996																					
422345A	Lone Pine	Condamine River (north branch)	6/12/1996				7.4	OK	130	95	OK	130	0.1276	OK	130	3.7	OK	130	0	ND	130			
422345A	Lone Pine	Condamine River (north branch)	8/01/1997																					
422345A	Lone Pine	Condamine River (north branch)	11/02/1997				7.2	OK	130	96	OK	130	0.1845	OK	130	3.39	OK	130	0	ND	130			
422345A	Lone Pine	Condamine River (north branch)	25/03/1997																					
422345A	Lone Pine	Condamine River (north branch)	18/04/1997				2.3	OK	130	26	OK	130												
422345A	Lone Pine	Condamine River (north branch)	29/05/1997																					
422345A	Lone Pine	Condamine River (north branch)	22/07/1997				8.3	OK	130	74	OK	130												
422345A	Lone Pine	Condamine River (north branch)	25/09/1997																					
422345A	Lone Pine	Condamine River (north branch)	27/11/1997				5.4	OK	130	67	OK	130	0.3	OK	130	5.03	OK	130	0	ND	130			
422345A	Lone Pine	Condamine River (north branch)	29/04/1998																					
422345A	Lone Pine	Condamine River (north branch)	29/04/1998																					
422345A	Lone Pine	Condamine River (north branch)	23/09/1998				7.8	OK	130	89	OK	130	0.637	OK	130	2.46	OK	130	0	ND	130			
422345A	Lone Pine	Condamine River (north branch)	18/02/1999				3.6	OK	130	50	OK	130	0.3779	OK	130	1.68	OK	130	0	ND	130			
422345A	Lone Pine	Condamine River (north branch)	18/03/1999																					
422345A	Lone Pine	Condamine River (north branch)	29/03/1999																					
422345A	Lone Pine	Condamine River (north branch)	16/06/1999				7.8	OK	130	73	OK	130	0.2397	OK	130	4.73	OK	130	0	ND	130			
422345A	Lone Pine	Condamine River (north branch)	1/09/1999				4	OK	130	46	OK	130	0.1834	OK	130	3.98	OK	130	0	ND	130			
422345A	Lone Pine	Condamine River (north branch)	1/11/1999																					
422345A	Lone Pine	Condamine River (north branch)	1/11/1999																					
422345A	Lone Pine	Condamine River (north branch)	21/12/1999																					
422345A	Lone Pine	Condamine River (north branch)	29/02/2000				5.4	OK	130	68	OK	130	0.2038	OK	130	2.78	OK	130	0	ND	130			
422345A	Lone Pine	Condamine River (north branch)	16/03/2000																					
422345A	Lone Pine	Condamine River (north branch)	19/06/2000				6.3	OK	130	63	OK	130	0.1879	OK	130	5	<	130	0.1	<	130			
422345A	Lone Pine	Condamine River (north branch)	8/09/2000				7.9	OK	130	82	OK	130												
422345A	Lone Pine	Condamine River (north branch)	22/09/2000																					
422345A	Lone Pine	Condamine River (north branch)	14/02/2001				5.8	OK	130	73	OK	130	0.5571	OK	130	3.23	OK	130	0.06	OK	130			
422345A	Lone Pine	Condamine River (north branch)	13/06/2001				2.5	OK	130	26	OK	130	0.1046	OK	130	3.11	OK	130	0	ND	130			
422345A	Lone Pine	Condamine River (north branch)	11/07/2001				1.4	OK	130	13	OK	130												
422345A	Lone Pine	Condamine River (north branch)	18/07/2001				5.2	OK	130	49	OK	130												
422345A	Lone Pine	Condamine River (north branch)	14/08/2001				5.3	OK	130	53	OK	130												
422345A	Lone Pine	Condamine River (north branch)	12/12/2001				5.4	OK	130	67	OK	130												
422345A	Lone Pine	Condamine River (north branch)	14/06/2002																					
422345A	Lone Pine	Condamine River (north branch)	21/11/2002				10.4	OK	130	130	OK	130												
422345A	Lone Pine	Condamine River (north branch)	8/05/2003				3.1	OK	130	33	OK	130												

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				Ammonia as N - soluble (mg/L)			Oxygen (Dissolved) (mg/L)FLD			DO (% saturation)			Total Phosphorus as P (mg/L)			Sulphate as SO4 (mg/L)			Boron as B (mg/L)			Cadmium as Cd total (ug/L)			
422345A	Lone Pine	Condamine River (north branch)	31/07/2003				9.4	OK	130	83	OK	130													
422345A	Lone Pine	Condamine River (north branch)	11/03/2004				5.6	OK	130	73	OK	130	0.33	OK	130	4	<	130	0.1	<	130				
422345A	Lone Pine	Condamine River (north branch)	20/12/2005				5.5	OK	130	71	OK	130	0.309	OK	10	1.8	OK	130	0.05	OK	130				
422345A	Lone Pine	Condamine River (north branch)	21/03/2006				1.3	OK	130	16	OK	130	0.3285	OK	130	1.6	OK	130	0.12	OK	130				
422345A	Lone Pine	Condamine River (north branch)	28/04/2009				8.4	OK	130	85	OK	130													
422346A	N Condamine_R Kurlaw	Condamine River (north branch)	11/07/1979													6	OK	125							
422346A	N Condamine_R Kurlaw	Condamine River (north branch)	11/07/1979																						
422346A	N Condamine_R Kurlaw	Condamine River (north branch)	11/02/1980													10	OK	125							
422346A	N Condamine_R Kurlaw	Condamine River (north branch)	11/02/1980																						
422346A	N Condamine_R Kurlaw	Condamine River (north branch)	9/02/1981													5	OK	125							
422346A	N Condamine_R Kurlaw	Condamine River (north branch)	19/02/1981													8	OK	125							
422346A	N Condamine_R Kurlaw	Condamine River (north branch)	19/02/1981																						
422346A	N Condamine_R Kurlaw	Condamine River (north branch)	1/07/1981													5	OK	125							
422346A	N Condamine_R Kurlaw	Condamine River (north branch)	13/12/1983													3.5	OK	125	0.06	OK	135				
422346A	N Condamine_R Kurlaw	Condamine River (north branch)	13/12/1983																						
422347A	Pampas Bridge	Condamine River (north branch)	6/02/1980													25	OK	125							
422347A	Pampas Bridge	Condamine River (north branch)	7/02/1980													4.5	OK	125							
422347A	Pampas Bridge	Condamine River (north branch)	7/02/1980																						
422347A	Pampas Bridge	Condamine River (north branch)	8/02/1980													5	OK	125							
422347A	Pampas Bridge	Condamine River (north branch)	8/02/1980																						
422347A	Pampas Bridge	Condamine River (north branch)	11/02/1980													6	OK	125							
422347A	Pampas Bridge	Condamine River (north branch)	11/02/1980																						
422347A	Pampas Bridge	Condamine River (north branch)	9/02/1981													7	OK	125							
422347A	Pampas Bridge	Condamine River (north branch)	9/02/1981																						
422347A	Pampas Bridge	Condamine River (north branch)	29/08/2006													8.8	OK	10	0.05	OK	10				
422348A	Christians	Condamine River (north branch)	7/02/1980													7	OK	125							
422348A	Christians	Condamine River (north branch)	7/02/1980																						
422348A	Christians	Condamine River (north branch)	7/04/1981													7	OK	135							
422339A	Jimbour_Ck Bunginie	Jimbour Creek	9/01/1973													8	OK	125							
422339A	Jimbour_Ck Bunginie	Jimbour Creek	24/01/1973													8	OK	125							
422339A	Jimbour_Ck Bunginie	Jimbour Creek	18/09/1973																						
422339A	Jimbour_Ck Bunginie	Jimbour Creek	18/09/1973																						
422339A	Jimbour_Ck Bunginie	Jimbour Creek	30/10/1973																						
422339A	Jimbour_Ck Bunginie	Jimbour Creek	30/10/1973																						
422339A	Jimbour_Ck Bunginie	Jimbour Creek	11/09/1974													23.4	OK	125							
422339A	Jimbour_Ck Bunginie	Jimbour Creek	24/08/1976													25	OK	125							
422339A	Jimbour_Ck Bunginie	Jimbour Creek	30/01/1980													6	OK	125							
422339A	Jimbour_Ck Bunginie	Jimbour Creek	30/01/1980																						
422339A	Jimbour_Ck Bunginie	Jimbour Creek	21/01/1988																						
422339A	Jimbour_Ck Bunginie	Jimbour Creek	25/05/1988													8.6	OK	125	0.03	OK	135				
422339A	Jimbour_Ck Bunginie	Jimbour Creek	25/05/1988																						
422339A	Jimbour_Ck Bunginie	Jimbour Creek	4/08/1988													8	OK	125	0.05	OK	135				
422339A	Jimbour_Ck Bunginie	Jimbour Creek	4/08/1988																						
422339A	Jimbour_Ck Bunginie	Jimbour Creek	6/09/1989													12.5	OK	125	0.06	OK	135				
422339A	Jimbour_Ck Bunginie	Jimbour Creek	6/09/1989																						
422339A	Jimbour_Ck Bunginie	Jimbour Creek	3/07/1990													9.2	OK	125	0.04	OK	135				
422339A	Jimbour_Ck Bunginie	Jimbour Creek	3/07/1990																						
422339A	Jimbour_Ck Bunginie	Jimbour Creek	16/10/1990													14	OK	125	0.09	OK	135				
422339A	Jimbour_Ck Bunginie	Jimbour Creek	16/10/1990																						
422339A	Jimbour_Ck Bunginie	Jimbour Creek	1/07/1992													14.6	OK	125	0.2	OK	135				
422339A	Jimbour_Ck Bunginie	Jimbour Creek	1/07/1992																						
422339A	Jimbour_Ck Bunginie	Jimbour Creek	14/08/1995																						
422339A	Jimbour_Ck Bunginie	Jimbour Creek	26/09/1995													18.8	OK	130	0.1	OK	130				

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Station	Station Name	Receiving Creek/ River	Date	V2345.00	F2345.00	Q2345.00	V2351.50	F2351.50	Q2351.50	DO & Temp	F2351.50	Q2351.50	V2363.00	F2363.00	Q2363.00	V2401.00	F2401.00	Q2401.00	V2551.00	F2551.00	Q2551.00	V2574.00	F2574.00	Q2574.00	
				Ammonia as N - soluble (mg/L)			Oxygen (Dissolved) (mg/L)FLD			DO (% saturation)			Total Phosphorus as P (mg/L)			Sulphate as SO4 (mg/L)			Boron as B (mg/L)			Cadmium as Cd total (ug/L)			
422339A	Jimbour_Ck Bunginie	Jimbour Creek	26/05/1997							7.7	OK	130	84	OK	130	0.0911	OK	130	5.92	OK	130	0.1	OK	130	
422339A	Jimbour_Ck Bunginie	Jimbour Creek	24/11/1997							3.6	OK	130	47	OK	130	0.3389	OK	130	4.14	OK	130	0.1	OK	130	
422339A	Jimbour_Ck Bunginie	Jimbour Creek	18/02/1999	0.004	OK	130							0.62	OK	130										
422339A	Jimbour_Ck Bunginie	Jimbour Creek	18/10/1999	0	ND	130							0.089	OK	130										
422326A	Gowrie_Ck Cranley	Oakey Creek	16/03/1971																						
422326A	Gowrie_Ck Cranley	Oakey Creek	31/05/1971													7	OK	125							
422326A	Gowrie_Ck Cranley	Oakey Creek	19/07/1971													1	OK	125							
422326A	Gowrie_Ck Cranley	Oakey Creek	30/08/1971													4	OK	125							
422326A	Gowrie_Ck Cranley	Oakey Creek	18/10/1971																						
422326A	Gowrie_Ck Cranley	Oakey Creek	13/03/1972																						
422326A	Gowrie_Ck Cranley	Oakey Creek	19/06/1972													10	OK	125							
422326A	Gowrie_Ck Cranley	Oakey Creek	21/08/1972													22	OK	125							
422326A	Gowrie_Ck Cranley	Oakey Creek	23/10/1972																						
422326A	Gowrie_Ck Cranley	Oakey Creek	8/01/1973													4	OK	125							
422326A	Gowrie_Ck Cranley	Oakey Creek	16/03/1973													3	OK	125							
422326A	Gowrie_Ck Cranley	Oakey Creek	8/05/1973													2.6	OK	125	0.06	OK	135				
422326A	Gowrie_Ck Cranley	Oakey Creek	18/06/1973																0.03	OK	135				
422326A	Gowrie_Ck Cranley	Oakey Creek	24/07/1973																0.04	OK	135				
422326A	Gowrie_Ck Cranley	Oakey Creek	17/09/1973																						
422326A	Gowrie_Ck Cranley	Oakey Creek	29/10/1973																						
422326A	Gowrie_Ck Cranley	Oakey Creek	21/01/1974													1.7	OK	125							
422326A	Gowrie_Ck Cranley	Oakey Creek	25/03/1974																						
422326A	Gowrie_Ck Cranley	Oakey Creek	16/09/1974																						
422326A	Gowrie_Ck Cranley	Oakey Creek	24/02/1976													3	OK	125							
422326A	Gowrie_Ck Cranley	Oakey Creek	23/08/1976																						
422326A	Gowrie_Ck Cranley	Oakey Creek	9/07/1979													9	OK	125							
422326A	Gowrie_Ck Cranley	Oakey Creek	10/09/1979													4	OK	125							
422326A	Gowrie_Ck Cranley	Oakey Creek	29/01/1980													10	OK	125							
422326A	Gowrie_Ck Cranley	Oakey Creek	14/04/1980													6	OK	125							
422326A	Gowrie_Ck Cranley	Oakey Creek	1/07/1980													9	OK	125							
422326A	Gowrie_Ck Cranley	Oakey Creek	8/09/1980													7	OK	125							
422326A	Gowrie_Ck Cranley	Oakey Creek	30/01/1981													17	OK	125							
422326A	Gowrie_Ck Cranley	Oakey Creek	10/04/1981													9	OK	125							
422326A	Gowrie_Ck Cranley	Oakey Creek	29/06/1981													5	OK	125							
422326A	Gowrie_Ck Cranley	Oakey Creek	14/09/1981													5	OK	125							
422326A	Gowrie_Ck Cranley	Oakey Creek	23/11/1982													6.1	OK	125							
422326A	Gowrie_Ck Cranley	Oakey Creek	2/02/1983													6.4	OK	125							
422326A	Gowrie_Ck Cranley	Oakey Creek	17/05/1983													2.5	OK	125	0.03	OK	135				
422326A	Gowrie_Ck Cranley	Oakey Creek	12/07/1983													8.8	OK	125	0.04	OK	135				
422326A	Gowrie_Ck Cranley	Oakey Creek	12/12/1983													4	OK	125	0.03	OK	135				
422326A	Gowrie_Ck Cranley	Oakey Creek	5/03/1984													10.5	OK	125	0.02	OK	135				
422326A	Gowrie_Ck Cranley	Oakey Creek	28/05/1984													3.2	OK	125	0.02	OK	135				
422326A	Gowrie_Ck Cranley	Oakey Creek	10/10/1984													5	OK	125							
422326A	Gowrie_Ck Cranley	Oakey Creek	8/01/1985													11	OK	125	0.02	OK	135				
422326A	Gowrie_Ck Cranley	Oakey Creek	11/03/1985													7.6	OK	125	0.01	OK	135				
422326A	Gowrie_Ck Cranley	Oakey Creek	24/07/1985													5.6	OK	125	0.02	OK	135				
422326A	Gowrie_Ck Cranley	Oakey Creek	21/10/1985													6.2	OK	125	0.03	OK	135				
422326A	Gowrie_Ck Cranley	Oakey Creek	6/01/1986													6.2	OK	125	0.02	OK	135				
422326A	Gowrie_Ck Cranley	Oakey Creek	1/04/1986													5.7	OK	125	0.02	OK	135				
422326A	Gowrie_Ck Cranley	Oakey Creek	1/07/1986													3.7	OK	125	0.02	OK	135				
422326A	Gowrie_Ck Cranley	Oakey Creek	19/09/1986													11	OK	125	0.06	OK	135				
422326A	Gowrie_Ck Cranley	Oakey Creek	19/12/1986													4.8	OK	125	0.03	OK	135				
422326A	Gowrie_Ck Cranley	Oakey Creek	6/03/1987													6	OK	125	0.04	OK	135				

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Station	Station Name	Receiving Creek/ River	Date	V2345.00	F2345.00	Q2345.00	V2351.50	F2351.50	Q2351.50	DO & Temp	F2351.50	Q2351.50	V2363.00	F2363.00	Q2363.00	V2401.00	F2401.00	Q2401.00	V2551.00	F2551.00	Q2551.00	V2574.00	F2574.00	Q2574.00
				Ammonia as N - soluble (mg/L)			Oxygen (Dissolved) (mg/L)FLD			DO (% saturation)			Total Phosphorus as P (mg/L)			Sulphate as SO4 (mg/L)			Boron as B (mg/L)			Cadmium as Cd total (ug/L)		
422326A	Gowrie_Ck Cranley	Oakey Creek	20/05/1987													7.3	OK	125	0.03	OK	135			
422326A	Gowrie_Ck Cranley	Oakey Creek	4/09/1987													5.2	OK	125						
422326A	Gowrie_Ck Cranley	Oakey Creek	6/11/1987													4.5	OK	125	0.03	OK	135			
422326A	Gowrie_Ck Cranley	Oakey Creek	11/03/1988													15	OK	125	0.03	OK	135			
422326A	Gowrie_Ck Cranley	Oakey Creek	13/05/1988													6	OK	125	0.01	OK	135			
422326A	Gowrie_Ck Cranley	Oakey Creek	5/08/1988													5.6	OK	125	0.02	OK	135			
422326A	Gowrie_Ck Cranley	Oakey Creek	14/12/1988																					
422326A	Gowrie_Ck Cranley	Oakey Creek	5/06/1989																					
422326A	Gowrie_Ck Cranley	Oakey Creek	16/08/1989																					
422326A	Gowrie_Ck Cranley	Oakey Creek	27/10/1989													5.1	OK	125						
422326A	Gowrie_Ck Cranley	Oakey Creek	16/07/1990													6.6	OK	125	0.02	OK	135			
422326A	Gowrie_Ck Cranley	Oakey Creek	18/10/1990													4.8	OK	125	0.02	OK	135			
422326A	Gowrie_Ck Cranley	Oakey Creek	11/03/1991																					
422326A	Gowrie_Ck Cranley	Oakey Creek	19/11/1991																					
422326A	Gowrie_Ck Cranley	Oakey Creek	6/03/1992													3.4	OK	125						
422326A	Gowrie_Ck Cranley	Oakey Creek	14/07/1992													3.8	OK	125						
422326A	Gowrie_Ck Cranley	Oakey Creek	19/10/1992													5.3	OK	125						
422326A	Gowrie_Ck Cranley	Oakey Creek	11/02/1993													4.3	OK	125						
422326A	Gowrie_Ck Cranley	Oakey Creek	3/03/1993																					
422326A	Gowrie_Ck Cranley	Oakey Creek	8/06/1993																					
422326A	Gowrie_Ck Cranley	Oakey Creek	8/06/1993													4.8	OK	125						
422326A	Gowrie_Ck Cranley	Oakey Creek	20/10/1993																					
422326A	Gowrie_Ck Cranley	Oakey Creek	20/10/1993																					
422326A	Gowrie_Ck Cranley	Oakey Creek	16/03/1994																					
422326A	Gowrie_Ck Cranley	Oakey Creek	13/07/1994																					
422326A	Gowrie_Ck Cranley	Oakey Creek	5/12/1994																					
422326A	Gowrie_Ck Cranley	Oakey Creek	1/09/1995																					
422326A	Gowrie_Ck Cranley	Oakey Creek	30/01/1996																					
422326A	Gowrie_Ck Cranley	Oakey Creek	30/05/1996				10.5	OK	130	114	OK	130												
422326A	Gowrie_Ck Cranley	Oakey Creek	4/09/1996				10.4	OK	130	115	OK	130												
422326A	Gowrie_Ck Cranley	Oakey Creek	6/01/1997				10	OK	130	125	OK	130												
422326A	Gowrie_Ck Cranley	Oakey Creek	14/04/1997																					
422326A	Gowrie_Ck Cranley	Oakey Creek	3/06/1997				11.6	OK	130	115	OK	130	0.0391	OK	130	3.68	OK	130	0	ND	130			
422326A	Gowrie_Ck Cranley	Oakey Creek	28/07/1997				11.2	OK	130	121	OK	130												
422326A	Gowrie_Ck Cranley	Oakey Creek	7/08/1997																					
422326A	Gowrie_Ck Cranley	Oakey Creek	17/11/1997				7.4	OK	130	99	OK	130	0.0847	OK	130	3.03	OK	130	0	ND	130			
422326A	Gowrie_Ck Cranley	Oakey Creek	26/09/1998										0.1559	OK	130	4.69	OK	130	0	ND	130			
422326A	Gowrie_Ck Cranley	Oakey Creek	11/01/1999	0.04	OK	130							0.38	OK	130									
422326A	Gowrie_Ck Cranley	Oakey Creek	12/04/1999	0.008	OK	130							0.05	OK	130									
422326A	Gowrie_Ck Cranley	Oakey Creek	15/06/1999				10.7	OK	130	98	OK	130	0.044	OK	130	3.75	OK	130	0	ND	130			
422326A	Gowrie_Ck Cranley	Oakey Creek	12/07/1999	0.005	OK	130							0.08	OK	130									
422326A	Gowrie_Ck Cranley	Oakey Creek	1/09/1999				8.4	OK	130	85	OK	130	0.4593	OK	130	4.23	OK	130	0	ND	130			
422326A	Gowrie_Ck Cranley	Oakey Creek	11/10/1999	0.002	OK	130							0.059	OK	130									
422326A	Gowrie_Ck Cranley	Oakey Creek	19/10/1999																					
422326A	Gowrie_Ck Cranley	Oakey Creek	25/10/1999																					
422326A	Gowrie_Ck Cranley	Oakey Creek	26/10/1999																					
422326A	Gowrie_Ck Cranley	Oakey Creek	26/10/1999																					
422326A	Gowrie_Ck Cranley	Oakey Creek	16/02/2000																					
422326A	Gowrie_Ck Cranley	Oakey Creek	16/02/2000																					
422326A	Gowrie_Ck Cranley	Oakey Creek	19/04/2000																					
422326A	Gowrie_Ck Cranley	Oakey Creek	9/05/2000																					
422326A	Gowrie_Ck Cranley	Oakey Creek	19/06/2000				13.8	OK	130	136	OK	130	0.0181	OK	130	6	<	130	0.1	<	130			
422326A	Gowrie_Ck Cranley	Oakey Creek	25/09/2000	0.038	OK	130	9.1	OK	130	99	OK	130	0.062	OK	130	4.34	OK	130	0.06	OK	130			
422326A	Gowrie_Ck Cranley	Oakey Creek	25/09/2000																					
422326A	Gowrie_Ck Cranley	Oakey Creek	8/01/2001																					

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				Ammonia as N - soluble (mg/L)	Oxygen (Dissolved) (mg/L)FLD	DO (% saturation)	Total Phosphorus as P (mg/L)	Sulphate as SO4 (mg/L)	Boron as B (mg/L)	Cadmium as Cd total (ug/L)														
422326A	Gowrie_Ck Cranley	Oakey Creek	1/02/2001		7.7 OK	130	89	OK	130	0.3844	OK	130	2.09	OK	130	0.06	OK	130						
422326A	Gowrie_Ck Cranley	Oakey Creek	6/02/2001	0.0526	OK	130	8.6	OK	130	102	OK	130	0.1151	OK	130	14.98	OK	130	0.08	OK	130			
422326A	Gowrie_Ck Cranley	Oakey Creek	31/05/2001																					
422326A	Gowrie_Ck Cranley	Oakey Creek	18/06/2001		4.9	OK	130	46	OK	130														
422326A	Gowrie_Ck Cranley	Oakey Creek	24/10/2001																					
422326A	Gowrie_Ck Cranley	Oakey Creek	17/04/2002		8.1	OK	130	90	OK	130														
422326A	Gowrie_Ck Cranley	Oakey Creek	17/04/2002							0.043	OK	130	5.79	OK	130	0.06	OK	130						
422326A	Gowrie_Ck Cranley	Oakey Creek	22/04/2002		9.6	OK	130	110	OK	130														
422326A	Gowrie_Ck Cranley	Oakey Creek	2/07/2002																					
422326A	Gowrie_Ck Cranley	Oakey Creek	16/07/2002		11.7	OK	130	108	OK	130														
422326A	Gowrie_Ck Cranley	Oakey Creek	9/09/2002																					
422326A	Gowrie_Ck Cranley	Oakey Creek	21/11/2002																					
422326A	Gowrie_Ck Cranley	Oakey Creek	10/12/2002							0.1188	OK	130	3.47	OK	130	0.03	OK	130						
422326A	Gowrie_Ck Cranley	Oakey Creek	5/12/2003							0.68	OK	130	2	<	130	0	>	130						
422326A	Gowrie_Ck Cranley	Oakey Creek	5/12/2003		7.8	OK	130	91	OK	130	0.39	OK	130	2	<	130	0.1	<	130					
422326A	Gowrie_Ck Cranley	Oakey Creek	8/12/2003							0.76	OK	130	4	>	130	0	>	130						
422326A	Gowrie_Ck Cranley	Oakey Creek	10/03/2004		8.4	OK	130	104	OK	130	0.081	OK	130	5	<	130	0.1	<	130					
422326A	Gowrie_Ck Cranley	Oakey Creek	25/01/2005		4.4	OK	130	53	OK	130	0.074	OK	130	3	<	130	0.1	<	130					
422326A	Gowrie_Ck Cranley	Oakey Creek	22/07/2005							0.021	OK	130	3.8	OK	130	0.03	OK	130						
422326A	Gowrie_Ck Cranley	Oakey Creek	22/09/2005							0.056	OK	130	2.8	OK	130	0.04	OK	130						
422326A	Gowrie_Ck Cranley	Oakey Creek	22/08/2006		10.9	OK	130	104	OK	130	0.0431	OK	10	3.7	OK	131	0.1	OK	131					
422326A	Gowrie_Ck Cranley	Oakey Creek	26/08/2006										3.4	OK	10	0.02	OK	10						
422326A	Gowrie_Ck Cranley	Oakey Creek	14/01/2009		9.9	OK	130	117	OK	130														
422326A	Gowrie_Ck Cranley	Oakey Creek	27/04/2009		10.1	OK	130	105	OK	130														
422326A	Gowrie_Ck Cranley	Oakey Creek	14/09/2009		5.2	OK	130	54	OK	130														
422330A	Oakey_Ck Oakey	Oakey Creek	8/03/1971																					
422330A	Oakey_Ck Oakey	Oakey Creek	8/03/1971										23	OK	125									
422330A	Oakey_Ck Oakey	Oakey Creek	18/10/1971																					
422330A	Oakey_Ck Oakey	Oakey Creek	8/01/1973																					
422330A	Oakey_Ck Oakey	Oakey Creek	26/01/1973																					
422330A	Oakey_Ck Oakey	Oakey Creek	24/07/1973													0.04	OK	135						
422330A	Oakey_Ck Oakey	Oakey Creek	17/09/1973																					
422330A	Oakey_Ck Oakey	Oakey Creek	13/10/1975										10	OK	125									
422330A	Oakey_Ck Oakey	Oakey Creek	29/12/1975										3	OK	125									
422330A	Oakey_Ck Oakey	Oakey Creek	29/12/1975										4	OK	125									
422330A	Oakey_Ck Oakey	Oakey Creek	23/08/1976										38	OK	125									
422332A	Gowrie_Ck Oakey	Oakey Creek	15/03/1971										18	OK	125									
422332A	Gowrie_Ck Oakey	Oakey Creek	31/05/1971										27	OK	125									
422332A	Gowrie_Ck Oakey	Oakey Creek	31/05/1971																					
422332A	Gowrie_Ck Oakey	Oakey Creek	19/07/1971										22	OK	125									
422332A	Gowrie_Ck Oakey	Oakey Creek	19/07/1971																					
422332A	Gowrie_Ck Oakey	Oakey Creek	30/08/1971										163	OK	125									
422332A	Gowrie_Ck Oakey	Oakey Creek	30/08/1971																					
422332A	Gowrie_Ck Oakey	Oakey Creek	18/10/1971										17	OK	151									
422332A	Gowrie_Ck Oakey	Oakey Creek	13/03/1972																					
422332A	Gowrie_Ck Oakey	Oakey Creek	21/08/1972										30	OK	125									
422332A	Gowrie_Ck Oakey	Oakey Creek	23/10/1972										4	OK	125									
422332A	Gowrie_Ck Oakey	Oakey Creek	8/05/1973										26	OK	125	0.14	OK	135						
422332A	Gowrie_Ck Oakey	Oakey Creek	8/05/1973																					
422332A	Gowrie_Ck Oakey	Oakey Creek	17/09/1973																					
422332A	Gowrie_Ck Oakey	Oakey Creek	17/09/1973																					
422332A	Gowrie_Ck Oakey	Oakey Creek	29/10/1973										24	OK	125									
422332A	Gowrie_Ck Oakey	Oakey Creek	21/01/1974										1.7	OK	125									
422332A	Gowrie_Ck Oakey	Oakey Creek	12/09/1974										23.4	OK	125									
422332A	Gowrie_Ck Oakey	Oakey Creek	13/10/1975										16	OK	125									

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Station	Station Name	Receiving Creek/ River	Date	V2345.00	F2345.00	Q2345.00	V2351.50	F2351.50	Q2351.50	DO & Temp	F2351.50	Q2351.50	V2363.00	F2363.00	Q2363.00	V2401.00	F2401.00	Q2401.00	V2551.00	F2551.00	Q2551.00	V2574.00	F2574.00	Q2574.00
				Ammonia as N - soluble (mg/L)			Oxygen (Dissolved) (mg/L)FLD			DO (% saturation)			Total Phosphorus as P (mg/L)			Sulphate as SO4 (mg/L)			Boron as B (mg/L)			Cadmium as Cd total (ug/L)		
422332A	Gowrie_Ck Oakey	Oakey Creek	8/12/1975													21	OK	125						
422332A	Gowrie_Ck Oakey	Oakey Creek	25/02/1976													15	OK	125						
422332A	Gowrie_Ck Oakey	Oakey Creek	9/10/1978													9	OK	125						
422332A	Gowrie_Ck Oakey	Oakey Creek	9/07/1979													42	OK	125						
422332A	Gowrie_Ck Oakey	Oakey Creek	9/07/1979													25	OK	125						
422332A	Gowrie_Ck Oakey	Oakey Creek	9/07/1979																					
422332A	Gowrie_Ck Oakey	Oakey Creek	10/09/1979													67	OK	125						
422332A	Gowrie_Ck Oakey	Oakey Creek	10/09/1979																					
422332A	Gowrie_Ck Oakey	Oakey Creek	29/01/1980													13	OK	125						
422332A	Gowrie_Ck Oakey	Oakey Creek	29/01/1980																					
422332A	Gowrie_Ck Oakey	Oakey Creek	14/04/1980													55	OK	125						
422332A	Gowrie_Ck Oakey	Oakey Creek	14/04/1980																					
422332A	Gowrie_Ck Oakey	Oakey Creek	1/07/1980													61	OK	125						
422332A	Gowrie_Ck Oakey	Oakey Creek	1/07/1980																					
422332A	Gowrie_Ck Oakey	Oakey Creek	30/01/1981													49	OK	125						
422332A	Gowrie_Ck Oakey	Oakey Creek	30/01/1981																					
422332A	Gowrie_Ck Oakey	Oakey Creek	26/08/2006													245	OK	10	3.2	OK	10			
422350A	Oakey_Ck Fairview	Oakey Creek	18/06/1963																					
422350A	Oakey_Ck Fairview	Oakey Creek	25/09/1963													9	OK	125						
422350A	Oakey_Ck Fairview	Oakey Creek	22/07/1964													25	OK	125						
422350A	Oakey_Ck Fairview	Oakey Creek	8/12/1964													12	OK	125						
422350A	Oakey_Ck Fairview	Oakey Creek	10/05/1965													21	OK	125						
422350A	Oakey_Ck Fairview	Oakey Creek	21/10/1965													15	OK	125						
422350A	Oakey_Ck Fairview	Oakey Creek	16/10/1980													68	OK	125						
422350A	Oakey_Ck Fairview	Oakey Creek	29/01/1981													11	OK	125						
422350A	Oakey_Ck Fairview	Oakey Creek	8/02/1981													6	OK	125						
422350A	Oakey_Ck Fairview	Oakey Creek	8/02/1981													5	OK	125						
422350A	Oakey_Ck Fairview	Oakey Creek	9/02/1981													6	OK	125						
422350A	Oakey_Ck Fairview	Oakey Creek	19/02/1981													9	OK	125						
422350A	Oakey_Ck Fairview	Oakey Creek	15/04/1981													10	OK	125						
422350A	Oakey_Ck Fairview	Oakey Creek	30/06/1981													30	OK	125						
422350A	Oakey_Ck Fairview	Oakey Creek	15/09/1981													26	OK	125						
422350A	Oakey_Ck Fairview	Oakey Creek	16/02/1982													3	OK	125						
422350A	Oakey_Ck Fairview	Oakey Creek	29/06/1982													48	OK	125						
422350A	Oakey_Ck Fairview	Oakey Creek	14/09/1982													38	OK	125						
422350A	Oakey_Ck Fairview	Oakey Creek	25/11/1982													42	OK	125						
422350A	Oakey_Ck Fairview	Oakey Creek	13/05/1983													12	OK	125	0.04	OK	135			
422350A	Oakey_Ck Fairview	Oakey Creek	28/07/1983													32	OK	125	0.08	OK	135			
422350A	Oakey_Ck Fairview	Oakey Creek	10/10/1983													38	OK	125	0.11	OK	135			
422350A	Oakey_Ck Fairview	Oakey Creek	13/12/1983													9	OK	125	0.06	OK	135			
422350A	Oakey_Ck Fairview	Oakey Creek	6/03/1984													31	OK	125	0.08	OK	135			
422350A	Oakey_Ck Fairview	Oakey Creek	28/05/1984													9.5	OK	125	0.11	OK	135			
422350A	Oakey_Ck Fairview	Oakey Creek	11/10/1984													34	OK	125						
422350A	Oakey_Ck Fairview	Oakey Creek	9/01/1985													24	OK	125	0.1	OK	135			
422350A	Oakey_Ck Fairview	Oakey Creek	24/07/1985													22	OK	125	0.06	OK	135			
422350A	Oakey_Ck Fairview	Oakey Creek	21/10/1985													32	OK	125	0.04	OK	135			
422350A	Oakey_Ck Fairview	Oakey Creek	7/01/1986													29	OK	125	0.1	OK	135			
422350A	Oakey_Ck Fairview	Oakey Creek	2/04/1986													17.5	OK	125	0.07	OK	135			
422350A	Oakey_Ck Fairview	Oakey Creek	1/07/1986													19	OK	125	0.12	OK	135			
422350A	Oakey_Ck Fairview	Oakey Creek	8/10/1986													78	OK	125	0.2	OK	135			
422350A	Oakey_Ck Fairview	Oakey Creek	15/01/1987													67	OK	125	0.17	OK	135			
422350A	Oakey_Ck Fairview	Oakey Creek	2/04/1987													79	OK	125	0.2	OK	135			
422350A	Oakey_Ck Fairview	Oakey Creek	19/06/1987													25	OK	125	0.11	OK	135			
422350A	Oakey_Ck Fairview	Oakey Creek	3/09/1987													52	OK	125						
422350A	Oakey_Ck Fairview	Oakey Creek	5/11/1987													15	OK	125	0.08	OK	135			

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Station	Station Name	Receiving Creek/ River	Date	V2345.00	F2345.00	Q2345.00	V2351.50	F2351.50	Q2351.50	DO & Temp	F2351.50	Q2351.50	V2363.00	F2363.00	Q2363.00	V2401.00	F2401.00	Q2401.00	V2551.00	F2551.00	Q2551.00	V2574.00	F2574.00	Q2574.00
				Ammonia as N - soluble (mg/L)			Oxygen (Dissolved) (mg/L)FLD			DO (% saturation)			Total Phosphorus as P (mg/L)			Sulphate as SO4 (mg/L)			Boron as B (mg/L)			Cadmium as Cd total (ug/L)		
422350A	Oakey_Ck Fairview	Oakey Creek	8/03/1988													52	OK	125	0.1	OK	135			
422350A	Oakey_Ck Fairview	Oakey Creek	25/05/1988													48	OK	125	0.07	OK	135			
422350A	Oakey_Ck Fairview	Oakey Creek	4/08/1988													23	OK	125	0.05	OK	135			
422350A	Oakey_Ck Fairview	Oakey Creek	10/11/1988													48	OK	125	0.11	OK	135			
422350A	Oakey_Ck Fairview	Oakey Creek	26/01/1989													21	OK	125	0.06	OK	135			
422350A	Oakey_Ck Fairview	Oakey Creek	6/09/1989													41	OK	125	0.1	OK	135			
422350A	Oakey_Ck Fairview	Oakey Creek	7/12/1989													7.4	OK	125	0.01	OK	135			
422350A	Oakey_Ck Fairview	Oakey Creek	23/03/1990													26	OK	125	0.06	OK	135			
422350A	Oakey_Ck Fairview	Oakey Creek	3/07/1990													36.3	OK	125	0.05	OK	135			
422350A	Oakey_Ck Fairview	Oakey Creek	16/10/1990													44.3	OK	125	0.11	OK	135			
422350A	Oakey_Ck Fairview	Oakey Creek	12/10/1992													36	OK	125	0.1	OK	135			
422350A	Oakey_Ck Fairview	Oakey Creek	9/06/1993													54.2	OK	125	0.1	OK	135			
422350A	Oakey_Ck Fairview	Oakey Creek	15/03/1994																					
422350A	Oakey_Ck Fairview	Oakey Creek	15/03/1994													29.3	OK	125						
422350A	Oakey_Ck Fairview	Oakey Creek	14/07/1994													108.6	OK	125	0.1	OK	135			
422350A	Oakey_Ck Fairview	Oakey Creek	20/07/1994													111.9	OK	125	0.1	OK	135			
422350A	Oakey_Ck Fairview	Oakey Creek	8/12/1994										2.2352	OK	130	85.5	OK	130	0.2	OK	130			
422350A	Oakey_Ck Fairview	Oakey Creek	28/03/1995																					
422350A	Oakey_Ck Fairview	Oakey Creek	28/03/1995				9.9	OK	130	129	OK	130	1.1365	OK	130	14.08	OK	130	0.2	OK	130			
422350A	Oakey_Ck Fairview	Oakey Creek	5/05/1995				4.9	OK	130	54	OK	130	0.6095	OK	130	47.06	OK	130	0.7	OK	130			
422350A	Oakey_Ck Fairview	Oakey Creek	14/08/1995										1.3405	OK	130	121.46	OK	130	1.5	OK	130			
422350A	Oakey_Ck Fairview	Oakey Creek	18/08/1995																					
422350A	Oakey_Ck Fairview	Oakey Creek	7/09/1995																					
422350A	Oakey_Ck Fairview	Oakey Creek	13/09/1995																					
422350A	Oakey_Ck Fairview	Oakey Creek	20/09/1995																					
422350A	Oakey_Ck Fairview	Oakey Creek	4/11/1995				13	OK	130	143	OK	130	0.8413	OK	130	125.68	OK	130	1.9	OK	130			
422350A	Oakey_Ck Fairview	Oakey Creek	12/12/1995																					
422350A	Oakey_Ck Fairview	Oakey Creek	6/02/1996				3.9	OK	130	51	OK	130												
422350A	Oakey_Ck Fairview	Oakey Creek	28/05/1996				8.9	OK	130	90	OK	130	0.4329	OK	130									
422350A	Oakey_Ck Fairview	Oakey Creek	29/05/1996																					
422350A	Oakey_Ck Fairview	Oakey Creek	13/06/1996				9	OK	130	92	OK	130	0.8569	OK	130									
422350A	Oakey_Ck Fairview	Oakey Creek	20/06/1996																					
422350A	Oakey_Ck Fairview	Oakey Creek	16/09/1996																					
422350A	Oakey_Ck Fairview	Oakey Creek	16/09/1996				11.2	OK	130	125	OK	130	1.3947	OK	130									
422350A	Oakey_Ck Fairview	Oakey Creek	7/10/1996																					
422350A	Oakey_Ck Fairview	Oakey Creek	31/10/1996																					
422350A	Oakey_Ck Fairview	Oakey Creek	18/11/1996				9	OK	130	112	OK	130	1	OK	130	59.08	OK	130	0.8	OK	130			
422350A	Oakey_Ck Fairview	Oakey Creek	7/01/1997				14.5	OK	130	170	OK	130	0.6262	OK	130	40.29	OK	130	0	ND	130			
422350A	Oakey_Ck Fairview	Oakey Creek	25/03/1997																					
422350A	Oakey_Ck Fairview	Oakey Creek	23/04/1997				9.6	OK	130	113	OK	130	0.4101	OK	130	50.44	OK	130	1.1	OK	130			
422350A	Oakey_Ck Fairview	Oakey Creek	29/05/1997																					
422350A	Oakey_Ck Fairview	Oakey Creek	21/07/1997				8.9	OK	130	85	OK	130	1.0821	OK	130	78.9	OK	130	1.7	OK	130			
422350A	Oakey_Ck Fairview	Oakey Creek	25/09/1997																					
422350A	Oakey_Ck Fairview	Oakey Creek	13/11/1997																					
422350A	Oakey_Ck Fairview	Oakey Creek	24/11/1997				4.6	OK	130	59	OK	130	1.3416	OK	130	31.19	OK	130	0.7	OK	130			
422350A	Oakey_Ck Fairview	Oakey Creek	28/04/1998				7.4	OK	130	83	OK	130												
422350A	Oakey_Ck Fairview	Oakey Creek	21/05/1998				7	OK	130	76	OK	130	0.8363	OK	130	10.22	OK	130	0.2	OK	130			
422350A	Oakey_Ck Fairview	Oakey Creek	7/10/1998				7.2	OK	130	87	OK	130	0.9684	OK	130	42.73	OK	130	1	OK	130			
422350A	Oakey_Ck Fairview	Oakey Creek	19/11/1998				6.7	OK	130	80	OK	130	0.7164	OK	130	79.64	OK	130	2	OK	130			
422350A	Oakey_Ck Fairview	Oakey Creek	18/02/1999				4.7	OK	130	64	OK	130	0.5112	OK	130	11.08	OK	130	0.1	OK	130			
422350A	Oakey_Ck Fairview	Oakey Creek	22/03/1999																					
422350A	Oakey_Ck Fairview	Oakey Creek	16/06/1999				6.3	OK	130	59	OK	130	0.8767	OK	130	71.42	OK	130	1.6	OK	130			
422350A	Oakey_Ck Fairview	Oakey Creek	29/06/1999																					
422350A	Oakey_Ck Fairview	Oakey Creek	1/09/1999				9.6	OK	130	103	OK	130	1.0517	OK	130	70.74	OK	130	1.4	OK	130			
422350A	Oakey_Ck Fairview	Oakey Creek	1/09/1999																					

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Station	Station Name	Receiving Creek/ River	Date	V2345.00	F2345.00	Q2345.00	V2351.50	F2351.50	Q2351.50	DO & Temp	F2351.50	Q2351.50	V2363.00	F2363.00	Q2363.00	V2401.00	F2401.00	Q2401.00	V2551.00	F2551.00	Q2551.00	V2574.00	F2574.00	Q2574.00
				Ammonia as N - soluble (mg/L)			Oxygen (Dissolved) (mg/L)FLD			DO (% saturation)			Total Phosphorus as P (mg/L)			Sulphate as SO4 (mg/L)			Boron as B (mg/L)			Cadmium as Cd total (ug/L)		
422350A	Oakey_Ck Fairview	Oakey Creek	27/01/2000																					
422350A	Oakey_Ck Fairview	Oakey Creek	27/01/2000				7.2	OK	130	85	OK	130	0.6933	OK	130	13.45	OK	130	0.2	OK	130			
422350A	Oakey_Ck Fairview	Oakey Creek	2/02/2000																					
422350A	Oakey_Ck Fairview	Oakey Creek	21/02/2000				7.7	OK	130	97	OK	130	0.7709	OK	130	16.62	OK	130	0.2	OK	130			
422350A	Oakey_Ck Fairview	Oakey Creek	19/06/2000				7.2	OK	130	72	OK	130	1.0935	OK	130	50	OK	130	0.7	OK	130			
422350A	Oakey_Ck Fairview	Oakey Creek	24/08/2000																					
422350A	Oakey_Ck Fairview	Oakey Creek	1/12/2000																					
422350A	Oakey_Ck Fairview	Oakey Creek	5/02/2001										2.1596	OK	130									
422350A	Oakey_Ck Fairview	Oakey Creek	6/02/2001	0.1204	OK	130							1.244	OK	130	12.26	OK	130	0.05	OK	130			
422350A	Oakey_Ck Fairview	Oakey Creek	6/02/2001																					
422350A	Oakey_Ck Fairview	Oakey Creek	6/02/2001										1.3947	OK	130									
422350A	Oakey_Ck Fairview	Oakey Creek	8/02/2001										0.8442	OK	130									
422350A	Oakey_Ck Fairview	Oakey Creek	17/04/2001										0.6042	OK	130									
422350A	Oakey_Ck Fairview	Oakey Creek	29/05/2001										0.3557	OK	130	96.62	OK	130	1.23	OK	130			
422350A	Oakey_Ck Fairview	Oakey Creek	13/06/2001				7.4	OK	130	79	OK	130	0.4988	OK	130	53.25	OK	130	0	ND	130			
422350A	Oakey_Ck Fairview	Oakey Creek	12/07/2001				6.7	OK	130	67	OK	130												
422350A	Oakey_Ck Fairview	Oakey Creek	20/08/2001																					
422350A	Oakey_Ck Fairview	Oakey Creek	15/10/2001				9.8	OK	130	120	OK	130	0.3077	OK	130	101.36	OK	130	1.92	OK	130			
422350A	Oakey_Ck Fairview	Oakey Creek	25/10/2001				7.1	OK	130	84	OK	130												
422350A	Oakey_Ck Fairview	Oakey Creek	11/11/2001										0.0991	OK	130									
422350A	Oakey_Ck Fairview	Oakey Creek	12/11/2001										1.2062	OK	130									
422350A	Oakey_Ck Fairview	Oakey Creek	13/11/2001										1.2657	OK	130									
422350A	Oakey_Ck Fairview	Oakey Creek	13/11/2001				5.1	OK	130	61	OK	130												
422350A	Oakey_Ck Fairview	Oakey Creek	30/11/2001																					
422350A	Oakey_Ck Fairview	Oakey Creek	6/03/2002				6.1	OK	130	73	OK	130												
422350A	Oakey_Ck Fairview	Oakey Creek	17/04/2002										0.9478	OK	130	22.32	OK	130	0.78	OK	130			
422350A	Oakey_Ck Fairview	Oakey Creek	15/05/2002										0.4288	OK	130	22.43	OK	130	0.46	OK	130			
422350A	Oakey_Ck Fairview	Oakey Creek	27/06/2002																					
422350A	Oakey_Ck Fairview	Oakey Creek	3/10/2002																					
422350A	Oakey_Ck Fairview	Oakey Creek	7/10/2002				9.3	OK	130	127	OK	130	0.3477	OK	130	148.08	OK	130	2.53	OK	130			
422350A	Oakey_Ck Fairview	Oakey Creek	12/05/2003				12.5	OK	130	136	OK	130	0.8708	OK	130	34.97	OK	130	0.79	OK	130			
422350A	Oakey_Ck Fairview	Oakey Creek	12/10/2003				9.3	OK	130	102	OK	130	0.37	OK	130	185	OK	130	3.2	OK	130			
422350A	Oakey_Ck Fairview	Oakey Creek	8/12/2003										1.5	OK	130	53	OK	130	1.1	OK	130			
422350A	Oakey_Ck Fairview	Oakey Creek	9/12/2003				6.3	OK	130	81	OK	130	1.2	OK	130	46	<	130	0.9	<	130			
422350A	Oakey_Ck Fairview	Oakey Creek	11/03/2004										0.75	OK	130	14	<	130	0.3	<	130			
422350A	Oakey_Ck Fairview	Oakey Creek	26/11/2004										1.209	OK	130	150	OK	130	3.2	OK	130			
422350A	Oakey_Ck Fairview	Oakey Creek	25/01/2005				5	OK	130	60	OK	130	1.4	OK	130	46	OK	130	1.4	OK	130			
422350A	Oakey_Ck Fairview	Oakey Creek	20/12/2005				3.4	OK	130	45	OK	130	0.746	OK	10	33	OK	130	0.9	OK	130			
422350A	Oakey_Ck Fairview	Oakey Creek	15/03/2006				7.9	OK	130	104	OK	130	0.3277	OK	130	36	OK	130	0.99	OK	130			
422350A	Oakey_Ck Fairview	Oakey Creek	15/08/2006				11.9	OK	130	112	OK	130	0.1558	OK	10	269	OK	131	2.8	OK	131			
422350A	Oakey_Ck Fairview	Oakey Creek	16/09/2009				14.9	OK	130	157	OK	130												

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Station	Station Name	Receiving Creek/ River	Date	V2622.00	F2622.00	Q2622.00	V2624.00	F2624.00	Q2624.00	V2641.00	F2641.00	Q2641.00	V2694.00	F2694.00	Q2694.00	V2744.00	F2744.00	Q2744.00	V2822.00	F2822.00	Q2822.00	V2824.00	F2824.00	Q2824.00
				Copper as Cu soluble mg/L			Copper as Cu total (ug/L)			Flouride as F (mg/L)			Lead as Pb total (ug/L)			Nickel as Ni total (ug/L)			Zinc as Zn soluble (mg/L)			Zinc as Zn total (ug/L)		
422314A	Condamine_R Range Br	Condamine River	24/09/1963							0.1	OK	125												
422314A	Condamine_R Range Br	Condamine River	28/04/1964							0.1	OK	125												
422314A	Condamine_R Range Br	Condamine River	21/07/1964							0.1	OK	125												
422314A	Condamine_R Range Br	Condamine River	8/12/1964							0.2	OK	125												
422314A	Condamine_R Range Br	Condamine River	14/09/1965							0.3	OK	125												
422314A	Condamine_R Range Br	Condamine River	8/08/1996	0	ND	130				0.14	OK	130												
422314A	Condamine_R Range Br	Condamine River	4/03/1997	0.02	OK	130				0.14	OK	130							0	ND	130			
422314A	Condamine_R Range Br	Condamine River	22/05/1997	0.02	OK	130				0.24	OK	130												
422314A	Condamine_R Range Br	Condamine River	20/11/1997	0.01	OK	130				0.19	OK	130							0	ND	130			
422314A	Condamine_R Range Br	Condamine River	18/02/1998	0.01	OK	130				0.18	OK	130							0	ND	130			
422314A	Condamine_R Range Br	Condamine River	28/05/1998	0.01	OK	130				0.18	OK	130							0.01	OK	130			
422314A	Condamine_R Range Br	Condamine River	16/03/2001	0	ND	130				0.14	OK	130							0.01	OK	130			
422314A	Condamine_R Range Br	Condamine River	8/11/2001	0	ND	130				0.17	OK	130							0.04	OK	130			
422316A	Condamine_R Cecil Wr	Condamine River	27/05/1963							0.6	OK	125												
422316A	Condamine_R Cecil Wr	Condamine River	18/06/1963							0.3	OK	125												
422316A	Condamine_R Cecil Wr	Condamine River	1/08/1963							0.1	OK	125												
422316A	Condamine_R Cecil Wr	Condamine River	25/09/1963							0.1	OK	125												
422316A	Condamine_R Cecil Wr	Condamine River	17/12/1964							0.2	OK	125												
422316A	Condamine_R Cecil Wr	Condamine River	31/10/1965							0.8	OK	125												
422316A	Condamine_R Cecil Wr	Condamine River	1/06/1971							0.2	OK	125												
422316A	Condamine_R Cecil Wr	Condamine River	1/06/1971																					
422316A	Condamine_R Cecil Wr	Condamine River	20/07/1971																					
422316A	Condamine_R Cecil Wr	Condamine River	1/09/1971							0.15	OK	125												
422316A	Condamine_R Cecil Wr	Condamine River	18/10/1971							0.15	OK	125												
422316A	Condamine_R Cecil Wr	Condamine River	1/04/1972							0.15	OK	125												
422316A	Condamine_R Cecil Wr	Condamine River	30/06/1972							0.2	OK	125												
422316A	Condamine_R Cecil Wr	Condamine River	23/08/1972							0.16	OK	125												
422316A	Condamine_R Cecil Wr	Condamine River	30/09/1972							0.18	OK	125												
422316A	Condamine_R Cecil Wr	Condamine River	31/12/1972							0.18	OK	125												
422316A	Condamine_R Cecil Wr	Condamine River	21/01/1973							0.21	OK	125												
422316A	Condamine_R Cecil Wr	Condamine River	20/03/1973							0.14	OK	125												
422316A	Condamine_R Cecil Wr	Condamine River	20/03/1973																					
422316A	Condamine_R Cecil Wr	Condamine River	2/04/1973							0.15	OK	125												
422316A	Condamine_R Cecil Wr	Condamine River	9/05/1973							0.3	OK	125												
422316A	Condamine_R Cecil Wr	Condamine River	19/06/1973							0.02	OK	125												
422316A	Condamine_R Cecil Wr	Condamine River	19/06/1973																					
422316A	Condamine_R Cecil Wr	Condamine River	1/07/1973							0.13	OK	125												
422316A	Condamine_R Cecil Wr	Condamine River	25/07/1973							0.17	OK	125												
422316A	Condamine_R Cecil Wr	Condamine River	25/07/1973																					
422316A	Condamine_R Cecil Wr	Condamine River	31/10/1973							0.15	OK	125												
422316A	Condamine_R Cecil Wr	Condamine River	31/10/1973																					
422316A	Condamine_R Cecil Wr	Condamine River	17/12/1973							0.26	OK	125												
422316A	Condamine_R Cecil Wr	Condamine River	23/01/1974																					
422316A	Condamine_R Cecil Wr	Condamine River	27/03/1974							0.23	OK	125												
422316A	Condamine_R Cecil Wr	Condamine River	27/03/1974																					
422316A	Condamine_R Cecil Wr	Condamine River	1/07/1974							0.14	OK	125												
422316A	Condamine_R Cecil Wr	Condamine River	17/09/1974							0.18	OK	125												
422316A	Condamine_R Cecil Wr	Condamine River	17/09/1974																					
422316A	Condamine_R Cecil Wr	Condamine River	3/12/1974							0.23	OK	125												
422316A	Condamine_R Cecil Wr	Condamine River	14/10/1975							0.2	OK	125												
422316A	Condamine_R Cecil Wr	Condamine River	10/12/1975							0.1	OK	125												
422316A	Condamine_R Cecil Wr	Condamine River	29/01/1976							0.36	OK	125												
422316A	Condamine_R Cecil Wr	Condamine River	12/05/1976							0.2	OK	125												
422316A	Condamine_R Cecil Wr	Condamine River	12/05/1976							0.5	OK	125												
422316A	Condamine_R Cecil Wr	Condamine River	30/06/1976							0.2	OK	125												

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Station	Station Name	Receiving Creek/ River	Date	V2622.00	F2622.00	Q2622.00	V2624.00	F2624.00	Q2624.00	V2641.00	F2641.00	Q2641.00	V2694.00	F2694.00	Q2694.00	V2744.00	F2744.00	Q2744.00	V2822.00	F2822.00	Q2822.00	V2824.00	F2824.00	Q2824.00
				Copper as Cu soluble mg/L			Copper as Cu total (ug/L)			Flouride as F (mg/L)			Lead as Pb total (ug/L)			Nickel as Ni total (ug/L)			Zinc as Zn soluble (mg/L)			Zinc as Zn total (ug/L)		
422316A	Condamine_R Cecil Wr	Condamine River	25/08/1976							0.3	OK	125												
422316A	Condamine_R Cecil Wr	Condamine River	30/09/1976																					
422316A	Condamine_R Cecil Wr	Condamine River	3/11/1977							0.3	OK	125												
422316A	Condamine_R Cecil Wr	Condamine River	14/03/1978							0.1	OK	125												
422316A	Condamine_R Cecil Wr	Condamine River	25/04/1978							0.3	OK	125												
422316A	Condamine_R Cecil Wr	Condamine River	27/07/1978							0.3	OK	125												
422316A	Condamine_R Cecil Wr	Condamine River	11/10/1978							0.1	OK	125												
422316A	Condamine_R Cecil Wr	Condamine River	14/02/1979							0.1	OK	125												
422316A	Condamine_R Cecil Wr	Condamine River	14/02/1979																					
422316A	Condamine_R Cecil Wr	Condamine River	11/07/1979							0.1	OK	125												
422316A	Condamine_R Cecil Wr	Condamine River	11/07/1979																					
422316A	Condamine_R Cecil Wr	Condamine River	3/09/1979							0.1	OK	125												
422316A	Condamine_R Cecil Wr	Condamine River	12/09/1979							0.1	OK	125												
422316A	Condamine_R Cecil Wr	Condamine River	12/09/1979																					
422316A	Condamine_R Cecil Wr	Condamine River	30/01/1980							0.3	OK	125												
422316A	Condamine_R Cecil Wr	Condamine River	30/01/1980																					
422316A	Condamine_R Cecil Wr	Condamine River	31/01/1980							0.3	OK	125												
422316A	Condamine_R Cecil Wr	Condamine River	2/07/1980							0.1	OK	125												
422316A	Condamine_R Cecil Wr	Condamine River	2/07/1980																					
422316A	Condamine_R Cecil Wr	Condamine River	1/07/1981							0.1	OK	125												
422316A	Condamine_R Cecil Wr	Condamine River	1/07/1981																					
422316A	Condamine_R Cecil Wr	Condamine River	8/07/1982							0.1	OK	125												
422316A	Condamine_R Cecil Wr	Condamine River	28/09/1982							0.1	OK	125												
422316A	Condamine_R Cecil Wr	Condamine River	28/07/1983							0.1	OK	125												
422316A	Condamine_R Cecil Wr	Condamine River	29/05/1984							0.3	OK	125												
422316A	Condamine_R Cecil Wr	Condamine River	29/05/1984																					
422316A	Condamine_R Cecil Wr	Condamine River	9/01/1985							0.1	OK	125												
422316A	Condamine_R Cecil Wr	Condamine River	9/01/1985																					
422316A	Condamine_R Cecil Wr	Condamine River	14/05/1985							0.2	OK	125												
422316A	Condamine_R Cecil Wr	Condamine River	14/05/1985																					
422316A	Condamine_R Cecil Wr	Condamine River	22/10/1985							0.2	OK	125												
422316A	Condamine_R Cecil Wr	Condamine River	22/10/1985																					
422316A	Condamine_R Cecil Wr	Condamine River	8/10/1986							0.2	OK	125												
422316A	Condamine_R Cecil Wr	Condamine River	8/10/1986																					
422316A	Condamine_R Cecil Wr	Condamine River	14/01/1987							0.2	OK	125												
422316A	Condamine_R Cecil Wr	Condamine River	14/01/1987																					
422316A	Condamine_R Cecil Wr	Condamine River	2/04/1987							0.2	OK	125												
422316A	Condamine_R Cecil Wr	Condamine River	2/04/1987																					
422316A	Condamine_R Cecil Wr	Condamine River	18/06/1987							0.1	OK	125												
422316A	Condamine_R Cecil Wr	Condamine River	18/06/1987																					
422316A	Condamine_R Cecil Wr	Condamine River	3/09/1987							0.1	OK	125												
422316A	Condamine_R Cecil Wr	Condamine River	3/09/1987																					
422316A	Condamine_R Cecil Wr	Condamine River	5/11/1987							0.2	OK	125												
422316A	Condamine_R Cecil Wr	Condamine River	5/11/1987																					
422316A	Condamine_R Cecil Wr	Condamine River	6/04/1988																					
422316A	Condamine_R Cecil Wr	Condamine River	23/05/1988							0.2	OK	125												
422316A	Condamine_R Cecil Wr	Condamine River	24/05/1988							0.1	OK	125												
422316A	Condamine_R Cecil Wr	Condamine River	24/05/1988																					
422316A	Condamine_R Cecil Wr	Condamine River	4/08/1988							0.1	OK	125												
422316A	Condamine_R Cecil Wr	Condamine River	4/08/1988																					
422316A	Condamine_R Cecil Wr	Condamine River	10/11/1988							0.2	OK	125												
422316A	Condamine_R Cecil Wr	Condamine River	10/11/1988																					
422316A	Condamine_R Cecil Wr	Condamine River	26/01/1989							0.2	OK	125												
422316A	Condamine_R Cecil Wr	Condamine River	26/01/1989																					
422316A	Condamine_R Cecil Wr	Condamine River	22/08/1989							0.1	OK	125												

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Station	Station Name	Receiving Creek/ River	Date	V2622.00	F2622.00	Q2622.00	V2624.00	F2624.00	Q2624.00	V2641.00	F2641.00	Q2641.00	V2694.00	F2694.00	Q2694.00	V2744.00	F2744.00	Q2744.00	V2822.00	F2822.00	Q2822.00	V2824.00	F2824.00	Q2824.00
				Copper as Cu soluble mg/L			Copper as Cu total (ug/L)			Flouride as F (mg/L)			Lead as Pb total (ug/L)			Nickel as Ni total (ug/L)			Zinc as Zn soluble (mg/L)			Zinc as Zn total (ug/L)		
422316A	Condamine_R Cecil Wr	Condamine River	22/08/1989																					
422316A	Condamine_R Cecil Wr	Condamine River	28/03/1990							0.17	OK	125												
422316A	Condamine_R Cecil Wr	Condamine River	28/03/1990																					
422316A	Condamine_R Cecil Wr	Condamine River	3/07/1990							0.12	OK	125												
422316A	Condamine_R Cecil Wr	Condamine River	3/07/1990																					
422316A	Condamine_R Cecil Wr	Condamine River	17/10/1990	0.07	OK	135				0.16	OK	125								0.01	OK	135		
422316A	Condamine_R Cecil Wr	Condamine River	17/10/1990																					
422316A	Condamine_R Cecil Wr	Condamine River	25/02/1992	0.02	OK	135				0.17	OK	125												
422316A	Condamine_R Cecil Wr	Condamine River	25/02/1992																					
422316A	Condamine_R Cecil Wr	Condamine River	2/07/1992	0.1	OK	135				0.13	OK	125								0.01	OK	135		
422316A	Condamine_R Cecil Wr	Condamine River	2/07/1992																					
422316A	Condamine_R Cecil Wr	Condamine River	21/10/1992							0.14	OK	125								0.01	OK	135		
422316A	Condamine_R Cecil Wr	Condamine River	21/10/1992																					
422316A	Condamine_R Cecil Wr	Condamine River	8/03/1994	0.01	OK	135				0.1	OK	125												
422316A	Condamine_R Cecil Wr	Condamine River	8/03/1994																					
422316A	Condamine_R Cecil Wr	Condamine River	12/04/1994	0.04	OK	135				0.13	OK	125												
422316A	Condamine_R Cecil Wr	Condamine River	16/05/1994	0.08	OK	135				0.15	OK	125												
422316A	Condamine_R Cecil Wr	Condamine River	15/06/1994	0.01	OK	135				0.13	OK	125												
422316A	Condamine_R Cecil Wr	Condamine River	12/07/1994							0.16	OK	125												
422316A	Condamine_R Cecil Wr	Condamine River	14/07/1994																					
422316A	Condamine_R Cecil Wr	Condamine River	15/08/1994	0.04	OK	135				0.14	OK	125												
422316A	Condamine_R Cecil Wr	Condamine River	15/08/1994																					
422316A	Condamine_R Cecil Wr	Condamine River	20/09/1994	0.01	OK	135				0.14	OK	125												
422316A	Condamine_R Cecil Wr	Condamine River	20/09/1994																					
422316A	Condamine_R Cecil Wr	Condamine River	11/10/1994	0.03	OK	135				0.12	OK	125								0.01	OK	135		
422316A	Condamine_R Cecil Wr	Condamine River	11/10/1994																					
422316A	Condamine_R Cecil Wr	Condamine River	28/11/1994	0	ND	130	2	OK	130	0.19	OK	130	2	OK	130	5	OK	130	0	ND	130	10	OK	130
422316A	Condamine_R Cecil Wr	Condamine River	10/01/1995	0	ND	130				0.21	OK	130								0.02	OK	130		
422316A	Condamine_R Cecil Wr	Condamine River	15/02/1995	0.01	OK	130				0.21	OK	130								0.02	OK	130		
422316A	Condamine_R Cecil Wr	Condamine River	21/03/1995	0.02	OK	130	6	OK	130	0.16	OK	130	2	OK	130	10	OK	130	0.01	OK	130	20	OK	130
422316A	Condamine_R Cecil Wr	Condamine River	11/04/1995	0.08	OK	130				0.17	OK	130								0.01	OK	130		
422316A	Condamine_R Cecil Wr	Condamine River	24/05/1995	0.01	OK	130				0.16	OK	130								0	ND	130		
422316A	Condamine_R Cecil Wr	Condamine River	27/06/1995	0.01	OK	130	4	OK	130	0.17	OK	130	0	ND	130	5	OK	130	0.03	OK	130	10	OK	130
422316A	Condamine_R Cecil Wr	Condamine River	26/07/1995																					
422316A	Condamine_R Cecil Wr	Condamine River	13/08/1995																					
422316A	Condamine_R Cecil Wr	Condamine River	30/08/1995																					
422316A	Condamine_R Cecil Wr	Condamine River	25/09/1995	0.03	OK	130	3	OK	130	0.18	OK	130	0	ND	130	5	OK	130	0.07	OK	130	10	OK	130
422316A	Condamine_R Cecil Wr	Condamine River	26/09/1995	0.05	OK	130				0.22	OK	130								0.03	OK	130		
422316A	Condamine_R Cecil Wr	Condamine River	17/10/1995	0.07	OK	130				0.19	OK	130								0.01	OK	130		
422316A	Condamine_R Cecil Wr	Condamine River	11/12/1995	0	ND	130				0.15	OK	130								0.01	OK	130		
422316A	Condamine_R Cecil Wr	Condamine River	20/12/1995	0.02	OK	130				0.18	OK	130								0	ND	130		
422316A	Condamine_R Cecil Wr	Condamine River	30/01/1996	0.03	OK	130				0.2	OK	130								0.02	OK	130		
422316A	Condamine_R Cecil Wr	Condamine River	5/02/1996																					
422316A	Condamine_R Cecil Wr	Condamine River	28/02/1996	0.01	OK	130				0	ND	130								0.01	OK	130		
422316A	Condamine_R Cecil Wr	Condamine River	27/03/1996																					
422316A	Condamine_R Cecil Wr	Condamine River	28/05/1996	0.03	OK	130				0.12	OK	130								0.01	OK	130		
422316A	Condamine_R Cecil Wr	Condamine River	19/06/1996	0	ND	130				0.11	OK	130								0	ND	130		
422316A	Condamine_R Cecil Wr	Condamine River	25/07/1996	0.01	OK	130				0.13	OK	130								0	ND	130		
422316A	Condamine_R Cecil Wr	Condamine River	17/09/1996																					
422316A	Condamine_R Cecil Wr	Condamine River	17/09/1996																					
422316A	Condamine_R Cecil Wr	Condamine River	3/12/1996																					
422316A	Condamine_R Cecil Wr	Condamine River	3/12/1996	0.01	OK	130				0.27	OK	130								0	ND	130		
422316A	Condamine_R Cecil Wr	Condamine River	11/02/1997	0	ND	130				0.18	OK	130								0	ND	130		
422316A	Condamine_R Cecil Wr	Condamine River	25/03/1997																					
422316A	Condamine_R Cecil Wr	Condamine River	24/04/1997																					

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Station	Station Name	Receiving Creek/ River	Date	V2622.00	F2622.00	Q2622.00	V2624.00	F2624.00	Q2624.00	V2641.00	F2641.00	Q2641.00	V2694.00	F2694.00	Q2694.00	V2744.00	F2744.00	Q2744.00	V2822.00	F2822.00	Q2822.00	V2824.00	F2824.00	Q2824.00
				Copper as Cu soluble mg/L			Copper as Cu total (ug/L)			Flouride as F (mg/L)			Lead as Pb total (ug/L)			Nickel as Ni total (ug/L)			Zinc as Zn soluble (mg/L)			Zinc as Zn total (ug/L)		
422316A	Condamine_R Cecil Wr	Condamine River	24/04/1997																					
422316A	Condamine_R Cecil Wr	Condamine River	29/05/1997																					
422316A	Condamine_R Cecil Wr	Condamine River	20/06/1997	0.01	OK	130				0.15	OK	130								0	ND	130		
422316A	Condamine_R Cecil Wr	Condamine River	22/07/1997																					
422316A	Condamine_R Cecil Wr	Condamine River	25/09/1997																					
422316A	Condamine_R Cecil Wr	Condamine River	25/09/1997																					
422316A	Condamine_R Cecil Wr	Condamine River	25/11/1997																					
422316A	Condamine_R Cecil Wr	Condamine River	25/11/1997																					
422316A	Condamine_R Cecil Wr	Condamine River	25/11/1997	0.01	OK	130				0.15	OK	130								0	ND	130		
422316A	Condamine_R Cecil Wr	Condamine River	28/04/1998																					
422316A	Condamine_R Cecil Wr	Condamine River	7/10/1998	0.03	OK	130				0.13	OK	130								0	ND	130		
422316A	Condamine_R Cecil Wr	Condamine River	18/02/1999	0.01	OK	130				0.11	OK	130								0	ND	130		
422316A	Condamine_R Cecil Wr	Condamine River	19/03/1999																					
422316A	Condamine_R Cecil Wr	Condamine River	16/06/1999	0	ND	130				0.12	OK	130								0	ND	130		
422316A	Condamine_R Cecil Wr	Condamine River	29/06/1999																					
422316A	Condamine_R Cecil Wr	Condamine River	29/06/1999																					
422316A	Condamine_R Cecil Wr	Condamine River	1/09/1999	0	ND	130				0.08	OK	130								0	ND	130		
422316A	Condamine_R Cecil Wr	Condamine River	12/11/1999																					
422316A	Condamine_R Cecil Wr	Condamine River	17/11/1999																					
422316A	Condamine_R Cecil Wr	Condamine River	14/01/2000																					
422316A	Condamine_R Cecil Wr	Condamine River	24/01/2000																					
422316A	Condamine_R Cecil Wr	Condamine River	27/01/2000																					
422316A	Condamine_R Cecil Wr	Condamine River	27/01/2000	0	ND	130				0.2	OK	130								0.01	OK	130		
422316A	Condamine_R Cecil Wr	Condamine River	21/02/2000	0	ND	130				0.15	OK	130								0	ND	130		
422316A	Condamine_R Cecil Wr	Condamine River	19/06/2000	0.05	<	130				0.2	OK	130								0.02	<	130		
422316A	Condamine_R Cecil Wr	Condamine River	5/09/2000																					
422316A	Condamine_R Cecil Wr	Condamine River	21/12/2000																					
422316A	Condamine_R Cecil Wr	Condamine River	5/01/2001																					
422316A	Condamine_R Cecil Wr	Condamine River	5/01/2001																					
422316A	Condamine_R Cecil Wr	Condamine River	18/01/2001																					
422316A	Condamine_R Cecil Wr	Condamine River	25/01/2001																					
422316A	Condamine_R Cecil Wr	Condamine River	1/02/2001																					
422316A	Condamine_R Cecil Wr	Condamine River	1/02/2001	0.02	OK	130				0.18	OK	130								0.03	OK	130		
422316A	Condamine_R Cecil Wr	Condamine River	6/02/2001																					
422316A	Condamine_R Cecil Wr	Condamine River	8/02/2001																					
422316A	Condamine_R Cecil Wr	Condamine River	27/02/2001																					
422316A	Condamine_R Cecil Wr	Condamine River	17/03/2001	0	ND	130				0.11	OK	130								0	ND	130		
422316A	Condamine_R Cecil Wr	Condamine River	20/03/2001																					
422316A	Condamine_R Cecil Wr	Condamine River	17/04/2001																					
422316A	Condamine_R Cecil Wr	Condamine River	13/06/2001	0	ND	130				0.12	OK	130								0	ND	130		
422316A	Condamine_R Cecil Wr	Condamine River	11/07/2001																					
422316A	Condamine_R Cecil Wr	Condamine River	9/11/2001	0	ND	130				0.12	OK	130								0.02	OK	130		
422316A	Condamine_R Cecil Wr	Condamine River	10/04/2002																					
422316A	Condamine_R Cecil Wr	Condamine River	17/04/2002	0.01	OK	130				0.13	OK	130								0.04	OK	130		
422316A	Condamine_R Cecil Wr	Condamine River	26/09/2002																					
422316A	Condamine_R Cecil Wr	Condamine River	21/11/2002																					
422316A	Condamine_R Cecil Wr	Condamine River	8/05/2003																					
422316A	Condamine_R Cecil Wr	Condamine River	5/06/2003																					
422316A	Condamine_R Cecil Wr	Condamine River	6/11/2003																					
422316A	Condamine_R Cecil Wr	Condamine River	10/03/2004	0.03	<	130				0.2	OK	130								0.01	OK	130		
422316A	Condamine_R Cecil Wr	Condamine River	11/03/2004	0.03	<	130				0.2	OK	130								0.02	OK	130		
422316A	Condamine_R Cecil Wr	Condamine River	20/12/2005	0.03	<	130				0.2	OK	130								0.01	<	130		
422316A	Condamine_R Cecil Wr	Condamine River	15/03/2006	0.03	<	130				0.2	OK	130								0.03	OK	130		
422316A	Condamine_R Cecil Wr	Condamine River	29/08/2006	0.03	<	10				0.2	OK	10								0.01	OK	10		
422316A	Condamine_R Cecil Wr	Condamine River	1/07/2009																					

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Station	Station Name	Receiving Creek/ River	Date	V2622.00	F2622.00	Q2622.00	V2624.00	F2624.00	Q2624.00	V2641.00	F2641.00	Q2641.00	V2694.00	F2694.00	Q2694.00	V2744.00	F2744.00	Q2744.00	V2822.00	F2822.00	Q2822.00	V2824.00	F2824.00	Q2824.00
				Copper as Cu soluble mg/L			Copper as Cu total (ug/L)			Flouride as F (mg/L)			Lead as Pb total (ug/L)			Nickel as Ni total (ug/L)			Zinc as Zn soluble (mg/L)			Zinc as Zn total (ug/L)		
422322A	Rocky_Ck Pittsworth	Condamine River	26/09/1963							0.3	OK	125												
422322A	Rocky_Ck Pittsworth	Condamine River	30/08/1971							0.6	OK	125												
422322A	Rocky_Ck Pittsworth	Condamine River	5/05/1983							0.2	OK	125												
422322A	Rocky_Ck Pittsworth	Condamine River	4/12/1996	0.01	OK	130				0.15	OK	130							0.01	OK	130			
422322A	Rocky_Ck Pittsworth	Condamine River	4/12/1996	0.01	OK	130				0.15	OK	130							0.01	OK	130			
422323A	Tummalville	Condamine River	11/03/1963							0.4	OK	125												
422323A	Tummalville	Condamine River	28/05/1963							0.6	OK	125												
422323A	Tummalville	Condamine River	1/08/1963																					
422323A	Tummalville	Condamine River	26/09/1963																					
422323A	Tummalville	Condamine River	31/10/1963							0.2	OK	125												
422323A	Tummalville	Condamine River	16/01/1964							0.3	OK	125												
422323A	Tummalville	Condamine River	11/03/1964							0.1	OK	125												
422323A	Tummalville	Condamine River	13/03/1964							0.4	OK	125												
422323A	Tummalville	Condamine River	17/07/1964							0.5	OK	125												
422323A	Tummalville	Condamine River	17/12/1964							0.2	OK	125												
422323A	Tummalville	Condamine River	26/03/1971							0.2	OK	125												
422323A	Tummalville	Condamine River	26/03/1971																					
422323A	Tummalville	Condamine River	1/06/1971							0.2	OK	125												
422323A	Tummalville	Condamine River	17/06/1971							0.2	OK	125												
422323A	Tummalville	Condamine River	21/07/1971							0.1	OK	125												
422323A	Tummalville	Condamine River	21/07/1971																					
422323A	Tummalville	Condamine River	1/09/1971							0.15	OK	125												
422323A	Tummalville	Condamine River	20/10/1971							0.3	OK	125												
422323A	Tummalville	Condamine River	16/12/1971							0.3	OK	125												
422323A	Tummalville	Condamine River	27/01/1972							0.55	OK	125												
422323A	Tummalville	Condamine River	15/03/1972							0.5	OK	125												
422323A	Tummalville	Condamine River	13/07/1972							0.3	OK	125												
422323A	Tummalville	Condamine River	8/09/1972							0.05	OK	125												
422323A	Tummalville	Condamine River	25/10/1972							0.22	OK	125												
422323A	Tummalville	Condamine River	7/12/1972							0.15	OK	125												
422323A	Tummalville	Condamine River	7/12/1972																					
422323A	Tummalville	Condamine River	9/01/1973							0.17	OK	125												
422323A	Tummalville	Condamine River	25/01/1973							0.24	OK	125												
422323A	Tummalville	Condamine River	4/05/1973							0.14	OK	125												
422323A	Tummalville	Condamine River	4/05/1973																					
422323A	Tummalville	Condamine River	19/06/1973							0.13	OK	125												
422323A	Tummalville	Condamine River	19/06/1973																					
422323A	Tummalville	Condamine River	25/07/1973							0.14	OK	125												
422323A	Tummalville	Condamine River	25/07/1973																					
422323A	Tummalville	Condamine River	19/08/1973							0.15	OK	125												
422323A	Tummalville	Condamine River	19/08/1973																					
422323A	Tummalville	Condamine River	31/10/1973							0.15	OK	125												
422323A	Tummalville	Condamine River	31/10/1973																					
422323A	Tummalville	Condamine River	20/12/1973							0.16	OK	125												
422323A	Tummalville	Condamine River	28/03/1974							0.2	OK	125												
422323A	Tummalville	Condamine River	29/08/1974							0.16	OK	125												
422323A	Tummalville	Condamine River	10/06/1975							0.1	OK	125												
422323A	Tummalville	Condamine River	14/10/1975							0.2	OK	125												
422323A	Tummalville	Condamine River	8/12/1975							0.15	OK	125												
422323A	Tummalville	Condamine River	11/12/1975							0.2	OK	125												
422323A	Tummalville	Condamine River	26/08/1976							0.3	OK	125												
422323A	Tummalville	Condamine River	9/02/1978							0.1	OK	125												
422323A	Tummalville	Condamine River	6/04/1978							0.1	OK	125												
422323A	Tummalville	Condamine River	16/02/1979							0.1	OK	125												
422323A	Tummalville	Condamine River	16/07/1979							0.1	OK	125												

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Station	Station Name	Receiving Creek/ River	Date	V2622.00	F2622.00	Q2622.00	V2624.00	F2624.00	Q2624.00	V2641.00	F2641.00	Q2641.00	V2694.00	F2694.00	Q2694.00	V2744.00	F2744.00	Q2744.00	V2822.00	F2822.00	Q2822.00	V2824.00	F2824.00	Q2824.00
				Copper as Cu soluble mg/L			Copper as Cu total (ug/L)			Flouride as F (mg/L)			Lead as Pb total (ug/L)			Nickel as Ni total (ug/L)			Zinc as Zn soluble (mg/L)			Zinc as Zn total (ug/L)		
422323A	Tummalville	Condamine River	16/07/1979																					
422323A	Tummalville	Condamine River	1/02/1980							0.2	OK	125												
422323A	Tummalville	Condamine River	1/02/1980																					
422323A	Tummalville	Condamine River	16/04/1980							0.2	OK	125												
422323A	Tummalville	Condamine River	16/04/1980																					
422323A	Tummalville	Condamine River	3/07/1980							0.1	OK	125												
422323A	Tummalville	Condamine River	3/07/1980																					
422323A	Tummalville	Condamine River	11/09/1980							0.1	OK	125												
422323A	Tummalville	Condamine River	8/04/1981							0.2	OK	125												
422323A	Tummalville	Condamine River	8/04/1981																					
422323A	Tummalville	Condamine River	2/07/1981							0.1	OK	125												
422323A	Tummalville	Condamine River	2/07/1981																					
422323A	Tummalville	Condamine River	15/09/1981							0.2	OK	125												
422323A	Tummalville	Condamine River	7/05/1982							0.1	OK	125												
422323A	Tummalville	Condamine River	30/06/1982							0.1	OK	125												
422323A	Tummalville	Condamine River	19/11/1982							0.2	OK	125												
422323A	Tummalville	Condamine River	19/11/1982																					
422323A	Tummalville	Condamine River	3/02/1983							0.2	OK	125												
422323A	Tummalville	Condamine River	3/02/1983																					
422323A	Tummalville	Condamine River	4/05/1983							0.1	OK	125												
422323A	Tummalville	Condamine River	11/05/1983							0.1	OK	125												
422323A	Tummalville	Condamine River	2/06/1983							0.1	OK	125												
422323A	Tummalville	Condamine River	27/07/1983							0.1	OK	125												
422323A	Tummalville	Condamine River	12/10/1983							0.1	OK	125												
422323A	Tummalville	Condamine River	12/10/1983																					
422323A	Tummalville	Condamine River	16/12/1983							0.1	OK	125												
422323A	Tummalville	Condamine River	16/12/1983																					
422323A	Tummalville	Condamine River	31/05/1984							0.1	OK	125												
422323A	Tummalville	Condamine River	31/05/1984																					
422323A	Tummalville	Condamine River	11/10/1984							0.1	OK	125												
422323A	Tummalville	Condamine River	11/10/1984																					
422323A	Tummalville	Condamine River	12/03/1985							0.1	OK	125												
422323A	Tummalville	Condamine River	12/03/1985																					
422323A	Tummalville	Condamine River	14/05/1985							0.1	OK	125												
422323A	Tummalville	Condamine River	14/05/1985																					
422323A	Tummalville	Condamine River	29/07/1985							0.1	OK	125												
422323A	Tummalville	Condamine River	29/07/1985																					
422323A	Tummalville	Condamine River	22/10/1985							0.2	OK	125												
422323A	Tummalville	Condamine River	22/10/1985																					
422323A	Tummalville	Condamine River	3/07/1986							0.2	OK	125												
422323A	Tummalville	Condamine River	3/07/1986																					
422323A	Tummalville	Condamine River	7/10/1986							0.2	OK	125												
422323A	Tummalville	Condamine River	7/10/1986																					
422323A	Tummalville	Condamine River	13/01/1987							0.2	OK	125												
422323A	Tummalville	Condamine River	13/01/1987																					
422323A	Tummalville	Condamine River	2/04/1987							0.2	OK	125												
422323A	Tummalville	Condamine River	2/04/1987																					
422323A	Tummalville	Condamine River	15/06/1987							0.1	OK	125												
422323A	Tummalville	Condamine River	15/06/1987																					
422323A	Tummalville	Condamine River	2/09/1987							0.1	OK	125												
422323A	Tummalville	Condamine River	2/09/1987																					
422323A	Tummalville	Condamine River	4/11/1987							0.2	OK	125												
422323A	Tummalville	Condamine River	4/11/1987																					
422323A	Tummalville	Condamine River	18/05/1988							0.1	OK	125												
422323A	Tummalville	Condamine River	18/05/1988																					

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Station	Station Name	Receiving Creek/ River	Date	V2622.00	F2622.00	Q2622.00	V2624.00	F2624.00	Q2624.00	V2641.00	F2641.00	Q2641.00	V2694.00	F2694.00	Q2694.00	V2744.00	F2744.00	Q2744.00	V2822.00	F2822.00	Q2822.00	V2824.00	F2824.00	Q2824.00
				Copper as Cu soluble mg/L			Copper as Cu total (ug/L)			Flouride as F (mg/L)			Lead as Pb total (ug/L)			Nickel as Ni total (ug/L)			Zinc as Zn soluble (mg/L)			Zinc as Zn total (ug/L)		
422323A	Tummalville	Condamine River	9/02/1989							0.1	OK	125												
422323A	Tummalville	Condamine River	9/02/1989																					
422323A	Tummalville	Condamine River	23/08/1989							0.1	OK	125												
422323A	Tummalville	Condamine River	23/08/1989																					
422323A	Tummalville	Condamine River	13/07/1990							0.12	OK	125												
422323A	Tummalville	Condamine River	13/07/1990																					
422323A	Tummalville	Condamine River	1/10/1990	0.06	OK	135				0.15	OK	125												
422323A	Tummalville	Condamine River	19/02/1992	0.03	OK	135				0.17	OK	125												
422323A	Tummalville	Condamine River	10/07/1992	0.07	OK	135				0.13	OK	125							0.01	OK	135			
422323A	Tummalville	Condamine River	26/10/1992							0.15	OK	125							0.01	OK	135			
422323A	Tummalville	Condamine River	26/10/1992																					
422323A	Tummalville	Condamine River	10/02/1993							0.15	OK	125												
422323A	Tummalville	Condamine River	10/02/1993																					
422323A	Tummalville	Condamine River	25/02/1993																					
422323A	Tummalville	Condamine River	10/06/1993	0.03	OK	135				0.15	OK	125												
422323A	Tummalville	Condamine River	10/06/1993																					
422323A	Tummalville	Condamine River	9/03/1994							0.22	OK	125												
422323A	Tummalville	Condamine River	9/03/1994																					
422323A	Tummalville	Condamine River	14/07/1994							0.14	OK	125							0.01	OK	135			
422323A	Tummalville	Condamine River	14/07/1994																					
422323A	Tummalville	Condamine River	3/04/1995																					
422323A	Tummalville	Condamine River	3/04/1995	0.06	OK	130				0.2	OK	130							0	ND	130			
422323A	Tummalville	Condamine River	29/08/1995	0.04	OK	130				0.22	OK	130							0	ND	130			
422323A	Tummalville	Condamine River	29/08/1995																					
422323A	Tummalville	Condamine River	13/09/1995																					
422323A	Tummalville	Condamine River	15/09/1995																					
422323A	Tummalville	Condamine River	22/11/1995																					
422323A	Tummalville	Condamine River	29/11/1995																					
422323A	Tummalville	Condamine River	29/11/1995																					
422323A	Tummalville	Condamine River	8/01/1996	0.04	OK	130				0.11	OK	130							0.01	OK	130			
422323A	Tummalville	Condamine River	1/02/1996																					
422323A	Tummalville	Condamine River	24/02/1996																					
422323A	Tummalville	Condamine River	24/02/1996																					
422323A	Tummalville	Condamine River	17/07/1996																					
422323A	Tummalville	Condamine River	18/09/1996																					
422323A	Tummalville	Condamine River	23/10/1996																					
422323A	Tummalville	Condamine River	24/10/1996																					
422323A	Tummalville	Condamine River	20/12/1996	0	ND	130				0.15	OK	130							0	ND	130			
422323A	Tummalville	Condamine River	25/03/1997																					
422323A	Tummalville	Condamine River	18/04/1997																					
422323A	Tummalville	Condamine River	18/04/1997																					
422323A	Tummalville	Condamine River	18/04/1997																					
422323A	Tummalville	Condamine River	18/04/1997																					
422323A	Tummalville	Condamine River	24/04/1997																					
422323A	Tummalville	Condamine River	29/05/1997																					
422323A	Tummalville	Condamine River	5/06/1997																					
422323A	Tummalville	Condamine River	24/07/1997	0	ND	130				0.14	OK	130							0	ND	130			
422323A	Tummalville	Condamine River	17/09/1997																					
422323A	Tummalville	Condamine River	17/09/1997																					
422323A	Tummalville	Condamine River	27/11/1997	0.01	OK	130				0.2	OK	130							0.01	OK	130			
422323A	Tummalville	Condamine River	27/11/1997																					
422323A	Tummalville	Condamine River	30/04/1998																					
422323A	Tummalville	Condamine River	17/07/1998																					
422323A	Tummalville	Condamine River	11/08/1998																					
422323A	Tummalville	Condamine River	6/10/1998																					

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Station	Station Name	Receiving Creek/ River	Date	V2622.00	F2622.00	Q2622.00	V2624.00	F2624.00	Q2624.00	V2641.00	F2641.00	Q2641.00	V2694.00	F2694.00	Q2694.00	V2744.00	F2744.00	Q2744.00	V2822.00	F2822.00	Q2822.00	V2824.00	F2824.00	Q2824.00
				Copper as Cu soluble mg/L			Copper as Cu total (ug/L)			Flouride as F (mg/L)			Lead as Pb total (ug/L)			Nickel as Ni total (ug/L)			Zinc as Zn soluble (mg/L)			Zinc as Zn total (ug/L)		
422323A	Tummalville	Condamine River	11/01/1999																					
422323A	Tummalville	Condamine River	22/02/1999	0.01	OK	130				0.09	OK	130								0.01	OK	130		
422323A	Tummalville	Condamine River	16/03/1999																					
422323A	Tummalville	Condamine River	19/03/1999																					
422323A	Tummalville	Condamine River	12/04/1999																					
422323A	Tummalville	Condamine River	16/06/1999	0	ND	130				0.12	OK	130								0.02	OK	130		
422323A	Tummalville	Condamine River	2/07/1999																					
422323A	Tummalville	Condamine River	12/07/1999																					
422323A	Tummalville	Condamine River	11/08/1999	0	ND	130				0.04	OK	130								0	ND	130		
422323A	Tummalville	Condamine River	10/11/1999																					
422323A	Tummalville	Condamine River	16/11/1999																					
422323A	Tummalville	Condamine River	29/02/2000	0.03	OK	130				0.14	OK	130								0	ND	130		
422323A	Tummalville	Condamine River	2/03/2000																					
422323A	Tummalville	Condamine River	19/06/2000	0.05	<	130				0.1	OK	130								0.02	OK	130		
422323A	Tummalville	Condamine River	13/09/2000																					
422323A	Tummalville	Condamine River	9/01/2001																					
422323A	Tummalville	Condamine River	14/02/2001																					
422323A	Tummalville	Condamine River	14/02/2001	0	ND	130				0.1	OK	130								0	ND	130		
422323A	Tummalville	Condamine River	13/06/2001	0.01	OK	130				0.1	OK	130								0	ND	130		
422323A	Tummalville	Condamine River	18/07/2001																					
422323A	Tummalville	Condamine River	12/02/2002																					
422323A	Tummalville	Condamine River	21/11/2002																					
422323A	Tummalville	Condamine River	7/05/2003																					
422323A	Tummalville	Condamine River	31/07/2003																					
422323A	Tummalville	Condamine River	15/12/2003																					
422323A	Tummalville	Condamine River	9/03/2004	0.03	<	130				0.1	OK	130								0.01	OK	130		
422323A	Tummalville	Condamine River	11/03/2004	0.03	<	130				0.1	OK	130								0.01	OK	130		
422323A	Tummalville	Condamine River	21/09/2005	0.03	<	130				0.1	OK	130								0.05	OK	130		
422323A	Tummalville	Condamine River	7/02/2006	0.03	<	10				0.1	OK	10								0.01	<	10		
422323A	Tummalville	Condamine River	29/04/2009																					
422333A	Condamine_R Loudouns	Condamine River	18/06/1963							0.3	OK	125												
422333A	Condamine_R Loudouns	Condamine River	18/03/1971							0.2	OK	125												
422333A	Condamine_R Loudouns	Condamine River	18/06/1971							0.3	OK	125												
422333A	Condamine_R Loudouns	Condamine River	21/07/1971							0.2	OK	125												
422333A	Condamine_R Loudouns	Condamine River	31/08/1971							0.3	OK	125												
422333A	Condamine_R Loudouns	Condamine River	19/10/1971							0.25	OK	125												
422333A	Condamine_R Loudouns	Condamine River	18/11/1971							0.3	OK	125												
422333A	Condamine_R Loudouns	Condamine River	14/03/1972							0.4	OK	125												
422333A	Condamine_R Loudouns	Condamine River	22/08/1972							0.25	OK	125												
422333A	Condamine_R Loudouns	Condamine River	24/10/1972							0.17	OK	125												
422333A	Condamine_R Loudouns	Condamine River	16/03/1973							0.16	OK	125												
422333A	Condamine_R Loudouns	Condamine River	9/05/1973							0.18	OK	125												
422333A	Condamine_R Loudouns	Condamine River	19/06/1973																					
422333A	Condamine_R Loudouns	Condamine River	25/07/1973							0.13	OK	125												
422333A	Condamine_R Loudouns	Condamine River	18/09/1973							0.13	OK	125												
422333A	Condamine_R Loudouns	Condamine River	30/10/1973							0.15	OK	125												
422333A	Condamine_R Loudouns	Condamine River	27/03/1974							0.28	OK	125												
422333A	Condamine_R Loudouns	Condamine River	27/03/1974																					
422333A	Condamine_R Loudouns	Condamine River	12/09/1974							0.18	OK	125												
422333A	Condamine_R Loudouns	Condamine River	24/08/1976							0.4	OK	125												
422333A	Condamine_R Loudouns	Condamine River	5/04/1978							0.1	OK	125												
422333A	Condamine_R Loudouns	Condamine River	10/10/1978							0.1	OK	125												
422333A	Condamine_R Loudouns	Condamine River	10/07/1979							0.1	OK	125												
422333A	Condamine_R Loudouns	Condamine River	10/07/1979																					
422333A	Condamine_R Loudouns	Condamine River	11/09/1979							0.1	OK	125												

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Station	Station Name	Receiving Creek/ River	Date	V2622.00	F2622.00	Q2622.00	V2624.00	F2624.00	Q2624.00	V2641.00	F2641.00	Q2641.00	V2694.00	F2694.00	Q2694.00	V2744.00	F2744.00	Q2744.00	V2822.00	F2822.00	Q2822.00	V2824.00	F2824.00	Q2824.00	
				Copper as Cu soluble mg/L			Copper as Cu total (ug/L)			Flouride as F (mg/L)			Lead as Pb total (ug/L)			Nickel as Ni total (ug/L)			Zinc as Zn soluble (mg/L)			Zinc as Zn total (ug/L)			
422333A	Condamine_R Loudouns	Condamine River	11/09/1979																						
422333A	Condamine_R Loudouns	Condamine River	13/09/1979							0.1	OK	125													
422333A	Condamine_R Loudouns	Condamine River	31/01/1980							0.3	OK	125													
422333A	Condamine_R Loudouns	Condamine River	2/07/1980							0.2	OK	125													
422333A	Condamine_R Loudouns	Condamine River	2/07/1980																						
422333A	Condamine_R Loudouns	Condamine River	28/05/1984							0.1	OK	125													
422333A	Condamine_R Loudouns	Condamine River	28/05/1984																						
422333A	Condamine_R Loudouns	Condamine River	10/10/1984							0.2	OK	125													
422333A	Condamine_R Loudouns	Condamine River	10/10/1984																						
422333A	Condamine_R Loudouns	Condamine River	9/01/1985							0.2	OK	125													
422333A	Condamine_R Loudouns	Condamine River	9/01/1985																						
422333A	Condamine_R Loudouns	Condamine River	13/05/1985							0.2	OK	125													
422333A	Condamine_R Loudouns	Condamine River	13/05/1985																						
422333A	Condamine_R Loudouns	Condamine River	24/07/1985							0.1	OK	125													
422333A	Condamine_R Loudouns	Condamine River	24/07/1985																						
422333A	Condamine_R Loudouns	Condamine River	21/10/1985							0.2	OK	125													
422333A	Condamine_R Loudouns	Condamine River	21/10/1985																						
422333A	Condamine_R Loudouns	Condamine River	6/01/1986							0.3	OK	125													
422333A	Condamine_R Loudouns	Condamine River	6/01/1986																						
422333A	Condamine_R Loudouns	Condamine River	2/07/1986							0.2	OK	125													
422333A	Condamine_R Loudouns	Condamine River	2/07/1986																						
422333A	Condamine_R Loudouns	Condamine River	9/10/1986							0.2	OK	125													
422333A	Condamine_R Loudouns	Condamine River	15/01/1987							0.2	OK	125													
422333A	Condamine_R Loudouns	Condamine River	15/01/1987																						
422333A	Condamine_R Loudouns	Condamine River	3/04/1987							0.3	OK	125													
422333A	Condamine_R Loudouns	Condamine River	3/04/1987																						
422333A	Condamine_R Loudouns	Condamine River	18/06/1987							0.1	OK	125													
422333A	Condamine_R Loudouns	Condamine River	18/06/1987																						
422333A	Condamine_R Loudouns	Condamine River	3/09/1987							0.1	OK	125													
422333A	Condamine_R Loudouns	Condamine River	3/09/1987																						
422333A	Condamine_R Loudouns	Condamine River	5/11/1987							0.2	OK	125													
422333A	Condamine_R Loudouns	Condamine River	5/11/1987																						
422333A	Condamine_R Loudouns	Condamine River	7/03/1988							0.2	OK	125													
422333A	Condamine_R Loudouns	Condamine River	25/05/1988							0.1	OK	125													
422333A	Condamine_R Loudouns	Condamine River	25/05/1988																						
422333A	Condamine_R Loudouns	Condamine River	25/08/1988							0.1	OK	125													
422333A	Condamine_R Loudouns	Condamine River	27/01/1989							0.2	OK	125													
422333A	Condamine_R Loudouns	Condamine River	27/01/1989																						
422333A	Condamine_R Loudouns	Condamine River	6/09/1989							0.1	OK	125													
422333A	Condamine_R Loudouns	Condamine River	6/09/1989																						
422333A	Condamine_R Loudouns	Condamine River	7/12/1989							0.24	OK	125													
422333A	Condamine_R Loudouns	Condamine River	3/07/1990							0.13	OK	125													
422333A	Condamine_R Loudouns	Condamine River	3/07/1990																						
422333A	Condamine_R Loudouns	Condamine River	16/10/1990	0.04	OK	135				0.2	OK	125													
422333A	Condamine_R Loudouns	Condamine River	16/10/1990																						
422333A	Condamine_R Loudouns	Condamine River	14/02/1992	0.03	OK	135				0.17	OK	125													
422333A	Condamine_R Loudouns	Condamine River	1/07/1992	0.03	OK	135				0.16	OK	125									0.01	OK	135		
422333A	Condamine_R Loudouns	Condamine River	1/07/1992																						
422333A	Condamine_R Loudouns	Condamine River	4/03/1994																						
422333A	Condamine_R Loudouns	Condamine River	12/04/1994	0.06	OK	135				0.15	OK	125													
422333A	Condamine_R Loudouns	Condamine River	16/05/1994	0.07	OK	135				0.16	OK	125									0.06	OK	135		
422333A	Condamine_R Loudouns	Condamine River	15/06/1994	0.01	OK	135				0.15	OK	125													
422333A	Condamine_R Loudouns	Condamine River	12/07/1994							0.16	OK	125													
422333A	Condamine_R Loudouns	Condamine River	13/07/1994																						
422333A	Condamine_R Loudouns	Condamine River	15/08/1994							0.16	OK	125													

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Station	Station Name	Receiving Creek/ River	Date	V2622.00	F2622.00	Q2622.00	V2624.00	F2624.00	Q2624.00	V2641.00	F2641.00	Q2641.00	V2694.00	F2694.00	Q2694.00	V2744.00	F2744.00	Q2744.00	V2822.00	F2822.00	Q2822.00	V2824.00	F2824.00	Q2824.00
				Copper as Cu soluble mg/L			Copper as Cu total (ug/L)			Flouride as F (mg/L)			Lead as Pb total (ug/L)			Nickel as Ni total (ug/L)			Zinc as Zn soluble (mg/L)			Zinc as Zn total (ug/L)		
422333A	Condamine_R Loudouns	Condamine River	15/08/1994																					
422333A	Condamine_R Loudouns	Condamine River	20/09/1994	0.02	OK	135				0.17	OK	125								0.01	OK	135		
422333A	Condamine_R Loudouns	Condamine River	20/09/1994																					
422333A	Condamine_R Loudouns	Condamine River	11/10/1994	0.03	OK	135				0.13	OK	125								0.01	OK	135		
422333A	Condamine_R Loudouns	Condamine River	11/10/1994																					
422333A	Condamine_R Loudouns	Condamine River	28/11/1994	0	ND	130	2	OK	130	0.21	OK	130	12	OK	130	10	OK	130	0	ND	130	10	OK	130
422333A	Condamine_R Loudouns	Condamine River	5/12/1994																					
422333A	Condamine_R Loudouns	Condamine River	10/01/1995	0	ND	130				0.26	OK	130								0.02	OK	130		
422333A	Condamine_R Loudouns	Condamine River	15/02/1995	0.01	OK	130				0.22	OK	130								0.02	OK	130		
422333A	Condamine_R Loudouns	Condamine River	21/03/1995	0.01	OK	130	12	OK	130	0.18	OK	130	4	OK	130	15	OK	130	0	ND	130	30	OK	130
422333A	Condamine_R Loudouns	Condamine River	28/03/1995																					
422333A	Condamine_R Loudouns	Condamine River	11/04/1995	0.06	OK	130				0.19	OK	130								0.01	OK	130		
422333A	Condamine_R Loudouns	Condamine River	24/05/1995	0.03	OK	130				0.19	OK	130								0	ND	130		
422333A	Condamine_R Loudouns	Condamine River	27/06/1995	0	ND	130	5	OK	130	0.2	OK	130	4	OK	130	5	OK	130	0	ND	130	80	OK	130
422333A	Condamine_R Loudouns	Condamine River	26/07/1995	0.02	OK	130				0.22	OK	130								0	ND	130		
422333A	Condamine_R Loudouns	Condamine River	14/08/1995																					
422333A	Condamine_R Loudouns	Condamine River	30/08/1995	0.05	OK	130				0.25	OK	130								0.01	OK	130		
422333A	Condamine_R Loudouns	Condamine River	25/09/1995	0.03	OK	130	4	OK	130	0.2	OK	130	0	ND	130	15	OK	130	0.05	OK	130	0	ND	130
422333A	Condamine_R Loudouns	Condamine River	17/10/1995	0.04	OK	130				0.23	OK	130								0	ND	130		
422333A	Condamine_R Loudouns	Condamine River	20/12/1995	0.02	OK	130				0.21	OK	130								0	ND	130		
422333A	Condamine_R Loudouns	Condamine River	30/01/1996	0.01	OK	130				0.17	OK	130								0.05	OK	130		
422333A	Condamine_R Loudouns	Condamine River	5/02/1996																					
422333A	Condamine_R Loudouns	Condamine River	6/02/1996																					
422333A	Condamine_R Loudouns	Condamine River	28/02/1996	0.01	OK	130				0	ND	130								0	ND	130		
422333A	Condamine_R Loudouns	Condamine River	27/03/1996																					
422333A	Condamine_R Loudouns	Condamine River	29/05/1996	0.01	OK	130				0.12	OK	130								0	ND	130		
422333A	Condamine_R Loudouns	Condamine River	19/06/1996	0	ND	130				0.12	OK	130								0	ND	130		
422333A	Condamine_R Loudouns	Condamine River	25/07/1996	0.01	OK	130				0.14	OK	130								0	ND	130		
422333A	Condamine_R Loudouns	Condamine River	16/09/1996																					
422333A	Condamine_R Loudouns	Condamine River	16/09/1996																					
422333A	Condamine_R Loudouns	Condamine River	24/10/1996																					
422333A	Condamine_R Loudouns	Condamine River	19/12/1996																					
422333A	Condamine_R Loudouns	Condamine River	19/12/1996	0.01	OK	130				0.16	OK	130								0	ND	130		
422333A	Condamine_R Loudouns	Condamine River	7/01/1997																					
422333A	Condamine_R Loudouns	Condamine River	16/01/1997																					
422333A	Condamine_R Loudouns	Condamine River	16/01/1997																					
422333A	Condamine_R Loudouns	Condamine River	11/02/1997	0.01	OK	130				0.2	OK	130								0	ND	130		
422333A	Condamine_R Loudouns	Condamine River	25/02/1997																					
422333A	Condamine_R Loudouns	Condamine River	25/02/1997	0	ND	130				0.18	OK	130								0	ND	130		
422333A	Condamine_R Loudouns	Condamine River	23/04/1997	0	ND	130				0.17	OK	130								0.01	OK	130		
422333A	Condamine_R Loudouns	Condamine River	16/05/1997																					
422333A	Condamine_R Loudouns	Condamine River	27/05/1997	0.01	OK	130				0.23	OK	130								0.02	OK	130		
422333A	Condamine_R Loudouns	Condamine River	21/07/1997																					
422333A	Condamine_R Loudouns	Condamine River	24/11/1997																					
422333A	Condamine_R Loudouns	Condamine River	24/11/1997	0.01	OK	130				0.2	OK	130								0	ND	130		
422333A	Condamine_R Loudouns	Condamine River	18/12/1997																					
422333A	Condamine_R Loudouns	Condamine River	28/04/1998																					
422333A	Condamine_R Loudouns	Condamine River	7/10/1998	0.01	OK	130				0.13	OK	130								0	ND	130		
422333A	Condamine_R Loudouns	Condamine River	11/01/1999																					
422333A	Condamine_R Loudouns	Condamine River	18/02/1999	0	ND	130				0.13	OK	130								0	ND	130		
422333A	Condamine_R Loudouns	Condamine River	22/03/1999																					
422333A	Condamine_R Loudouns	Condamine River	12/04/1999																					
422333A	Condamine_R Loudouns	Condamine River	16/06/1999	0.02	OK	130				0.14	OK	130								0.01	OK	130		
422333A	Condamine_R Loudouns	Condamine River	29/06/1999																					

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Station	Station Name	Receiving Creek/ River	Date	V2622.00	F2622.00	Q2622.00	V2624.00	F2624.00	Q2624.00	V2641.00	F2641.00	Q2641.00	V2694.00	F2694.00	Q2694.00	V2744.00	F2744.00	Q2744.00	V2822.00	F2822.00	Q2822.00	V2824.00	F2824.00	Q2824.00
				Copper as Cu soluble mg/L			Copper as Cu total (ug/L)			Flouride as F (mg/L)			Lead as Pb total (ug/L)			Nickel as Ni total (ug/L)			Zinc as Zn soluble (mg/L)			Zinc as Zn total (ug/L)		
422333A	Condamine_R Loudouns	Condamine River	12/07/1999																					
422333A	Condamine_R Loudouns	Condamine River	1/09/1999	0	ND	130				0.08	OK	130								0	ND	130		
422333A	Condamine_R Loudouns	Condamine River	21/02/2000	0	ND	130				0.18	OK	130								0.01	OK	130		
422333A	Condamine_R Loudouns	Condamine River	21/02/2000																					
422333A	Condamine_R Loudouns	Condamine River	19/06/2000	0.05	<	130				0.2	OK	130								0.03	OK	130		
422333A	Condamine_R Loudouns	Condamine River	25/08/2000																					
422333A	Condamine_R Loudouns	Condamine River	25/01/2001																					
422333A	Condamine_R Loudouns	Condamine River	6/02/2001	0.01	OK	130				0.13	OK	130								0.07	OK	130		
422333A	Condamine_R Loudouns	Condamine River	6/02/2001																					
422333A	Condamine_R Loudouns	Condamine River	8/02/2001																					
422333A	Condamine_R Loudouns	Condamine River	8/02/2001																					
422333A	Condamine_R Loudouns	Condamine River	20/03/2001																					
422333A	Condamine_R Loudouns	Condamine River	17/04/2001																					
422333A	Condamine_R Loudouns	Condamine River	14/05/2001																					
422333A	Condamine_R Loudouns	Condamine River	13/06/2001	0	ND	130				0.13	OK	130								0	ND	130		
422333A	Condamine_R Loudouns	Condamine River	11/11/2001																					
422333A	Condamine_R Loudouns	Condamine River	12/11/2001																					
422333A	Condamine_R Loudouns	Condamine River	13/11/2001																					
422333A	Condamine_R Loudouns	Condamine River	13/11/2001																					
422333A	Condamine_R Loudouns	Condamine River	8/08/2002																					
422333A	Condamine_R Loudouns	Condamine River	11/03/2004	0.03	<	130				0.2	OK	130								0.04	OK	130		
422333A	Condamine_R Loudouns	Condamine River	12/03/2004	0.03	<	130				0.1	<	130								0.01	OK	130		
422333A	Condamine_R Loudouns	Condamine River	3/03/2005	0.03	<	130				0.2	OK	130								0.03	OK	130		
422333A	Condamine_R Loudouns	Condamine River	21/12/2005	0.03	<	130				0.2	OK	130								0.02	OK	130		
422333A	Condamine_R Loudouns	Condamine River	15/03/2006	0.03	<	130				0.1	OK	130								0.06	OK	130		
422333A	Condamine_R Loudouns	Condamine River	5/05/2006	0.03	<	130				0.2	OK	130								0.01	OK	130		
422333A	Condamine_R Loudouns	Condamine River	12/11/2006																					
422333A	Condamine_R Loudouns	Condamine River	24/10/2008																					
422333A	Condamine_R Loudouns	Condamine River	1/07/2009																					
422345A	Lone Pine	Condamine River (north branch)	11/07/1979							0.1	OK	125												
422345A	Lone Pine	Condamine River (north branch)	7/02/1980							0.5	OK	125												
422345A	Lone Pine	Condamine River (north branch)	8/02/1980							0.5	OK	125												
422345A	Lone Pine	Condamine River (north branch)	11/02/1981																					
422345A	Lone Pine	Condamine River (north branch)	19/02/1981																					
422345A	Lone Pine	Condamine River (north branch)	6/04/1981							0.2	OK	125												
422345A	Lone Pine	Condamine River (north branch)	15/04/1981																					
422345A	Lone Pine	Condamine River (north branch)	28/07/1983							0.3	OK	125												
422345A	Lone Pine	Condamine River (north branch)	11/10/1983							0.3	OK	125												
422345A	Lone Pine	Condamine River (north branch)	29/05/1984																					
422345A	Lone Pine	Condamine River (north branch)	21/06/1984																					
422345A	Lone Pine	Condamine River (north branch)	8/08/1984							0.3	OK	125												
422345A	Lone Pine	Condamine River (north branch)	13/01/1987							0.4	OK	125												
422345A	Lone Pine	Condamine River (north branch)	18/02/1988																					
422345A	Lone Pine	Condamine River (north branch)	17/05/1988							0.3	OK	125												
422345A	Lone Pine	Condamine River (north branch)	1/08/1988							0.3	OK	125												
422345A	Lone Pine	Condamine River (north branch)	8/02/1989							0.2	OK	125												
422345A	Lone Pine	Condamine River (north branch)	11/07/1989																					
422345A	Lone Pine	Condamine River (north branch)	31/07/1989																					
422345A	Lone Pine	Condamine River (north branch)	22/08/1989							0.1	OK	125												
422345A	Lone Pine	Condamine River (north branch)	8/12/1989							0.23	OK	125												
422345A	Lone Pine	Condamine River (north branch)	30/03/1990							0.19	OK	125												
422345A	Lone Pine	Condamine River (north branch)	2/07/1990							0.24	OK	125												
422345A	Lone Pine	Condamine River (north branch)	17/10/1990	0.04	OK	135				0.24	OK	125												

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Station	Station Name	Receiving Creek/ River	Date	V2622.00	F2622.00	Q2622.00	V2624.00	F2624.00	Q2624.00	V2641.00	F2641.00	Q2641.00	V2694.00	F2694.00	Q2694.00	V2744.00	F2744.00	Q2744.00	V2822.00	F2822.00	Q2822.00	V2824.00	F2824.00	Q2824.00
				Copper as Cu soluble mg/L			Copper as Cu total (ug/L)			Flouride as F (mg/L)			Lead as Pb total (ug/L)			Nickel as Ni total (ug/L)			Zinc as Zn soluble (mg/L)			Zinc as Zn total (ug/L)		
422345A	Lone Pine	Condamine River (north branch)	6/06/1991																					
422345A	Lone Pine	Condamine River (north branch)	30/10/1991																					
422345A	Lone Pine	Condamine River (north branch)	20/02/1992							0.26	OK	125												
422345A	Lone Pine	Condamine River (north branch)	3/07/1992	0.04	OK	135				0.2	OK	125							0.01	OK	135			
422345A	Lone Pine	Condamine River (north branch)	21/10/1992							0.16	OK	125												
422345A	Lone Pine	Condamine River (north branch)	8/02/1993	0.05	OK	135				0.15	OK	125												
422345A	Lone Pine	Condamine River (north branch)	9/06/1993																					
422345A	Lone Pine	Condamine River (north branch)	27/10/1993																					
422345A	Lone Pine	Condamine River (north branch)	8/03/1994	0.03	OK	135				0.15	OK	125							0.01	OK	135			
422345A	Lone Pine	Condamine River (north branch)	14/07/1994	0.02	OK	135				0.28	OK	125							0.02	OK	135			
422345A	Lone Pine	Condamine River (north branch)	8/12/1994	0	ND	130				0.38	OK	130							0	ND	130			
422345A	Lone Pine	Condamine River (north branch)	29/03/1995																					
422345A	Lone Pine	Condamine River (north branch)	29/03/1995	0.04	OK	130				0.23	OK	130							0.01	OK	130			
422345A	Lone Pine	Condamine River (north branch)	29/08/1995	0.08	OK	130				0.27	OK	130							0.01	OK	130			
422345A	Lone Pine	Condamine River (north branch)	30/11/1995																					
422345A	Lone Pine	Condamine River (north branch)	30/11/1995																					
422345A	Lone Pine	Condamine River (north branch)	2/02/1996																					
422345A	Lone Pine	Condamine River (north branch)	2/02/1996	0.05	<	130				0.3	OK	130							0.02	<	130			
422345A	Lone Pine	Condamine River (north branch)	28/05/1996	0.01	OK	130				0.29	OK	130							0.01	OK	130			
422345A	Lone Pine	Condamine River (north branch)	17/09/1996	0.05	<	130				0.2	OK	130							0.02	<	130			
422345A	Lone Pine	Condamine River (north branch)	24/10/1996																					
422345A	Lone Pine	Condamine River (north branch)	6/12/1996	0.01	OK	130				0.27	OK	130							0	ND	130			
422345A	Lone Pine	Condamine River (north branch)	8/01/1997																					
422345A	Lone Pine	Condamine River (north branch)	11/02/1997	0.01	OK	130				0.19	OK	130							0	ND	130			
422345A	Lone Pine	Condamine River (north branch)	25/03/1997																					
422345A	Lone Pine	Condamine River (north branch)	18/04/1997																					
422345A	Lone Pine	Condamine River (north branch)	29/05/1997																					
422345A	Lone Pine	Condamine River (north branch)	22/07/1997																					
422345A	Lone Pine	Condamine River (north branch)	25/09/1997																					
422345A	Lone Pine	Condamine River (north branch)	27/11/1997	0	ND	130				0.19	OK	130							0.01	OK	130			
422345A	Lone Pine	Condamine River (north branch)	29/04/1998																					
422345A	Lone Pine	Condamine River (north branch)	29/04/1998																					
422345A	Lone Pine	Condamine River (north branch)	23/09/1998	0.01	OK	130				0.21	OK	130							0	ND	130			
422345A	Lone Pine	Condamine River (north branch)	18/02/1999	0.01	OK	130				0.12	OK	130							0	ND	130			
422345A	Lone Pine	Condamine River (north branch)	18/03/1999																					
422345A	Lone Pine	Condamine River (north branch)	29/03/1999																					
422345A	Lone Pine	Condamine River (north branch)	16/06/1999	0	ND	130				0.11	OK	130							0	ND	130			
422345A	Lone Pine	Condamine River (north branch)	1/09/1999	0	ND	130				0.12	OK	130							0.02	OK	130			
422345A	Lone Pine	Condamine River (north branch)	1/11/1999																					
422345A	Lone Pine	Condamine River (north branch)	1/11/1999																					
422345A	Lone Pine	Condamine River (north branch)	21/12/1999																					
422345A	Lone Pine	Condamine River (north branch)	29/02/2000	0.04	OK	130				0.17	OK	130							0	ND	130			
422345A	Lone Pine	Condamine River (north branch)	16/03/2000																					
422345A	Lone Pine	Condamine River (north branch)	19/06/2000	0.05	<	130				0.1	OK	130							0.02	OK	130			
422345A	Lone Pine	Condamine River (north branch)	8/09/2000																					
422345A	Lone Pine	Condamine River (north branch)	22/09/2000																					
422345A	Lone Pine	Condamine River (north branch)	14/02/2001	0.01	OK	130				0.13	OK	130							0	ND	130			
422345A	Lone Pine	Condamine River (north branch)	13/06/2001	0.01	OK	130				0.11	OK	130							0	ND	130			
422345A	Lone Pine	Condamine River (north branch)	11/07/2001																					
422345A	Lone Pine	Condamine River (north branch)	18/07/2001																					
422345A	Lone Pine	Condamine River (north branch)	14/08/2001																					
422345A	Lone Pine	Condamine River (north branch)	12/12/2001																					
422345A	Lone Pine	Condamine River (north branch)	14/06/2002																					
422345A	Lone Pine	Condamine River (north branch)	21/11/2002																					
422345A	Lone Pine	Condamine River (north branch)	8/05/2003																					

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				Copper as Cu soluble mg/L			Copper as Cu total (ug/L)			Flouride as F (mg/L)			Lead as Pb total (ug/L)			Nickel as Ni total (ug/L)			Zinc as Zn soluble (mg/L)			Zinc as Zn total (ug/L)		
422345A	Lone Pine	Condamine River (north branch)	31/07/2003																					
422345A	Lone Pine	Condamine River (north branch)	11/03/2004	0.03	<	130				0.3	OK	130								0.02	OK	130		
422345A	Lone Pine	Condamine River (north branch)	20/12/2005	0.03	<	130				0.2	OK	130								0.01	<	130		
422345A	Lone Pine	Condamine River (north branch)	21/03/2006	0.03	<	130				0.3	OK	130								0.06	OK	130		
422345A	Lone Pine	Condamine River (north branch)	28/04/2009																					
422346A	N Condamine_R Kurlaw	Condamine River (north branch)	11/07/1979							0.3	OK	125												
422346A	N Condamine_R Kurlaw	Condamine River (north branch)	11/07/1979																					
422346A	N Condamine_R Kurlaw	Condamine River (north branch)	11/02/1980							0.5	OK	125												
422346A	N Condamine_R Kurlaw	Condamine River (north branch)	11/02/1980																					
422346A	N Condamine_R Kurlaw	Condamine River (north branch)	9/02/1981							0.6	OK	125												
422346A	N Condamine_R Kurlaw	Condamine River (north branch)	19/02/1981							0.5	OK	125												
422346A	N Condamine_R Kurlaw	Condamine River (north branch)	19/02/1981																					
422346A	N Condamine_R Kurlaw	Condamine River (north branch)	1/07/1981							0.2	OK	125												
422346A	N Condamine_R Kurlaw	Condamine River (north branch)	13/12/1983							0.4	OK	125												
422346A	N Condamine_R Kurlaw	Condamine River (north branch)	13/12/1983																					
422347A	Pampas Bridge	Condamine River (north branch)	6/02/1980							0.5	OK	125												
422347A	Pampas Bridge	Condamine River (north branch)	7/02/1980							0.5	OK	125												
422347A	Pampas Bridge	Condamine River (north branch)	7/02/1980																					
422347A	Pampas Bridge	Condamine River (north branch)	8/02/1980							0.4	OK	125												
422347A	Pampas Bridge	Condamine River (north branch)	8/02/1980																					
422347A	Pampas Bridge	Condamine River (north branch)	11/02/1980							0.3	OK	125												
422347A	Pampas Bridge	Condamine River (north branch)	11/02/1980																					
422347A	Pampas Bridge	Condamine River (north branch)	9/02/1981							0.4	OK	125												
422347A	Pampas Bridge	Condamine River (north branch)	9/02/1981																					
422347A	Pampas Bridge	Condamine River (north branch)	29/08/2006	0.03	<	10				0.3	OK	10								0.02	OK	10		
422348A	Christians	Condamine River (north branch)	7/02/1980							0.2	OK	125												
422348A	Christians	Condamine River (north branch)	7/02/1980																					
422348A	Christians	Condamine River (north branch)	7/04/1981							0.1	OK	125												
422339A	Jimbour_Ck Bunginie	Jimbour Creek	9/01/1973							0.4	OK	125												
422339A	Jimbour_Ck Bunginie	Jimbour Creek	24/01/1973							0.28	OK	125												
422339A	Jimbour_Ck Bunginie	Jimbour Creek	18/09/1973							0.25	OK	125												
422339A	Jimbour_Ck Bunginie	Jimbour Creek	18/09/1973																					
422339A	Jimbour_Ck Bunginie	Jimbour Creek	30/10/1973							0.32	OK	125												
422339A	Jimbour_Ck Bunginie	Jimbour Creek	30/10/1973																					
422339A	Jimbour_Ck Bunginie	Jimbour Creek	11/09/1974							0.26	OK	125												
422339A	Jimbour_Ck Bunginie	Jimbour Creek	24/08/1976							0.5	OK	125												
422339A	Jimbour_Ck Bunginie	Jimbour Creek	30/01/1980							0.2	OK	125												
422339A	Jimbour_Ck Bunginie	Jimbour Creek	30/01/1980																					
422339A	Jimbour_Ck Bunginie	Jimbour Creek	21/01/1988																					
422339A	Jimbour_Ck Bunginie	Jimbour Creek	25/05/1988							0.3	OK	125												
422339A	Jimbour_Ck Bunginie	Jimbour Creek	25/05/1988																					
422339A	Jimbour_Ck Bunginie	Jimbour Creek	4/08/1988							0.3	OK	125												
422339A	Jimbour_Ck Bunginie	Jimbour Creek	4/08/1988																					
422339A	Jimbour_Ck Bunginie	Jimbour Creek	6/09/1989							0.3	OK	125												
422339A	Jimbour_Ck Bunginie	Jimbour Creek	6/09/1989																					
422339A	Jimbour_Ck Bunginie	Jimbour Creek	3/07/1990							0.33	OK	125												
422339A	Jimbour_Ck Bunginie	Jimbour Creek	3/07/1990																					
422339A	Jimbour_Ck Bunginie	Jimbour Creek	16/10/1990	0.03	OK	135				0.45	OK	125												
422339A	Jimbour_Ck Bunginie	Jimbour Creek	16/10/1990																					
422339A	Jimbour_Ck Bunginie	Jimbour Creek	1/07/1992	0.06	OK	135				0.27	OK	125								0.02	OK	135		
422339A	Jimbour_Ck Bunginie	Jimbour Creek	1/07/1992																					
422339A	Jimbour_Ck Bunginie	Jimbour Creek	14/08/1995																					
422339A	Jimbour_Ck Bunginie	Jimbour Creek	26/09/1995	0.04	OK	130				0.35	OK	130								0.01	OK	130		

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Station	Station Name	Receiving Creek/ River	Date	V2622.00	F2622.00	Q2622.00	V2624.00	F2624.00	Q2624.00	V2641.00	F2641.00	Q2641.00	V2694.00	F2694.00	Q2694.00	V2744.00	F2744.00	Q2744.00	V2822.00	F2822.00	Q2822.00	V2824.00	F2824.00	Q2824.00	
				Copper as Cu soluble mg/L			Copper as Cu total (ug/L)			Flouride as F (mg/L)			Lead as Pb total (ug/L)			Nickel as Ni total (ug/L)			Zinc as Zn soluble (mg/L)			Zinc as Zn total (ug/L)			
422339A	Jimbour_Ck Bunginie	Jimbour Creek	26/05/1997	0.02	OK	130				0.53	OK	130								0	ND	130			
422339A	Jimbour_Ck Bunginie	Jimbour Creek	24/11/1997	0	ND	130				0.26	OK	130								0.01	OK	130			
422339A	Jimbour_Ck Bunginie	Jimbour Creek	18/02/1999																						
422339A	Jimbour_Ck Bunginie	Jimbour Creek	18/10/1999																						
422326A	Gowrie_Ck Cranley	Oakey Creek	16/03/1971							0.15	OK	125													
422326A	Gowrie_Ck Cranley	Oakey Creek	31/05/1971							0.1	OK	125													
422326A	Gowrie_Ck Cranley	Oakey Creek	19/07/1971							0.2	OK	125													
422326A	Gowrie_Ck Cranley	Oakey Creek	30/08/1971							0.15	OK	125													
422326A	Gowrie_Ck Cranley	Oakey Creek	18/10/1971							0.15	OK	125													
422326A	Gowrie_Ck Cranley	Oakey Creek	13/03/1972							0.6	OK	125													
422326A	Gowrie_Ck Cranley	Oakey Creek	19/06/1972							0.35	OK	125													
422326A	Gowrie_Ck Cranley	Oakey Creek	21/08/1972							0.15	OK	125													
422326A	Gowrie_Ck Cranley	Oakey Creek	23/10/1972							0.12	OK	125													
422326A	Gowrie_Ck Cranley	Oakey Creek	8/01/1973							0.16	OK	125													
422326A	Gowrie_Ck Cranley	Oakey Creek	16/03/1973							0.1	OK	125													
422326A	Gowrie_Ck Cranley	Oakey Creek	8/05/1973							0.1	OK	125													
422326A	Gowrie_Ck Cranley	Oakey Creek	18/06/1973																						
422326A	Gowrie_Ck Cranley	Oakey Creek	24/07/1973							0.14	OK	125													
422326A	Gowrie_Ck Cranley	Oakey Creek	17/09/1973							0.05	OK	125													
422326A	Gowrie_Ck Cranley	Oakey Creek	29/10/1973							0.11	OK	125													
422326A	Gowrie_Ck Cranley	Oakey Creek	21/01/1974							0.11	OK	125													
422326A	Gowrie_Ck Cranley	Oakey Creek	25/03/1974							0.13	OK	125													
422326A	Gowrie_Ck Cranley	Oakey Creek	16/09/1974							0.15	OK	125													
422326A	Gowrie_Ck Cranley	Oakey Creek	24/02/1976							0.2	OK	125													
422326A	Gowrie_Ck Cranley	Oakey Creek	23/08/1976							0.3	OK	125													
422326A	Gowrie_Ck Cranley	Oakey Creek	9/07/1979																						
422326A	Gowrie_Ck Cranley	Oakey Creek	10/09/1979							0.1	OK	125													
422326A	Gowrie_Ck Cranley	Oakey Creek	29/01/1980																						
422326A	Gowrie_Ck Cranley	Oakey Creek	14/04/1980							0.1	OK	125													
422326A	Gowrie_Ck Cranley	Oakey Creek	1/07/1980							0.1	OK	125													
422326A	Gowrie_Ck Cranley	Oakey Creek	8/09/1980							0.1	OK	125													
422326A	Gowrie_Ck Cranley	Oakey Creek	30/01/1981							0.1	OK	125													
422326A	Gowrie_Ck Cranley	Oakey Creek	10/04/1981							0.1	OK	125													
422326A	Gowrie_Ck Cranley	Oakey Creek	29/06/1981							0.1	OK	125													
422326A	Gowrie_Ck Cranley	Oakey Creek	14/09/1981							0.1	OK	125													
422326A	Gowrie_Ck Cranley	Oakey Creek	23/11/1982							0.1	OK	125													
422326A	Gowrie_Ck Cranley	Oakey Creek	2/02/1983																						
422326A	Gowrie_Ck Cranley	Oakey Creek	17/05/1983							0.1	OK	125													
422326A	Gowrie_Ck Cranley	Oakey Creek	12/07/1983							0.1	OK	125													
422326A	Gowrie_Ck Cranley	Oakey Creek	12/12/1983							0.1	OK	125													
422326A	Gowrie_Ck Cranley	Oakey Creek	5/03/1984																						
422326A	Gowrie_Ck Cranley	Oakey Creek	28/05/1984																						
422326A	Gowrie_Ck Cranley	Oakey Creek	10/10/1984																						
422326A	Gowrie_Ck Cranley	Oakey Creek	8/01/1985							0.1	OK	125													
422326A	Gowrie_Ck Cranley	Oakey Creek	11/03/1985							0.1	OK	125													
422326A	Gowrie_Ck Cranley	Oakey Creek	24/07/1985							0.1	OK	125													
422326A	Gowrie_Ck Cranley	Oakey Creek	21/10/1985							0.1	OK	125													
422326A	Gowrie_Ck Cranley	Oakey Creek	6/01/1986							0.1	OK	125													
422326A	Gowrie_Ck Cranley	Oakey Creek	1/04/1986							0.1	OK	125													
422326A	Gowrie_Ck Cranley	Oakey Creek	1/07/1986							0.1	OK	125													
422326A	Gowrie_Ck Cranley	Oakey Creek	19/09/1986							0.1	OK	125													
422326A	Gowrie_Ck Cranley	Oakey Creek	19/12/1986							0.1	OK	125													
422326A	Gowrie_Ck Cranley	Oakey Creek	6/03/1987							0.1	OK	125													

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Station	Station Name	Receiving Creek/ River	Date	V2622.00	F2622.00	Q2622.00	V2624.00	F2624.00	Q2624.00	V2641.00	F2641.00	Q2641.00	V2694.00	F2694.00	Q2694.00	V2744.00	F2744.00	Q2744.00	V2822.00	F2822.00	Q2822.00	V2824.00	F2824.00	Q2824.00	
				Copper as Cu soluble mg/L			Copper as Cu total (ug/L)			Flouride as F (mg/L)			Lead as Pb total (ug/L)			Nickel as Ni total (ug/L)			Zinc as Zn soluble (mg/L)			Zinc as Zn total (ug/L)			
422326A	Gowrie_Ck Cranley	Oakey Creek	20/05/1987							0.1	OK	125													
422326A	Gowrie_Ck Cranley	Oakey Creek	4/09/1987							0.1	OK	125													
422326A	Gowrie_Ck Cranley	Oakey Creek	6/11/1987							0.1	OK	125													
422326A	Gowrie_Ck Cranley	Oakey Creek	11/03/1988							0.1	OK	125													
422326A	Gowrie_Ck Cranley	Oakey Creek	13/05/1988							0.1	OK	125													
422326A	Gowrie_Ck Cranley	Oakey Creek	5/08/1988							0.1	OK	125													
422326A	Gowrie_Ck Cranley	Oakey Creek	14/12/1988																						
422326A	Gowrie_Ck Cranley	Oakey Creek	5/06/1989																						
422326A	Gowrie_Ck Cranley	Oakey Creek	16/08/1989																						
422326A	Gowrie_Ck Cranley	Oakey Creek	27/10/1989							0.1	OK	125													
422326A	Gowrie_Ck Cranley	Oakey Creek	16/07/1990							0.02	OK	125													
422326A	Gowrie_Ck Cranley	Oakey Creek	18/10/1990	0.05	OK	135				0.13	OK	125													
422326A	Gowrie_Ck Cranley	Oakey Creek	11/03/1991																						
422326A	Gowrie_Ck Cranley	Oakey Creek	19/11/1991																						
422326A	Gowrie_Ck Cranley	Oakey Creek	6/03/1992	0.03	OK	135				0.08	OK	125													
422326A	Gowrie_Ck Cranley	Oakey Creek	14/07/1992	0.04	OK	135				0.05	OK	125							0.01	OK	135				
422326A	Gowrie_Ck Cranley	Oakey Creek	19/10/1992	0.01	OK	135				0.11	OK	125							0.02	OK	135				
422326A	Gowrie_Ck Cranley	Oakey Creek	11/02/1993	0.04	OK	135				0.1	OK	125													
422326A	Gowrie_Ck Cranley	Oakey Creek	3/03/1993																						
422326A	Gowrie_Ck Cranley	Oakey Creek	8/06/1993																						
422326A	Gowrie_Ck Cranley	Oakey Creek	8/06/1993	0.05	OK	135				0.05	OK	125							0.01	OK	135				
422326A	Gowrie_Ck Cranley	Oakey Creek	20/10/1993																						
422326A	Gowrie_Ck Cranley	Oakey Creek	20/10/1993																						
422326A	Gowrie_Ck Cranley	Oakey Creek	16/03/1994																						
422326A	Gowrie_Ck Cranley	Oakey Creek	13/07/1994																						
422326A	Gowrie_Ck Cranley	Oakey Creek	5/12/1994																						
422326A	Gowrie_Ck Cranley	Oakey Creek	1/09/1995																						
422326A	Gowrie_Ck Cranley	Oakey Creek	30/01/1996																						
422326A	Gowrie_Ck Cranley	Oakey Creek	30/05/1996																						
422326A	Gowrie_Ck Cranley	Oakey Creek	4/09/1996																						
422326A	Gowrie_Ck Cranley	Oakey Creek	6/01/1997																						
422326A	Gowrie_Ck Cranley	Oakey Creek	14/04/1997																						
422326A	Gowrie_Ck Cranley	Oakey Creek	3/06/1997	0	ND	130				0.07	OK	130							0.01	OK	130				
422326A	Gowrie_Ck Cranley	Oakey Creek	28/07/1997																						
422326A	Gowrie_Ck Cranley	Oakey Creek	7/08/1997																						
422326A	Gowrie_Ck Cranley	Oakey Creek	17/11/1997	0.01	OK	130				0.04	OK	130							0.02	OK	130				
422326A	Gowrie_Ck Cranley	Oakey Creek	26/09/1998	0.01	OK	130				0.03	OK	130							0.04	OK	130				
422326A	Gowrie_Ck Cranley	Oakey Creek	11/01/1999																						
422326A	Gowrie_Ck Cranley	Oakey Creek	12/04/1999																						
422326A	Gowrie_Ck Cranley	Oakey Creek	15/06/1999	0	ND	130				0.04	OK	130							0	ND	130				
422326A	Gowrie_Ck Cranley	Oakey Creek	12/07/1999																						
422326A	Gowrie_Ck Cranley	Oakey Creek	1/09/1999	0	ND	130				0.04	OK	130							0	ND	130				
422326A	Gowrie_Ck Cranley	Oakey Creek	11/10/1999																						
422326A	Gowrie_Ck Cranley	Oakey Creek	19/10/1999																						
422326A	Gowrie_Ck Cranley	Oakey Creek	25/10/1999																						
422326A	Gowrie_Ck Cranley	Oakey Creek	26/10/1999																						
422326A	Gowrie_Ck Cranley	Oakey Creek	26/10/1999																						
422326A	Gowrie_Ck Cranley	Oakey Creek	16/02/2000																						
422326A	Gowrie_Ck Cranley	Oakey Creek	16/02/2000																						
422326A	Gowrie_Ck Cranley	Oakey Creek	19/04/2000																						
422326A	Gowrie_Ck Cranley	Oakey Creek	9/05/2000																						
422326A	Gowrie_Ck Cranley	Oakey Creek	19/06/2000	0.05	<	130				0.1	<	130							0.02	OK	130				
422326A	Gowrie_Ck Cranley	Oakey Creek	25/09/2000	0.01	OK	130				0.08	OK	130							0	ND	130				
422326A	Gowrie_Ck Cranley	Oakey Creek	25/09/2000																						
422326A	Gowrie_Ck Cranley	Oakey Creek	8/01/2001																						

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Station	Station Name	Receiving Creek/ River	Date	V2622.00	F2622.00	Q2622.00	V2624.00	F2624.00	Q2624.00	V2641.00	F2641.00	Q2641.00	V2694.00	F2694.00	Q2694.00	V2744.00	F2744.00	Q2744.00	V2822.00	F2822.00	Q2822.00	V2824.00	F2824.00	Q2824.00	
				Copper as Cu soluble mg/L			Copper as Cu total (ug/L)			Flouride as F (mg/L)			Lead as Pb total (ug/L)			Nickel as Ni total (ug/L)			Zinc as Zn soluble (mg/L)			Zinc as Zn total (ug/L)			
422326A	Gowrie_Ck Cranley	Oakey Creek	1/02/2001	0	ND	130				0.02	OK	130								0.03	OK	130			
422326A	Gowrie_Ck Cranley	Oakey Creek	6/02/2001	0	ND	130				0.06	OK	130								0.04	OK	130			
422326A	Gowrie_Ck Cranley	Oakey Creek	31/05/2001																						
422326A	Gowrie_Ck Cranley	Oakey Creek	18/06/2001																						
422326A	Gowrie_Ck Cranley	Oakey Creek	24/10/2001																						
422326A	Gowrie_Ck Cranley	Oakey Creek	17/04/2002																						
422326A	Gowrie_Ck Cranley	Oakey Creek	17/04/2002	0.01	OK	130				0.08	OK	130								0.01	OK	130			
422326A	Gowrie_Ck Cranley	Oakey Creek	22/04/2002																						
422326A	Gowrie_Ck Cranley	Oakey Creek	2/07/2002																						
422326A	Gowrie_Ck Cranley	Oakey Creek	16/07/2002																						
422326A	Gowrie_Ck Cranley	Oakey Creek	9/09/2002																						
422326A	Gowrie_Ck Cranley	Oakey Creek	21/11/2002																						
422326A	Gowrie_Ck Cranley	Oakey Creek	10/12/2002	0.01	OK	130				0.03	OK	130								0.01	OK	130			
422326A	Gowrie_Ck Cranley	Oakey Creek	5/12/2003	0.03	<	130				0.1	<	130								0.02	OK	130			
422326A	Gowrie_Ck Cranley	Oakey Creek	5/12/2003	0.03	OK	130				0.1	<	130								0.02	OK	130			
422326A	Gowrie_Ck Cranley	Oakey Creek	8/12/2003	0.03	<	130				0.1	<	130								0.01	<	130			
422326A	Gowrie_Ck Cranley	Oakey Creek	10/03/2004	0.03	<	130				0.1	<	130								0.01	<	130			
422326A	Gowrie_Ck Cranley	Oakey Creek	25/01/2005	0.03	<	130				0.1	<	130								0.01	<	130			
422326A	Gowrie_Ck Cranley	Oakey Creek	22/07/2005	0.03	<	130				0.1	OK	130								0.01	<	130			
422326A	Gowrie_Ck Cranley	Oakey Creek	22/09/2005	0.03	<	130				0.1	<	130								0.01	<	130			
422326A	Gowrie_Ck Cranley	Oakey Creek	22/08/2006	0.03	<	131				0.1	<	131								0.01	<	131			
422326A	Gowrie_Ck Cranley	Oakey Creek	26/08/2006	0.03	<	10				0.1	<	10								0.01	<	10			
422326A	Gowrie_Ck Cranley	Oakey Creek	14/01/2009																						
422326A	Gowrie_Ck Cranley	Oakey Creek	27/04/2009																						
422326A	Gowrie_Ck Cranley	Oakey Creek	14/09/2009																						
422330A	Oakey_Ck Oakey	Oakey Creek	8/03/1971							0.35	OK	125													
422330A	Oakey_Ck Oakey	Oakey Creek	8/03/1971							0.35	OK	125													
422330A	Oakey_Ck Oakey	Oakey Creek	18/10/1971							0.3	OK	125													
422330A	Oakey_Ck Oakey	Oakey Creek	8/01/1973							0.25	OK	125													
422330A	Oakey_Ck Oakey	Oakey Creek	26/01/1973							0.21	OK	125													
422330A	Oakey_Ck Oakey	Oakey Creek	24/07/1973							0.18	OK	125													
422330A	Oakey_Ck Oakey	Oakey Creek	17/09/1973							0.2	OK	125													
422330A	Oakey_Ck Oakey	Oakey Creek	13/10/1975							0.5	OK	125													
422330A	Oakey_Ck Oakey	Oakey Creek	29/12/1975							0.15	OK	125													
422330A	Oakey_Ck Oakey	Oakey Creek	29/12/1975							0.3	OK	125													
422330A	Oakey_Ck Oakey	Oakey Creek	23/08/1976							0.5	OK	125													
422332A	Gowrie_Ck Oakey	Oakey Creek	15/03/1971							0.55	OK	125													
422332A	Gowrie_Ck Oakey	Oakey Creek	31/05/1971							0.8	OK	125													
422332A	Gowrie_Ck Oakey	Oakey Creek	31/05/1971																						
422332A	Gowrie_Ck Oakey	Oakey Creek	19/07/1971							0.6	OK	125													
422332A	Gowrie_Ck Oakey	Oakey Creek	19/07/1971																						
422332A	Gowrie_Ck Oakey	Oakey Creek	30/08/1971							0.6	OK	125													
422332A	Gowrie_Ck Oakey	Oakey Creek	30/08/1971																						
422332A	Gowrie_Ck Oakey	Oakey Creek	18/10/1971							0.4	OK	125													
422332A	Gowrie_Ck Oakey	Oakey Creek	13/03/1972																						
422332A	Gowrie_Ck Oakey	Oakey Creek	21/08/1972							0.18	OK	125													
422332A	Gowrie_Ck Oakey	Oakey Creek	23/10/1972							0.14	OK	125													
422332A	Gowrie_Ck Oakey	Oakey Creek	8/05/1973							0.12	OK	125													
422332A	Gowrie_Ck Oakey	Oakey Creek	8/05/1973																						
422332A	Gowrie_Ck Oakey	Oakey Creek	17/09/1973							0.05	OK	125													
422332A	Gowrie_Ck Oakey	Oakey Creek	17/09/1973																						
422332A	Gowrie_Ck Oakey	Oakey Creek	29/10/1973							0.14	OK	125													
422332A	Gowrie_Ck Oakey	Oakey Creek	21/01/1974																						
422332A	Gowrie_Ck Oakey	Oakey Creek	12/09/1974							0.18	OK	125													
422332A	Gowrie_Ck Oakey	Oakey Creek	13/10/1975							0.8	OK	125													

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Station	Station Name	Receiving Creek/ River	Date	V2622.00	F2622.00	Q2622.00	V2624.00	F2624.00	Q2624.00	V2641.00	F2641.00	Q2641.00	V2694.00	F2694.00	Q2694.00	V2744.00	F2744.00	Q2744.00	V2822.00	F2822.00	Q2822.00	V2824.00	F2824.00	Q2824.00
				Copper as Cu soluble mg/L			Copper as Cu total (ug/L)			Flouride as F (mg/L)			Lead as Pb total (ug/L)			Nickel as Ni total (ug/L)			Zinc as Zn soluble (mg/L)			Zinc as Zn total (ug/L)		
422332A	Gowrie_Ck Oakey	Oakey Creek	8/12/1975							1.2	OK	125												
422332A	Gowrie_Ck Oakey	Oakey Creek	25/02/1976							0.2	OK	125												
422332A	Gowrie_Ck Oakey	Oakey Creek	9/10/1978							0.2	OK	125												
422332A	Gowrie_Ck Oakey	Oakey Creek	9/07/1979							0.1	OK	125												
422332A	Gowrie_Ck Oakey	Oakey Creek	9/07/1979							0.2	OK	125												
422332A	Gowrie_Ck Oakey	Oakey Creek	9/07/1979																					
422332A	Gowrie_Ck Oakey	Oakey Creek	10/09/1979							0.2	OK	125												
422332A	Gowrie_Ck Oakey	Oakey Creek	10/09/1979																					
422332A	Gowrie_Ck Oakey	Oakey Creek	29/01/1980							0.1	OK	125												
422332A	Gowrie_Ck Oakey	Oakey Creek	29/01/1980																					
422332A	Gowrie_Ck Oakey	Oakey Creek	14/04/1980							0.5	OK	125												
422332A	Gowrie_Ck Oakey	Oakey Creek	14/04/1980																					
422332A	Gowrie_Ck Oakey	Oakey Creek	1/07/1980							0.3	OK	125												
422332A	Gowrie_Ck Oakey	Oakey Creek	1/07/1980																					
422332A	Gowrie_Ck Oakey	Oakey Creek	30/01/1981							0.3	OK	125												
422332A	Gowrie_Ck Oakey	Oakey Creek	30/01/1981																					
422332A	Gowrie_Ck Oakey	Oakey Creek	26/08/2006	0.03	<	10				0.2	OK	10							0.01	<	10			
422350A	Oakey_Ck Fairview	Oakey Creek	18/06/1963							0.2	OK	125												
422350A	Oakey_Ck Fairview	Oakey Creek	25/09/1963							0.2	OK	125												
422350A	Oakey_Ck Fairview	Oakey Creek	22/07/1964							0.1	OK	125												
422350A	Oakey_Ck Fairview	Oakey Creek	8/12/1964							0.4	OK	125												
422350A	Oakey_Ck Fairview	Oakey Creek	10/05/1965							0.25	OK	125												
422350A	Oakey_Ck Fairview	Oakey Creek	21/10/1965							0.4	OK	125												
422350A	Oakey_Ck Fairview	Oakey Creek	16/10/1980							0.3	OK	125												
422350A	Oakey_Ck Fairview	Oakey Creek	29/01/1981							0.2	OK	125												
422350A	Oakey_Ck Fairview	Oakey Creek	8/02/1981							0.2	OK	125												
422350A	Oakey_Ck Fairview	Oakey Creek	8/02/1981							0.2	OK	125												
422350A	Oakey_Ck Fairview	Oakey Creek	9/02/1981							0.2	OK	125												
422350A	Oakey_Ck Fairview	Oakey Creek	19/02/1981							0.2	OK	125												
422350A	Oakey_Ck Fairview	Oakey Creek	15/04/1981							0.2	OK	125												
422350A	Oakey_Ck Fairview	Oakey Creek	30/06/1981							0.2	OK	125												
422350A	Oakey_Ck Fairview	Oakey Creek	15/09/1981							0.2	OK	125												
422350A	Oakey_Ck Fairview	Oakey Creek	16/02/1982							0.3	OK	125												
422350A	Oakey_Ck Fairview	Oakey Creek	29/06/1982							0.1	OK	125												
422350A	Oakey_Ck Fairview	Oakey Creek	14/09/1982							0.2	OK	125												
422350A	Oakey_Ck Fairview	Oakey Creek	25/11/1982							0.2	OK	125												
422350A	Oakey_Ck Fairview	Oakey Creek	13/05/1983							0.2	OK	125												
422350A	Oakey_Ck Fairview	Oakey Creek	28/07/1983							0.2	OK	125												
422350A	Oakey_Ck Fairview	Oakey Creek	10/10/1983							0.2	OK	125												
422350A	Oakey_Ck Fairview	Oakey Creek	13/12/1983							0.2	OK	125												
422350A	Oakey_Ck Fairview	Oakey Creek	6/03/1984							0.2	OK	125												
422350A	Oakey_Ck Fairview	Oakey Creek	28/05/1984							0.2	OK	125												
422350A	Oakey_Ck Fairview	Oakey Creek	11/10/1984							0.2	OK	125												
422350A	Oakey_Ck Fairview	Oakey Creek	9/01/1985							0.2	OK	125												
422350A	Oakey_Ck Fairview	Oakey Creek	24/07/1985							0.2	OK	125												
422350A	Oakey_Ck Fairview	Oakey Creek	21/10/1985							0.3	OK	125												
422350A	Oakey_Ck Fairview	Oakey Creek	7/01/1986							0.2	OK	125												
422350A	Oakey_Ck Fairview	Oakey Creek	2/04/1986							0.2	OK	125												
422350A	Oakey_Ck Fairview	Oakey Creek	1/07/1986							0.2	OK	125												
422350A	Oakey_Ck Fairview	Oakey Creek	8/10/1986							0.2	OK	125												
422350A	Oakey_Ck Fairview	Oakey Creek	15/01/1987							0.3	OK	125												
422350A	Oakey_Ck Fairview	Oakey Creek	2/04/1987							0.3	OK	125												
422350A	Oakey_Ck Fairview	Oakey Creek	19/06/1987							0.2	OK	125												
422350A	Oakey_Ck Fairview	Oakey Creek	3/09/1987							0.2	OK	125												
422350A	Oakey_Ck Fairview	Oakey Creek	5/11/1987							0.2	OK	125												

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Station	Station Name	Receiving Creek/ River	Date	V2622.00	F2622.00	Q2622.00	V2624.00	F2624.00	Q2624.00	V2641.00	F2641.00	Q2641.00	V2694.00	F2694.00	Q2694.00	V2744.00	F2744.00	Q2744.00	V2822.00	F2822.00	Q2822.00	V2824.00	F2824.00	Q2824.00	
				Copper as Cu soluble mg/L			Copper as Cu total (ug/L)			Flouride as F (mg/L)			Lead as Pb total (ug/L)			Nickel as Ni total (ug/L)			Zinc as Zn soluble (mg/L)			Zinc as Zn total (ug/L)			
422350A	Oakey_Ck Fairview	Oakey Creek	8/03/1988							0.2	OK	125													
422350A	Oakey_Ck Fairview	Oakey Creek	25/05/1988							0.2	OK	125													
422350A	Oakey_Ck Fairview	Oakey Creek	4/08/1988							0.2	OK	125													
422350A	Oakey_Ck Fairview	Oakey Creek	10/11/1988							0.2	OK	125													
422350A	Oakey_Ck Fairview	Oakey Creek	26/01/1989							0.2	OK	125													
422350A	Oakey_Ck Fairview	Oakey Creek	6/09/1989							0.2	OK	125													
422350A	Oakey_Ck Fairview	Oakey Creek	7/12/1989							0.23	OK	125													
422350A	Oakey_Ck Fairview	Oakey Creek	23/03/1990							0.25	OK	125													
422350A	Oakey_Ck Fairview	Oakey Creek	3/07/1990							0.17	OK	125													
422350A	Oakey_Ck Fairview	Oakey Creek	16/10/1990	0.03	OK	135				0.24	OK	125							0.01	OK	135				
422350A	Oakey_Ck Fairview	Oakey Creek	12/10/1992	0.03	OK	135				0.17	OK	125													
422350A	Oakey_Ck Fairview	Oakey Creek	9/06/1993	0.03	OK	135				0.19	OK	125							1.46	OK	151				
422350A	Oakey_Ck Fairview	Oakey Creek	15/03/1994																						
422350A	Oakey_Ck Fairview	Oakey Creek	15/03/1994	0.02	OK	135				0.18	OK	125													
422350A	Oakey_Ck Fairview	Oakey Creek	14/07/1994							0.18	OK	125							0.01	OK	135				
422350A	Oakey_Ck Fairview	Oakey Creek	20/07/1994							0.18	OK	125							0.01	OK	135				
422350A	Oakey_Ck Fairview	Oakey Creek	8/12/1994	0	ND	130				0.27	OK	130							0	ND	130				
422350A	Oakey_Ck Fairview	Oakey Creek	28/03/1995																						
422350A	Oakey_Ck Fairview	Oakey Creek	28/03/1995	0.03	OK	130				0.28	OK	130							0	ND	130				
422350A	Oakey_Ck Fairview	Oakey Creek	5/05/1995	0.01	OK	130				0.26	OK	130							0	ND	130				
422350A	Oakey_Ck Fairview	Oakey Creek	14/08/1995	0.04	OK	130				0.23	OK	130							0	ND	130				
422350A	Oakey_Ck Fairview	Oakey Creek	18/08/1995																						
422350A	Oakey_Ck Fairview	Oakey Creek	7/09/1995																						
422350A	Oakey_Ck Fairview	Oakey Creek	13/09/1995																						
422350A	Oakey_Ck Fairview	Oakey Creek	20/09/1995																						
422350A	Oakey_Ck Fairview	Oakey Creek	4/10/1995	0.02	OK	130				0.2	OK	130							0	ND	130				
422350A	Oakey_Ck Fairview	Oakey Creek	12/12/1995																						
422350A	Oakey_Ck Fairview	Oakey Creek	6/02/1996																						
422350A	Oakey_Ck Fairview	Oakey Creek	28/05/1996																						
422350A	Oakey_Ck Fairview	Oakey Creek	29/05/1996																						
422350A	Oakey_Ck Fairview	Oakey Creek	13/06/1996																						
422350A	Oakey_Ck Fairview	Oakey Creek	20/06/1996																						
422350A	Oakey_Ck Fairview	Oakey Creek	16/09/1996																						
422350A	Oakey_Ck Fairview	Oakey Creek	16/09/1996																						
422350A	Oakey_Ck Fairview	Oakey Creek	7/10/1996																						
422350A	Oakey_Ck Fairview	Oakey Creek	31/10/1996																						
422350A	Oakey_Ck Fairview	Oakey Creek	18/11/1996	0.01	OK	130				0.18	OK	130							0	ND	130				
422350A	Oakey_Ck Fairview	Oakey Creek	7/01/1997	0	ND	130				0.19	OK	130							0.01	OK	130				
422350A	Oakey_Ck Fairview	Oakey Creek	25/03/1997																						
422350A	Oakey_Ck Fairview	Oakey Creek	23/04/1997	0	ND	130				0.22	OK	130							0.03	OK	130				
422350A	Oakey_Ck Fairview	Oakey Creek	29/05/1997																						
422350A	Oakey_Ck Fairview	Oakey Creek	21/07/1997	0.02	OK	130				0.12	OK	130							0.01	OK	130				
422350A	Oakey_Ck Fairview	Oakey Creek	25/09/1997																						
422350A	Oakey_Ck Fairview	Oakey Creek	13/11/1997																						
422350A	Oakey_Ck Fairview	Oakey Creek	24/11/1997	0.01	OK	130				0.2	OK	130							0	ND	130				
422350A	Oakey_Ck Fairview	Oakey Creek	28/04/1998																						
422350A	Oakey_Ck Fairview	Oakey Creek	21/05/1998	0.01	OK	130				0.16	OK	130							0.02	OK	130				
422350A	Oakey_Ck Fairview	Oakey Creek	7/10/1998	0.01	OK	130				0.15	OK	130							0	ND	130				
422350A	Oakey_Ck Fairview	Oakey Creek	19/11/1998	0.02	OK	130				0.18	OK	130							0	ND	130				
422350A	Oakey_Ck Fairview	Oakey Creek	18/02/1999	0	ND	130				0.17	OK	130							0	ND	130				
422350A	Oakey_Ck Fairview	Oakey Creek	22/03/1999																						
422350A	Oakey_Ck Fairview	Oakey Creek	16/06/1999	0	ND	130				0.15	OK	130							0	ND	130				
422350A	Oakey_Ck Fairview	Oakey Creek	29/06/1999																						
422350A	Oakey_Ck Fairview	Oakey Creek	1/09/1999	0	ND	130				0.13	OK	130							0.02	OK	130				
422350A	Oakey_Ck Fairview	Oakey Creek	1/09/1999																						

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Station	Station Name	Receiving Creek/ River	Date	V2622.00	F2622.00	Q2622.00	V2624.00	F2624.00	Q2624.00	V2641.00	F2641.00	Q2641.00	V2694.00	F2694.00	Q2694.00	V2744.00	F2744.00	Q2744.00	V2822.00	F2822.00	Q2822.00	V2824.00	F2824.00	Q2824.00
				Copper as Cu soluble mg/L			Copper as Cu total (ug/L)			Flouride as F (mg/L)			Lead as Pb total (ug/L)			Nickel as Ni total (ug/L)			Zinc as Zn soluble (mg/L)			Zinc as Zn total (ug/L)		
422350A	Oakey_Ck Fairview	Oakey Creek	27/01/2000																					
422350A	Oakey_Ck Fairview	Oakey Creek	27/01/2000	0	ND	130				0.18	OK	130								0	ND	130		
422350A	Oakey_Ck Fairview	Oakey Creek	2/02/2000																					
422350A	Oakey_Ck Fairview	Oakey Creek	21/02/2000	0	ND	130				0.15	OK	130								0.01	OK	130		
422350A	Oakey_Ck Fairview	Oakey Creek	19/06/2000	0.05	<	130				0.1	OK	130								0.02	<	130		
422350A	Oakey_Ck Fairview	Oakey Creek	24/08/2000																					
422350A	Oakey_Ck Fairview	Oakey Creek	1/12/2000																					
422350A	Oakey_Ck Fairview	Oakey Creek	5/02/2001																					
422350A	Oakey_Ck Fairview	Oakey Creek	6/02/2001	0.01	OK	130				0.18	OK	130								0.08	OK	130		
422350A	Oakey_Ck Fairview	Oakey Creek	6/02/2001																					
422350A	Oakey_Ck Fairview	Oakey Creek	6/02/2001																					
422350A	Oakey_Ck Fairview	Oakey Creek	8/02/2001																					
422350A	Oakey_Ck Fairview	Oakey Creek	17/04/2001																					
422350A	Oakey_Ck Fairview	Oakey Creek	29/05/2001	0.01	OK	130				0.13	OK	130								0	ND	130		
422350A	Oakey_Ck Fairview	Oakey Creek	13/06/2001	0.01	OK	130				0.13	OK	130								0.02	OK	130		
422350A	Oakey_Ck Fairview	Oakey Creek	12/07/2001																					
422350A	Oakey_Ck Fairview	Oakey Creek	20/08/2001																					
422350A	Oakey_Ck Fairview	Oakey Creek	15/10/2001	0.02	OK	130				0.17	OK	130								0	ND	130		
422350A	Oakey_Ck Fairview	Oakey Creek	25/10/2001																					
422350A	Oakey_Ck Fairview	Oakey Creek	11/11/2001																					
422350A	Oakey_Ck Fairview	Oakey Creek	12/11/2001																					
422350A	Oakey_Ck Fairview	Oakey Creek	13/11/2001																					
422350A	Oakey_Ck Fairview	Oakey Creek	13/11/2001																					
422350A	Oakey_Ck Fairview	Oakey Creek	30/11/2001																					
422350A	Oakey_Ck Fairview	Oakey Creek	6/03/2002																					
422350A	Oakey_Ck Fairview	Oakey Creek	17/04/2002	0.01	OK	130				0.17	OK	130								0.03	OK	130		
422350A	Oakey_Ck Fairview	Oakey Creek	15/05/2002	0	ND	130				0.17	OK	130								0	ND	130		
422350A	Oakey_Ck Fairview	Oakey Creek	27/06/2002																					
422350A	Oakey_Ck Fairview	Oakey Creek	3/10/2002																					
422350A	Oakey_Ck Fairview	Oakey Creek	7/10/2002	0.01	OK	130				0.19	OK	130								0.01	OK	130		
422350A	Oakey_Ck Fairview	Oakey Creek	12/05/2003	0.01	OK	130				0.14	OK	130								0.01	OK	130		
422350A	Oakey_Ck Fairview	Oakey Creek	12/10/2003	0.03	<	130				0.2	OK	130								0.01	OK	130		
422350A	Oakey_Ck Fairview	Oakey Creek	8/12/2003	0.03	<	130				0.2	OK	130								0.01	<	130		
422350A	Oakey_Ck Fairview	Oakey Creek	9/12/2003	0.03	<	130				0.2	OK	130								0.01	<	130		
422350A	Oakey_Ck Fairview	Oakey Creek	11/03/2004	0.03	<	130				0.2	OK	130								0.03	OK	130		
422350A	Oakey_Ck Fairview	Oakey Creek	26/11/2004	0.03	<	130				0.2	OK	130								0.02	OK	130		
422350A	Oakey_Ck Fairview	Oakey Creek	25/01/2005	0.03	<	130				0.2	OK	130								0.01	<	130		
422350A	Oakey_Ck Fairview	Oakey Creek	20/12/2005	0.03	<	130				0.2	OK	130								0.04	OK	130		
422350A	Oakey_Ck Fairview	Oakey Creek	15/03/2006	0.03	<	130				0.2	OK	130								0.13	OK	130		
422350A	Oakey_Ck Fairview	Oakey Creek	15/08/2006	0.03	<	131				0.2	OK	131								0.04	OK	131		
422350A	Oakey_Ck Fairview	Oakey Creek	16/09/2009																					

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Station	Station Name	Receiving Creek/ River	Date	V2010.00 F2010.00 Q2010.00			V2010.50 F2010.50 Q2010.50			V2030.00 F2030.00 Q2030.00			V2030.50 F2030.50 Q2030.50			V2030.51 F2030.51 Q2030.51		
				Conductivity @ 25C (uS/cm)	OK	FLD	Conductivity @ 25C FLD	OK	FLD	Turbidity (NTU)	OK	FLD	Turbidity (NTU) FLD	OK	FLD	Turbidity (NTU) FLD	OK	FLD
1303139	GAP CK GLENMORAL GAP	Dawson River	6/06/2001	180	OK	130	180	OK	130	25	OK	130	25	OK	130			
1303139	GAP CK GLENMORAL GAP	Dawson River	9/10/2001	225	OK	130	226	OK	130	20.4	OK	130	22	OK	130			
130344A	Juandah Ck Windamere	Dawson River	9/01/1985	165	OK	135	160	OK	130	100	OK	125						
130344A	Juandah Ck Windamere	Dawson River	7/01/1987	170	OK	125	143	OK	130	100	OK	125						
130344A	Juandah Ck Windamere	Dawson River	12/02/1988	235	OK	125	199	OK	130	100	OK	125						
130344A	Juandah Ck Windamere	Dawson River	19/05/1988	230	OK	125				100	OK	125						
130344A	Juandah Ck Windamere	Dawson River	12/01/1989	160	OK	135	171	OK	130	100	OK	125						
130344A	Juandah Ck Windamere	Dawson River	26/04/1989	165	OK	135	193	OK	130	100	OK	125						
130344A	Juandah Ck Windamere	Dawson River	6/05/1989	205	OK	125				100	OK	125						
130344A	Juandah Ck Windamere	Dawson River	2/12/1989	650	OK	130				5	OK	130						
130344A	Juandah Ck Windamere	Dawson River	2/12/1989				724	OK	130									
130344A	Juandah Ck Windamere	Dawson River	11/07/1990	453	OK	125	480	OK	130	17	OK	125						
130344A	Juandah Ck Windamere	Dawson River	9/12/1993	126	OK	125	108	OK	130	200	OK	151						
130344A	Juandah Ck Windamere	Dawson River	10/12/1993	142	OK	125	131	OK	130	200	OK	151						
130344A	Juandah Ck Windamere	Dawson River	28/11/1995	194.8	OK	130	200	OK	130	234	OK	130	245	OK	130			
130344A	Juandah Ck Windamere	Dawson River	26/03/1997	540	OK	130	515	OK	130	10	OK	130	15	OK	130			
130344A	Juandah Ck Windamere	Dawson River	19/11/1997	225	OK	130	223	OK	130	1950	OK	130	2000	OK	130			
130344A	Juandah Ck Windamere	Dawson River	7/10/1998	697	OK	130	534	OK	130	23	OK	130	52.7	OK	130			
130344A	Juandah Ck Windamere	Dawson River	18/11/1998	1005	OK	130	865	OK	130	7.5	OK	130	11.2	OK	130			
130344A	Juandah Ck Windamere	Dawson River	25/02/1999	580	OK	130	649	OK	130	30	OK	130	39.1	OK	130			
130344A	Juandah Ck Windamere	Dawson River	31/10/2000	130	OK	130	126	OK	130	680	OK	130	885	OK	130			
130344A	Juandah Ck Windamere	Dawson River	5/12/2001	260	OK	130	261	OK	130	365	OK	130	308	OK	130			
130344A	Juandah Ck Windamere	Dawson River	7/07/2005	146	OK	130	140	OK	1	333	OK	130	314	OK	1			
130344A	Juandah Ck Windamere	Dawson River	16/11/2005	162	OK	130	165	OK	1	506	OK	130	452	OK	1			
130344A	Juandah Ck Windamere	Dawson River	7/12/2007	123	OK	10	117	OK	1	3790	OK	10						
4164055	CANNING CK MRHI	Macintyre Brook	6/10/1994				265	OK	130									
4164055	CANNING CK MRHI	Macintyre Brook	8/05/1995				243	OK	130				90	OK	130			
4164055	CANNING CK MRHI	Macintyre Brook	15/09/1995				248	OK	130				52	OK	130			
4164055	CANNING CK MRHI	Macintyre Brook	15/09/1995															
4164055	CANNING CK MRHI	Macintyre Brook	28/08/1996	558	OK	130	562	OK	130	21.5	OK	130	30	OK	130			
4164055	CANNING CK MRHI	Macintyre Brook	14/11/1996	469	OK	130	480	OK	130	39.3	OK	130	87	OK	130			
416407A	Woodspring	Macintyre Brook	12/03/1962	100	OK	135												
416407A	Woodspring	Macintyre Brook	11/04/1962	580	OK	125												
416407A	Woodspring	Macintyre Brook	18/11/1962	835	OK	125												
416407A	Woodspring	Macintyre Brook	21/03/1963	365	OK	125												
416407A	Woodspring	Macintyre Brook	25/05/1963	370	OK	125												
416407A	Woodspring	Macintyre Brook	6/12/1965	164	OK	135												
416407A	Woodspring	Macintyre Brook	17/12/1965	325	OK	125												
416407A	Woodspring	Macintyre Brook	16/03/1971	650	OK	125												
416407A	Woodspring	Macintyre Brook	16/03/1971															
416407A	Woodspring	Macintyre Brook	18/12/1974	345	OK	125												
416407A	Woodspring	Macintyre Brook	18/12/1974															
416407A	Woodspring	Macintyre Brook	8/04/1975	260	OK	125												
416407A	Woodspring	Macintyre Brook	27/08/1975	280	OK	125												
416407A	Woodspring	Macintyre Brook	19/05/1976	685	OK	125												
416407A	Woodspring	Macintyre Brook	19/05/1976															
416407A	Woodspring	Macintyre Brook	4/08/1976	720	OK	125												
416407A	Woodspring	Macintyre Brook	27/10/1976	700	OK	125												
416407A	Woodspring	Macintyre Brook	1/11/1976	150	OK	125												
416407A	Woodspring	Macintyre Brook	25/03/1977	348	OK	125												
422202A	Dogwood Ck Miles	Balonne River	2/12/2005															
422202A	Dogwood Ck Miles	Balonne River	3/12/2005															
422202A	Dogwood Ck Miles	Balonne River	3/12/2005															
422202A	Dogwood Ck Miles	Balonne River	3/12/2005															
422202A	Dogwood Ck Miles	Balonne River	4/12/2005															
422202A	Dogwood Ck Miles	Balonne River	5/12/2005															
422202A	Dogwood Ck Miles	Balonne River	9/12/2005															
422202A	Dogwood Ck Miles	Balonne River	9/12/2005															
422202B	Dogwood Ck Gilweir	Balonne River	26/04/1964	90	OK	125												
422202B	Dogwood Ck Gilweir	Balonne River	18/03/1971	130	OK	135												
422202B	Dogwood Ck Gilweir	Balonne River	5/10/1971	130	OK	125												
422202B	Dogwood Ck Gilweir	Balonne River	18/01/1972	94	OK	125												
422202B	Dogwood Ck Gilweir	Balonne River	8/02/1972	102	OK	125												
422202B	Dogwood Ck Gilweir	Balonne River	27/06/1972	110	OK	135												
422202B	Dogwood Ck Gilweir	Balonne River	30/11/1972	66	OK	125												
422202B	Dogwood Ck Gilweir	Balonne River	6/02/1973	63	OK	125												
422202B	Dogwood Ck Gilweir	Balonne River	10/04/1973	82	OK	135												
422202B	Dogwood Ck Gilweir	Balonne River	8/08/1973	93	OK	125												
422202B	Dogwood Ck Gilweir	Balonne River	2/10/1973	110	OK	135												
422202B	Dogwood Ck Gilweir	Balonne River	19/01/1977	93	OK	135												
422202B	Dogwood Ck Gilweir	Balonne River	29/08/1978	82	OK	135												

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Station	Station Name	Receiving Creek/ River	Date	V2010.00 F2010.00 Q2010.00			V2010.50 F2010.50 Q2010.50			V2030.00 F2030.00 Q2030.00			V2030.50 F2030.50 Q2030.50			V2030.51 F2030.51 Q2030.51		
				Conductivity @ 25C (uS/cm)			Conductivity @ 25C FLD			Turbidity (NTU)			Turbidity (NTU) FLD			Turbidity (NTU) FLD Webb test only		
422202B	Dogwood Ck Gilweir	Balonne River	16/12/1980	71	OK	135												
422202B	Dogwood Ck Gilweir	Balonne River	17/02/1981	99	OK	135												
422202B	Dogwood Ck Gilweir	Balonne River	10/08/1981	85	OK	135				100	OK	125						
422202B	Dogwood Ck Gilweir	Balonne River	3/11/1981	102	OK	125				250	OK	151						
422202B	Dogwood Ck Gilweir	Balonne River	5/02/1982	88	OK	135				100	OK	125						
422202B	Dogwood Ck Gilweir	Balonne River	17/01/1983	98	OK	135												
422202B	Dogwood Ck Gilweir	Balonne River	25/07/1983	145	OK	135												
422202B	Dogwood Ck Gilweir	Balonne River	9/11/1983	73	OK	135				100	OK	125						
422202B	Dogwood Ck Gilweir	Balonne River	2/02/1984	77	OK	135				100	OK	125						
422202B	Dogwood Ck Gilweir	Balonne River	11/05/1984	135	OK	135				100	OK	125						
422202B	Dogwood Ck Gilweir	Balonne River	31/08/1984	115	OK	135				100	OK	125						
422202B	Dogwood Ck Gilweir	Balonne River	7/03/1985	105	OK	135				100	OK	125						
422202B	Dogwood Ck Gilweir	Balonne River	19/05/1988	150	OK	135	123	OK	130	100	OK	125						
422202B	Dogwood Ck Gilweir	Balonne River	24/01/1994	126	OK	135	130	OK	130	137	OK	151						
422202B	Dogwood Ck Gilweir	Balonne River	29/11/1994	173.1	OK	130				145	OK	130						
422202B	Dogwood Ck Gilweir	Balonne River	16/02/1995	66.7	OK	130				200	OK	130						
422202B	Dogwood Ck Gilweir	Balonne River	19/02/1995	89.2	OK	130				180	OK	130						
422202B	Dogwood Ck Gilweir	Balonne River	11/04/1995	294.4	OK	130				53	OK	130						
422202B	Dogwood Ck Gilweir	Balonne River	31/07/1995	108	OK	130	106	OK	130	52	OK	130	52	OK	130			
422202B	Dogwood Ck Gilweir	Balonne River	6/11/1995	116	OK	130	113	OK	130	23	OK	130	28	OK	130			
422202B	Dogwood Ck Gilweir	Balonne River	20/02/1996	143	OK	130	142	OK	130	135	OK	130	139	OK	130			
422202B	Dogwood Ck Gilweir	Balonne River	20/06/1996	119.7	OK	130	117	OK	130	125	OK	130	115	OK	130			
422202B	Dogwood Ck Gilweir	Balonne River	8/10/1996	76.9	OK	130	75	OK	130	167	OK	130	166	OK	130			
422202B	Dogwood Ck Gilweir	Balonne River	17/02/1997	142	OK	130	143	OK	130	379	OK	130	520	OK	130			
422202B	Dogwood Ck Gilweir	Balonne River	17/06/1997	119.5	OK	130	117	OK	130	103	OK	130	91.4	OK	130			
422202B	Dogwood Ck Gilweir	Balonne River	15/10/1997	98.9	OK	130	105	OK	130	152	OK	130	143	OK	130			
422202B	Dogwood Ck Gilweir	Balonne River	16/03/1998	136	OK	130	161	OK	130	78.9	OK	130	68	OK	130			
422202B	Dogwood Ck Gilweir	Balonne River	10/08/1998	122.9	OK	130	118	OK	130	186	OK	130	172	OK	130			
422202B	Dogwood Ck Gilweir	Balonne River	11/01/1999															
422202B	Dogwood Ck Gilweir	Balonne River	28/01/1999	135	OK	130	134	OK	130	93.7	OK	130	150	OK	130			
422202B	Dogwood Ck Gilweir	Balonne River	12/04/1999															
422202B	Dogwood Ck Gilweir	Balonne River	19/04/1999							120	OK	130						
422202B	Dogwood Ck Gilweir	Balonne River	20/04/1999	96.11	OK	130	98	OK	130	121	OK	130	103	OK	130			
422202B	Dogwood Ck Gilweir	Balonne River	12/07/1999															
422202B	Dogwood Ck Gilweir	Balonne River	19/08/1999	102	OK	130	100	OK	130	157	OK	130	169	OK	130			
422202B	Dogwood Ck Gilweir	Balonne River	16/12/1999	123	OK	130	120	OK	130	181	OK	130	168	OK	130			
422202B	Dogwood Ck Gilweir	Balonne River	14/04/2000	97.5	OK	130	98	OK	130	78.4	OK	130	70	OK	130			
422202B	Dogwood Ck Gilweir	Balonne River	4/09/2000	101.9	OK	130	101	OK	130	184	OK	130	155	OK	130			
422202B	Dogwood Ck Gilweir	Balonne River	1/05/2001	144	OK	130	144	OK	130	68.6	OK	130	71	OK	130			
422202B	Dogwood Ck Gilweir	Balonne River	1/10/2001	161	OK	130	169	OK	130	256	OK	130	268	OK	130			
422202B	Dogwood Ck Gilweir	Balonne River	3/02/2002	113.3	OK	130	121	OK	130	87.5	OK	130	96	OK	130			
422202B	Dogwood Ck Gilweir	Balonne River	29/07/2002	105	OK	130	108	OK	130	353	OK	130	312	OK	130			
422202B	Dogwood Ck Gilweir	Balonne River	12/03/2004	66	OK	130	59	OK	130	185	OK	130	163	OK	130			
422202B	Dogwood Ck Gilweir	Balonne River	27/02/2005	121	OK	130	120	OK	130	193	OK	130	312	OK	130			
422202B	Dogwood Ck Gilweir	Balonne River	24/10/2005	83	OK	130	83	OK	130	167	OK	130	172	OK	130			
422202B	Dogwood Ck Gilweir	Balonne River	14/02/2006	119	OK	10	123	OK	130	142	OK	10	171	OK	130			
422202B	Dogwood Ck Gilweir	Balonne River	11/02/2008	107	OK	10	107	OK	130	105	OK	10	118	OK	130			
422202B	Dogwood Ck Gilweir	Balonne River	27/10/2008	90	OK	10	87	OK	130	277	OK	10	228	OK	130			
4223005	CONDAMINE AT MCLEANS	Condamine River	17/03/2001	228	OK	130				172	OK	130						
4223005	CONDAMINE AT MCLEANS	Condamine River	9/11/2001	271.7	OK	130				52.5	OK	130						
4223006	CHINCHILLA WEIR	Condamine River	16/03/2001	216	OK	130				70.5	OK	130						
4223006	CHINCHILLA WEIR	Condamine River	8/11/2001	286	OK	130				11.8	OK	130						
4223030	CECIL PL DALBY RD	Oakey Creek	29/08/2006	2190	OK	10				22	OK	10						
4223031	Oakey CK Oakey	Oakey Creek	26/08/2006	289	OK	10				159	OK	10						
4223049	CONDAMINE R BEMARNG	Condamine River	4/02/1969	335	OK	125												
4223049	CONDAMINE R BEMARNG	Condamine River	1/09/1971	580	OK	125												
4223049	CONDAMINE R BEMARNG	Condamine River	18/11/1971	570	OK	125												
4223049	CONDAMINE R BEMARNG	Condamine River	20/03/1973	310	OK	125												
4223050	CONDAMINE R TIPTONS	Condamine River	18/06/1963	365	OK	125												
4223050	CONDAMINE R TIPTONS	Condamine River	25/09/1963	630	OK	125												
4223050	CONDAMINE R TIPTONS	Condamine River	28/04/1964	195	OK	125												
4223050	CONDAMINE R TIPTONS	Condamine River	8/12/1964	630	OK	125												
4223050	CONDAMINE R TIPTONS	Condamine River	14/09/1965	505	OK	125												
4223050	CONDAMINE R TIPTONS	Condamine River	21/10/1965	435	OK	125												
4223050	CONDAMINE R TIPTONS	Condamine River	29/08/2006	343	OK	10				324	OK	10						
4223051	CONDAMINE R KAREE	Condamine River	17/03/1971	315	OK	125												
4223051	CONDAMINE R KAREE	Condamine River	20/07/1971	474	OK	125												
4223051	CONDAMINE R KAREE	Condamine River	30/08/1971	510	OK	125												
4223051	CONDAMINE R KAREE	Condamine River	21/10/1971	610	OK	125												
4223051	CONDAMINE R KAREE	Condamine River	18/11/1971	670	OK	125												
4223051	CONDAMINE R KAREE	Condamine River	14/03/1972	270	OK	125												

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				Conductivity @ 25C (uS/cm)			Conductivity @ 25C FLD			Turbidity (NTU)			Turbidity (NTU) FLD			Turbidity (NTU) FLD Webb test only		
4223051	CONDAMINE R. KAREE	Condamine River	21/03/1973	300	OK	125												
4223068	LAKE BROADWATER DIWF	Condamine River	7/08/1996	84.6	OK	130				9.4	OK	130						
4223068	LAKE BROADWATER DIWF	Condamine River	27/02/1997	144	OK	130				16.2	OK	130						
4223068	LAKE BROADWATER DIWF	Condamine River	20/05/1997	150	OK	130				9.3	OK	130						
4223068	LAKE BROADWATER DIWF	Condamine River	5/09/1997	177	OK	130				28	OK	130						
4223068	LAKE BROADWATER DIWF	Condamine River	21/11/1997	207	OK	130				60	OK	130						
4223068	LAKE BROADWATER DIWF	Condamine River	17/02/1998	268	OK	130				99	OK	130						
4223068	LAKE BROADWATER DIWF	Condamine River	29/05/1998	269	OK	130				181	OK	130						
4223069	SPRINGVALE BR DIWF	Condamine River	9/08/1996	696	OK	130				4.9	OK	130						
4223069	SPRINGVALE BR DIWF	Condamine River	29/11/1996	402	OK	130				26.4	OK	130						
4223069	SPRINGVALE BR DIWF	Condamine River	25/02/1997	230	OK	130				224	OK	130						
4223069	SPRINGVALE BR DIWF	Condamine River	21/05/1997	332	OK	130				51	OK	130						
4223069	SPRINGVALE BR DIWF	Condamine River	16/09/1997	1610	OK	130				3.4	OK	130						
4223069	SPRINGVALE BR DIWF	Condamine River	19/11/1997	243	OK	130				210	OK	130						
4223069	SPRINGVALE BR DIWF	Condamine River	19/02/1998	305	OK	130				51	OK	130						
4223069	SPRINGVALE BR DIWF	Condamine River	27/05/1998	118	OK	130				471	OK	130						
4223073	BOWENVILLE Rd	Condamine River	26/05/1997	450	OK	130	470	OK	130	41.1	OK	130	48	OK	130			
4223073	BOWENVILLE Rd	Condamine River	1/09/2006	342	OK	10				13	OK	10						
4223074	W. BROOK CK WYREMA RD	Oakey Creek	18/05/1998				1823	OK	130				8	OK	130			
4223074	W. BROOK CK WYREMA RD	Oakey Creek	2/11/1998	1730	OK	130	1805	OK	130	3	OK	130	7	OK	130			
4223076	WEST CK ALDERLY ST	Oakey Creek	22/05/1998	172	OK	130	171	OK	130	14.9	OK	130	103	OK	130			
4223076	WEST CK ALDERLY ST	Oakey Creek	13/06/1998	561	OK	130				9.3	OK	130						
4223076	WEST CK ALDERLY ST	Oakey Creek	26/09/1998	347	OK	130				13.7	OK	130						
4223076	WEST CK ALDERLY ST	Oakey Creek	3/11/1998	220	OK	130	224	OK	130	19.4	OK	130	24	OK	130			
4223076	WEST CK ALDERLY ST	Oakey Creek	5/12/1998	243	OK	130				5.5	OK	130						
4223076	WEST CK ALDERLY ST	Oakey Creek	17/03/1999	444	OK	130				32.8	OK	130						
4223078	EAST CREEK	Oakey Creek	22/05/1998	187	OK	130	189	OK	130	5.1	OK	130	16	OK	130			
4223078	EAST CREEK	Oakey Creek	3/11/1998	269	OK	130	267	OK	130	2.8	OK	130	8	OK	130			
4223079	GOWRIE CK WILLIMS RD	Oakey Creek	18/05/1998				1216	OK	130				5	OK	130			
4223079	GOWRIE CK WILLIMS RD	Oakey Creek	2/11/1998				1395	OK	130				8	OK	130			
4223080	SPRING CREEK	Oakey Creek	18/05/1998				1045	OK	130				69	OK	130			
4223080	SPRING CREEK	Oakey Creek	3/11/1998	1215	OK	130	1276	OK	130	15.2	OK	130	17	OK	130			
422308B	Chinchilla	Condamine River	28/08/2006	439	OK	10				282	OK	10						
422308C	Condamine Chinchilla	Condamine River	22/11/1962	722	OK	125												
422308C	Condamine Chinchilla	Condamine River	12/03/1963	452	OK	135												
422308C	Condamine Chinchilla	Condamine River	24/09/1963	630	OK	125												
422308C	Condamine Chinchilla	Condamine River	28/04/1964	285	OK	125												
422308C	Condamine Chinchilla	Condamine River	16/12/1964	680	OK	125												
422308C	Condamine Chinchilla	Condamine River	13/09/1965	765	OK	125												
422308C	Condamine Chinchilla	Condamine River	3/02/1966	345	OK	135												
422308C	Condamine Chinchilla	Condamine River	15/04/1966	305	OK	135												
422308C	Condamine Chinchilla	Condamine River	29/06/1966															
422308C	Condamine Chinchilla	Condamine River	22/07/1966															
422308C	Condamine Chinchilla	Condamine River	14/05/1968															
422308C	Condamine Chinchilla	Condamine River	17/09/1968															
422308C	Condamine Chinchilla	Condamine River	19/03/1971	365	OK	125												
422308C	Condamine Chinchilla	Condamine River	4/10/1971	710	OK	125												
422308C	Condamine Chinchilla	Condamine River	17/01/1972	209	OK	125												
422308C	Condamine Chinchilla	Condamine River	7/02/1972	274	OK	125												
422308C	Condamine Chinchilla	Condamine River	26/06/1972															
422308C	Condamine Chinchilla	Condamine River	1/12/1972	237	OK	125												
422308C	Condamine Chinchilla	Condamine River	8/01/1973	245	OK	130												
422308C	Condamine Chinchilla	Condamine River	5/02/1973															
422308C	Condamine Chinchilla	Condamine River	9/04/1973	428	OK	125												
422308C	Condamine Chinchilla	Condamine River	6/07/1973	640	OK	125												
422308C	Condamine Chinchilla	Condamine River	1/10/1973	580	OK	125												
422308C	Condamine Chinchilla	Condamine River	18/02/1974	197	OK	135												
422308C	Condamine Chinchilla	Condamine River	5/03/1974	320	OK	125												
422308C	Condamine Chinchilla	Condamine River	13/05/1974															
422308C	Condamine Chinchilla	Condamine River	8/10/1974															
422308C	Condamine Chinchilla	Condamine River	23/10/1974															
422308C	Condamine Chinchilla	Condamine River	7/01/1975															
422308C	Condamine Chinchilla	Condamine River	20/01/1975															
422308C	Condamine Chinchilla	Condamine River	15/07/1975															
422308C	Condamine Chinchilla	Condamine River	13/10/1975															
422308C	Condamine Chinchilla	Condamine River	18/05/1976															
422308C	Condamine Chinchilla	Condamine River	17/08/1976	975	OK	125												
422308C	Condamine Chinchilla	Condamine River	17/01/1977	510	OK	125												
422308C	Condamine Chinchilla	Condamine River	22/03/1977															
422308C	Condamine Chinchilla	Condamine River	23/08/1977	580	OK	125												
422308C	Condamine Chinchilla	Condamine River	21/11/1977	795	OK	125												

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				Conductivity @ 25C (uS/cm)	OK	125	Conductivity @ 25C FLD	OK	130	Turbidity (NTU)	OK	151	Turbidity (NTU) FLD	OK	151	Turbidity (NTU) FLD	OK	151
422308C	Condamine Chinchilla	Condamine River	14/03/1978	390	OK	125												
422308C	Condamine Chinchilla	Condamine River	22/05/1978	500	OK	125												
422308C	Condamine Chinchilla	Condamine River	18/07/1979															
422308C	Condamine Chinchilla	Condamine River	13/02/1980	230	OK	125												
422308C	Condamine Chinchilla	Condamine River	28/04/1980	350	OK	125												
422308C	Condamine Chinchilla	Condamine River	22/07/1980	445	OK	125												
422308C	Condamine Chinchilla	Condamine River	6/10/1980	530	OK	125												
422308C	Condamine Chinchilla	Condamine River	21/02/1981	285	OK	125												
422308C	Condamine Chinchilla	Condamine River	18/05/1981	405	OK	125			110	OK	151							
422308C	Condamine Chinchilla	Condamine River	10/08/1981	440	OK	125			100	OK	125							
422308C	Condamine Chinchilla	Condamine River	2/11/1981	530	OK	125			15	OK	125							
422308C	Condamine Chinchilla	Condamine River	17/12/1981	240	OK	125			100	OK	125							
422308C	Condamine Chinchilla	Condamine River	4/02/1982	410	OK	125			100	OK	125							
422308C	Condamine Chinchilla	Condamine River	5/05/1982	335	OK	125			40	OK	125							
422308C	Condamine Chinchilla	Condamine River	25/05/1982															
422308C	Condamine Chinchilla	Condamine River	2/08/1982	570	OK	125			22	OK	125							
422308C	Condamine Chinchilla	Condamine River	12/10/1982	640	OK	125			31	OK	125							
422308C	Condamine Chinchilla	Condamine River	17/01/1983	170	OK	135			100	OK	125							
422308C	Condamine Chinchilla	Condamine River	5/04/1983	215	OK	125			100	OK	125							
422308C	Condamine Chinchilla	Condamine River	25/07/1983	435	OK	125			40	OK	125							
422308C	Condamine Chinchilla	Condamine River	8/11/1983	450	OK	125			100	OK	125							
422308C	Condamine Chinchilla	Condamine River	31/01/1984	460	OK	125			5	OK	125							
422308C	Condamine Chinchilla	Condamine River	10/05/1984	355	OK	125			100	OK	125							
422308C	Condamine Chinchilla	Condamine River	29/08/1984	470	OK	125			60	OK	125							
422308C	Condamine Chinchilla	Condamine River	28/11/1984	510	OK	125			6	OK	125							
422308C	Condamine Chinchilla	Condamine River	5/03/1985															
422308C	Condamine Chinchilla	Condamine River	16/05/1985															
422308C	Condamine Chinchilla	Condamine River	31/07/1985	345	OK	125			3	OK	125							
422308C	Condamine Chinchilla	Condamine River	29/11/1985	275	OK	125			100	OK	125							
422308C	Condamine Chinchilla	Condamine River	4/02/1986				510	OK	130									
422308C	Condamine Chinchilla	Condamine River	26/05/1986				44	OK	130									
422308C	Condamine Chinchilla	Condamine River	5/09/1986	500	OK	125			150	OK	130	23	OK	125				
422308C	Condamine Chinchilla	Condamine River	18/11/1986	455	OK	125			19	OK	125							
422308C	Condamine Chinchilla	Condamine River	27/05/1987	315	OK	125	283	OK	130	92	OK	125						
422308C	Condamine Chinchilla	Condamine River	4/08/1987	320	OK	125	247	OK	130	100	OK	125						
422308C	Condamine Chinchilla	Condamine River	3/02/1988	250	OK	125	277	OK	130	100	OK	125						
422308C	Condamine Chinchilla	Condamine River	18/05/1988	335	OK	125	287	OK	130	100	OK	125						
422308C	Condamine Chinchilla	Condamine River	10/08/1988	435	OK	125	343	OK	130	60	OK	125						
422308C	Condamine Chinchilla	Condamine River	16/11/1988	630	OK	125	1436	OK	130	6	OK	125						
422308C	Condamine Chinchilla	Condamine River	15/02/1989	650	OK	125	638	OK	130	8	OK	125						
422308C	Condamine Chinchilla	Condamine River	30/05/1989				234	OK	130									
422308C	Condamine Chinchilla	Condamine River	25/09/1989	610	OK	125	710	OK	130	6	OK	125						
422308C	Condamine Chinchilla	Condamine River	8/01/1990				450	OK	130									
422308C	Condamine Chinchilla	Condamine River	13/02/1990				222	OK	130									
422308C	Condamine Chinchilla	Condamine River	16/03/1990				280	OK	130									
422308C	Condamine Chinchilla	Condamine River	16/09/1990	635	OK	125	638	OK	130	5	OK	125						
422308C	Condamine Chinchilla	Condamine River	8/05/1991	338	OK	125	300	OK	130	160	OK	151						
422308C	Condamine Chinchilla	Condamine River	7/01/1992				305	OK	130									
422308C	Condamine Chinchilla	Condamine River	11/01/1993	592	OK	125	619	OK	130									
422308C	Condamine Chinchilla	Condamine River	24/01/1994				903	OK	130									
422308C	Condamine Chinchilla	Condamine River	19/05/1994	260	OK	125	265	OK	130	134	OK	151						
422308C	Condamine Chinchilla	Condamine River	30/07/1994	223	OK	125	238	OK	130	138	OK	151	239	OK	130			
422308C	Condamine Chinchilla	Condamine River	11/04/1995	99.8	OK	130	318	OK	130	100	OK	130	57.8	OK	130			
422308C	Condamine Chinchilla	Condamine River	5/05/1995	272.5	OK	130	286	OK	130	34	OK	130	57	OK	130			
422308C	Condamine Chinchilla	Condamine River	25/07/1995				628	OK	130									
422308C	Condamine Chinchilla	Condamine River	31/07/1995	617	OK	130	620	OK	130	13.8	OK	130	23	OK	130			
422308C	Condamine Chinchilla	Condamine River	14/08/1995	340	OK	130			26	OK	130							
422308C	Condamine Chinchilla	Condamine River	27/09/1995	368	OK	130			3.3	OK	130							
422308C	Condamine Chinchilla	Condamine River	4/10/1995	320.4	OK	130	334	OK	130	9.9	OK	130	18	OK	130			
422308C	Condamine Chinchilla	Condamine River	6/11/1995	460	OK	130	656	OK	130	3.8	OK	130	33	OK	130			
422308C	Condamine Chinchilla	Condamine River	20/02/1996	330	OK	130	334	OK	130	170	OK	130	202	OK	130			
422308C	Condamine Chinchilla	Condamine River	19/06/1996	364	OK	130	370	OK	130	55.7	OK	130	54	OK	130			
422308C	Condamine Chinchilla	Condamine River	29/08/1996	604	OK	130	616	OK	130	8.9	OK	130	14	OK	130			
422308C	Condamine Chinchilla	Condamine River	7/10/1996	700	OK	130	714	OK	130	4	OK	130	9	OK	130			
422308C	Condamine Chinchilla	Condamine River	18/11/1996	729	OK	130	727	OK	130	0.9	OK	130	15	OK	130			
422308C	Condamine Chinchilla	Condamine River	13/03/1997	177	OK	130	144	OK	130	396	OK	130	496	OK	130			
422308C	Condamine Chinchilla	Condamine River	16/06/1997				904	OK	130									
422308C	Condamine Chinchilla	Condamine River	26/06/1997	946	OK	130	942	OK	130	16.6	OK	130	18.9	OK	130			
422308C	Condamine Chinchilla	Condamine River	15/10/1997	497	OK	130	518	OK	130	99	OK	130	144	OK	130			
422308C	Condamine Chinchilla	Condamine River	16/03/1998				399	OK	130									
422308C	Condamine Chinchilla	Condamine River	16/03/1998	399	OK	130	398	OK	130	255	OK	130	147	OK	130			

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Station	Station Name	Receiving Creek/ River	Date	V2010.00	F2010.00	Q2010.00	V2010.50	F2010.50	Q2010.50	V2030.00	F2030.00	Q2030.00	V2030.50	F2030.50	Q2030.50	V2030.51	F2030.51	Q2030.51
				Conductivity @ 25C (uS/cm)	OK	130	Conductivity @ 25C FLD	OK	130	Turbidity (NTU)	OK	130	Turbidity (NTU) FLD	OK	130	Turbidity (NTU) FLD	OK	130
422308C	Condamine_Chinchilla	Condamine River	4/06/1998	227	OK	130	228	OK	130	476	OK	130	458	OK	130			
422308C	Condamine_Chinchilla	Condamine River	10/08/1998	347	OK	130	347	OK	130	346	OK	130	442	OK	130			
422308C	Condamine_Chinchilla	Condamine River	21/10/1998				337	OK	130									
422308C	Condamine_Chinchilla	Condamine River	19/11/1998	332	OK	130	340	OK	130	177	OK	130	238	OK	130			
422308C	Condamine_Chinchilla	Condamine River	27/01/1999	245	OK	130	239	OK	130	268	OK	130	276	OK	130			
422308C	Condamine_Chinchilla	Condamine River	27/01/1999				239	OK	130									
422308C	Condamine_Chinchilla	Condamine River	19/04/1999	260.94	OK	130	288	OK	130	107	OK	130	122	OK	130			
422308C	Condamine_Chinchilla	Condamine River	24/05/1999	305.41	OK	130	337	OK	130	74.2	OK	130	100	OK	130			
422308C	Condamine_Chinchilla	Condamine River	20/08/1999	512	OK	130	522	OK	130	14.6	OK	130	23	OK	130			
422308C	Condamine_Chinchilla	Condamine River	27/09/1999	529.07	OK	130				13.7	OK	130						
422308C	Condamine_Chinchilla	Condamine River	16/12/1999	276	OK	130	275	OK	130	129	OK	130	195	OK	130			
422308C	Condamine_Chinchilla	Condamine River	3/04/2000	305.41	OK	130	343	OK	130	29.1	OK	130	43	OK	130			
422308C	Condamine_Chinchilla	Condamine River	15/08/2000	469	OK	130	463	OK	130	38.5	OK	130	40	OK	130			
422308C	Condamine_Chinchilla	Condamine River	21/09/2000	386	OK	130	389	OK	130	63.9	OK	130	67	OK	130			
422308C	Condamine_Chinchilla	Condamine River	9/11/2000	714	OK	130	720	OK	130	36.1	OK	130	30	OK	130			
422308C	Condamine_Chinchilla	Condamine River	12/12/2000	840	OK	130	855	OK	130	16.6	OK	130	22	OK	130			
422308C	Condamine_Chinchilla	Condamine River	25/01/2001															
422308C	Condamine_Chinchilla	Condamine River	8/02/2001															
422308C	Condamine_Chinchilla	Condamine River	20/03/2001															
422308C	Condamine_Chinchilla	Condamine River	1/05/2001	276	OK	130	278	OK	130	36	OK	130	37	OK	130			
422308C	Condamine_Chinchilla	Condamine River	20/06/2001				422	OK	130				22	OK	130			
422308C	Condamine_Chinchilla	Condamine River	1/10/2001	575	OK	130	589	OK	130	32.4	OK	130	37	OK	130			
422308C	Condamine_Chinchilla	Condamine River	25/02/2002	283	OK	130	281	OK	130	67.5	OK	130	82	OK	130			
422308C	Condamine_Chinchilla	Condamine River	29/07/2002	480	OK	130	652	OK	130	20.7	OK	130	17	OK	130			
422308C	Condamine_Chinchilla	Condamine River	10/03/2003				273	OK	130									
422308C	Condamine_Chinchilla	Condamine River	10/03/2003	211	OK	130	273	OK	130	176	OK	130	204	OK	130			
422308C	Condamine_Chinchilla	Condamine River	9/12/2003	96	OK	130	98	OK	130	790	OK	130	1071	OK	130			
422308C	Condamine_Chinchilla	Condamine River	12/03/2004	135	OK	130	140	OK	130	580	OK	130	607	OK	130			
422308C	Condamine_Chinchilla	Condamine River	5/12/2005															
422308C	Condamine_Chinchilla	Condamine River	5/12/2005															
422308C	Condamine_Chinchilla	Condamine River	6/12/2005															
422308C	Condamine_Chinchilla	Condamine River	6/12/2005															
422308C	Condamine_Chinchilla	Condamine River	22/12/2005	139	OK	130	139	OK	130	572	OK	130	791	OK	130			
422308C	Condamine_Chinchilla	Condamine River	14/03/2006	255	OK	130	237	OK	130	104	OK	130	141	OK	130			
422308C	Condamine_Chinchilla	Condamine River	29/11/2007	121	OK	10	118	OK	130	1350	OK	10	956	OK	130			
422308C	Condamine_Chinchilla	Condamine River	6/12/2007	140	OK	10				538	OK	10						
422308C	Condamine_Chinchilla	Condamine River	8/12/2007				138	OK	130				392	OK	130			
422308C	Condamine_Chinchilla	Condamine River	30/05/2008	225	OK	10	224	OK	130	489	OK	10	363	OK	130			
422312A	Cooby_Ck Dam	Oakey Creek	26/06/1997	993	OK	130				1.6	OK	130						
422312A	Cooby_Ck Dam	Oakey Creek	12/01/1999															
422312A	Cooby_Ck Dam	Oakey Creek	14/01/1999															
422312A	Cooby_Ck Dam	Oakey Creek	12/04/1999															
422312A	Cooby_Ck Dam	Oakey Creek	12/04/1999															
422312A	Cooby_Ck Dam	Oakey Creek	19/07/1999							4	OK	130						
422312A	Cooby_Ck Dam	Oakey Creek	19/07/1999															
422330B	Oakey_Ck Oakey	Oakey Creek	29/01/1980				320	OK	125									
422330B	Oakey_Ck Oakey	Oakey Creek	29/01/1980															
422331A	W_brook_Ck Arcadia	Oakey Creek	16/03/1971				1300	OK	125									
422331A	W_brook_Ck Arcadia	Oakey Creek	30/08/1971				1850	OK	125									
422331A	W_brook_Ck Arcadia	Oakey Creek	26/01/1973				1140	OK	125									
422331A	W_brook_Ck Arcadia	Oakey Creek	24/07/1973				1790	OK	125									
422331A	W_brook_Ck Arcadia	Oakey Creek	24/07/1973															
422331A	W_brook_Ck Arcadia	Oakey Creek	13/10/1975				1850	OK	125									
422331A	W_brook_Ck Arcadia	Oakey Creek	8/12/1975				1680	OK	125									
422331A	W_brook_Ck Arcadia	Oakey Creek	25/02/1976				695	OK	125									
422331A	W_brook_Ck Arcadia	Oakey Creek	25/02/1976															
422331A	W_brook_Ck Arcadia	Oakey Creek	23/08/1976				1950	OK	125									
422331A	W_brook_Ck Arcadia	Oakey Creek	23/08/1976				2000	OK	125									
422331A	W_brook_Ck Arcadia	Oakey Creek	23/01/1978				2060	OK	125									
422331A	W_brook_Ck Arcadia	Oakey Creek	9/10/1978				1900	OK	125									
422331A	W_brook_Ck Arcadia	Oakey Creek	9/07/1979															
422331A	W_brook_Ck Arcadia	Oakey Creek	9/07/1979															
422331A	W_brook_Ck Arcadia	Oakey Creek	10/09/1979				1970	OK	125									
422331A	W_brook_Ck Arcadia	Oakey Creek	10/09/1979															
422331A	W_brook_Ck Arcadia	Oakey Creek	29/01/1980				760	OK	125									
422331A	W_brook_Ck Arcadia	Oakey Creek	29/01/1980															
422331A	W_brook_Ck Arcadia	Oakey Creek	1/07/1980				2210	OK	125									
422331A	W_brook_Ck Arcadia	Oakey Creek	1/07/1980															
422331A	W_brook_Ck Arcadia	Oakey Creek	3/06/1997				1790	OK	130	1776	OK	130	6.5	OK	130	5	OK	130
422331A	W_brook_Ck Arcadia	Oakey Creek	28/11/1997				1580	OK	130	1586	OK	130	18.5	OK	130	22	OK	130
422332B	Gowrie_Ck Oakey	Oakey Creek	17/07/1992				1426	OK	125				6	OK	125			
422332B	Gowrie_Ck Oakey	Oakey Creek	17/07/1992				1340	OK	125				2	OK	125			

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Station	Station Name	Receiving Creek/ River	Date	V2010.00	F2010.00	Q2010.00	V2010.50	F2010.50	Q2010.50	V2030.00	F2030.00	Q2030.00	V2030.50	F2030.50	Q2030.50	V2030.51	F2030.51	Q2030.51
				Conductivity @ 25C (uS/cm)			Conductivity @ 25C FLD			Turbidity (NTU)			Turbidity (NTU) FLD			Turbidity (NTU) FLD Webb test only		
422332B	Gowrie Ck Oakey	Oakey Creek	17/07/1992				1050	ND	130									
422332B	Gowrie Ck Oakey	Oakey Creek	12/10/1992	1260	OK	125				10	OK	125						
422332B	Gowrie Ck Oakey	Oakey Creek	12/10/1992				1170	OK	130									
422332B	Gowrie Ck Oakey	Oakey Creek	29/10/1992	352	OK	125	292	OK	130	200	OK	151						
422332B	Gowrie Ck Oakey	Oakey Creek	2/02/1993	1660	OK	125				31	OK	125						
422332B	Gowrie Ck Oakey	Oakey Creek	2/02/1993				1952	OK	130									
422332B	Gowrie Ck Oakey	Oakey Creek	20/01/1994				379	OK	130									
422332B	Gowrie Ck Oakey	Oakey Creek	18/02/1994	1401	OK	125				200	OK	151						
422332B	Gowrie Ck Oakey	Oakey Creek	18/02/1994	1574	OK	125				200	OK	151						
422332B	Gowrie Ck Oakey	Oakey Creek	18/02/1994	1393	OK	125				200	OK	151						
422332B	Gowrie Ck Oakey	Oakey Creek	18/02/1994	578	OK	125				200	OK	151						
422332B	Gowrie Ck Oakey	Oakey Creek	18/02/1994	456	OK	125				200	OK	151						
422332B	Gowrie Ck Oakey	Oakey Creek	18/02/1994	393	OK	125				200	OK	151						
422332B	Gowrie Ck Oakey	Oakey Creek	18/02/1994	365	OK	125				200	OK	151						
422332B	Gowrie Ck Oakey	Oakey Creek	18/02/1994	357	OK	125				200	OK	151						
422332B	Gowrie Ck Oakey	Oakey Creek	18/02/1994	347	OK	125				200	OK	151						
422332B	Gowrie Ck Oakey	Oakey Creek	18/02/1994	1024	OK	125				200	OK	151						
422332B	Gowrie Ck Oakey	Oakey Creek	19/02/1994	363	OK	125				176	OK	151						
422332B	Gowrie Ck Oakey	Oakey Creek	19/02/1994	365	OK	125				147	OK	151						
422332B	Gowrie Ck Oakey	Oakey Creek	19/02/1994	369	OK	125				147	OK	151						
422332B	Gowrie Ck Oakey	Oakey Creek	28/02/1994	1449	OK	125				200	OK	151						
422332B	Gowrie Ck Oakey	Oakey Creek	1/03/1994	1455	OK	125				200	OK	151						
422332B	Gowrie Ck Oakey	Oakey Creek	1/03/1994	1417	OK	125				200	OK	151						
422332B	Gowrie Ck Oakey	Oakey Creek	1/03/1994	744	OK	125				200	OK	151						
422332B	Gowrie Ck Oakey	Oakey Creek	1/03/1994	385	OK	125				200	OK	151						
422332B	Gowrie Ck Oakey	Oakey Creek	1/03/1994	347	OK	125				200	OK	151						
422332B	Gowrie Ck Oakey	Oakey Creek	1/03/1994	281	OK	125				200	OK	151						
422332B	Gowrie Ck Oakey	Oakey Creek	1/03/1994	281	OK	125				200	OK	151						
422332B	Gowrie Ck Oakey	Oakey Creek	1/03/1994	258	OK	125				200	OK	151						
422332B	Gowrie Ck Oakey	Oakey Creek	1/03/1994	254	OK	125				200	OK	151						
422332B	Gowrie Ck Oakey	Oakey Creek	1/03/1994	262	OK	125				200	OK	151						
422332B	Gowrie Ck Oakey	Oakey Creek	1/03/1994	291	OK	125				200	OK	151						
422332B	Gowrie Ck Oakey	Oakey Creek	1/03/1994	315	OK	125				200	OK	151						
422332B	Gowrie Ck Oakey	Oakey Creek	1/03/1994	343	OK	125				200	OK	151						
422332B	Gowrie Ck Oakey	Oakey Creek	1/03/1994	357	OK	125				200	OK	151						
422332B	Gowrie Ck Oakey	Oakey Creek	1/03/1994	375	OK	125				200	OK	151						
422332B	Gowrie Ck Oakey	Oakey Creek	6/04/1994				1340	OK	130									
422332B	Gowrie Ck Oakey	Oakey Creek	13/07/1994	1686	OK	125				2	OK	125						
422332B	Gowrie Ck Oakey	Oakey Creek	13/07/1994				1726	OK	130									
422332B	Gowrie Ck Oakey	Oakey Creek	22/11/1994				2500	OK	130									
422332B	Gowrie Ck Oakey	Oakey Creek	8/12/1994				1930	OK	130									
422332B	Gowrie Ck Oakey	Oakey Creek	8/12/1994	1921.5	OK	130	1920	OK	130	1.9	OK	130						
422332B	Gowrie Ck Oakey	Oakey Creek	12/05/1995				1408	OK	130									
422332B	Gowrie Ck Oakey	Oakey Creek	12/05/1995	1358.2	OK	130	1394	OK	130	4.7	OK	130	52	OK	130			
422332B	Gowrie Ck Oakey	Oakey Creek	18/08/1995	616.5	OK	130	630	OK	130	41.3	OK	130	55	OK	130			
422332B	Gowrie Ck Oakey	Oakey Creek	23/10/1995	1650	OK	130				770	OK	130						
422332B	Gowrie Ck Oakey	Oakey Creek	23/10/1995	1990	OK	130				565	OK	130						
422332B	Gowrie Ck Oakey	Oakey Creek	23/10/1995	1910	OK	130				970	OK	130						
422332B	Gowrie Ck Oakey	Oakey Creek	23/10/1995	822	OK	130				1060	OK	130						
422332B	Gowrie Ck Oakey	Oakey Creek	23/10/1995	658	OK	130				993	OK	130						
422332B	Gowrie Ck Oakey	Oakey Creek	23/10/1995	486	OK	130				1040	OK	130						
422332B	Gowrie Ck Oakey	Oakey Creek	23/10/1995	469	OK	130				940	OK	130						
422332B	Gowrie Ck Oakey	Oakey Creek	23/10/1995	464	OK	130				780	OK	130						
422332B	Gowrie Ck Oakey	Oakey Creek	23/10/1995	476	OK	130				646	OK	130						
422332B	Gowrie Ck Oakey	Oakey Creek	23/10/1995	496	OK	130				490	OK	130						
422332B	Gowrie Ck Oakey	Oakey Creek	26/10/1995	1242	OK	130				48	OK	130						
422332B	Gowrie Ck Oakey	Oakey Creek	26/10/1995	1231	OK	130				80	OK	130						
422332B	Gowrie Ck Oakey	Oakey Creek	26/10/1995	813	OK	130				70	OK	130						
422332B	Gowrie Ck Oakey	Oakey Creek	27/10/1995	442	OK	130				1760	OK	130						
422332B	Gowrie Ck Oakey	Oakey Creek	27/10/1995	284	OK	130				1700	OK	130						
422332B	Gowrie Ck Oakey	Oakey Creek	27/10/1995	286	OK	130				960	OK	130						
422332B	Gowrie Ck Oakey	Oakey Creek	27/10/1995	317	OK	130				625	OK	130						
422332B	Gowrie Ck Oakey	Oakey Creek	30/10/1995				1445	OK	130									
422332B	Gowrie Ck Oakey	Oakey Creek	30/10/1995				1464	OK	130									
422332B	Gowrie Ck Oakey	Oakey Creek	6/11/1995				315	OK	130									
422332B	Gowrie Ck Oakey	Oakey Creek	20/11/1995	570	OK	130				5250	OK	130						
422332B	Gowrie Ck Oakey	Oakey Creek	20/11/1995															
422332B	Gowrie Ck Oakey	Oakey Creek	20/11/1995	221	OK	130				3190	OK	130						
422332B	Gowrie Ck Oakey	Oakey Creek	20/11/1995	243	OK	130				3140	OK	130						
422332B	Gowrie Ck Oakey	Oakey Creek	20/11/1995	262	OK	130				3010	OK	130						
422332B	Gowrie Ck Oakey	Oakey Creek	20/11/1995	259	OK	130				3230	OK	130						

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Station	Station Name	Receiving Creek/ River	Date	V2010.00	F2010.00	Q2010.00	V2010.50	F2010.50	Q2010.50	V2030.00	F2030.00	Q2030.00	V2030.50	F2030.50	Q2030.50	V2030.51	F2030.51	Q2030.51
				Conductivity @ 25C (uS/cm)			Conductivity @ 25C FLD			Turbidity (NTU)			Turbidity (NTU) FLD			Turbidity (NTU) FLD Webb test only		
422332B	Gowrie Ck Oakey	Oakey Creek	21/11/1995				1390	OK	130									
422332B	Gowrie Ck Oakey	Oakey Creek	28/11/1995				369	OK	130									
422332B	Gowrie Ck Oakey	Oakey Creek	12/12/1995				508	OK	130									
422332B	Gowrie Ck Oakey	Oakey Creek	13/12/1995				1336	OK	130				55	OK	130			
422332B	Gowrie Ck Oakey	Oakey Creek	6/02/1996				548	OK	130									
422332B	Gowrie Ck Oakey	Oakey Creek	1/05/1996				272	OK	130									
422332B	Gowrie Ck Oakey	Oakey Creek	2/05/1996				223	OK	130									
422332B	Gowrie Ck Oakey	Oakey Creek	2/05/1996				222	OK	130									
422332B	Gowrie Ck Oakey	Oakey Creek	3/05/1996				165	OK	130									
422332B	Gowrie Ck Oakey	Oakey Creek	3/05/1996				163	OK	130									
422332B	Gowrie Ck Oakey	Oakey Creek	3/05/1996				157	OK	130									
422332B	Gowrie Ck Oakey	Oakey Creek	3/05/1996				147	OK	130									
422332B	Gowrie Ck Oakey	Oakey Creek	3/05/1996				156	OK	130									
422332B	Gowrie Ck Oakey	Oakey Creek	3/05/1996				200	OK	130									
422332B	Gowrie Ck Oakey	Oakey Creek	3/05/1996				208	OK	130									
422332B	Gowrie Ck Oakey	Oakey Creek	3/05/1996				1006	OK	130	1082	OK	130	1.9	OK	130	11	OK	130
422332B	Gowrie Ck Oakey	Oakey Creek	29/05/1996				1111	OK	130									
422332B	Gowrie Ck Oakey	Oakey Creek	30/05/1996				1120	OK	130									
422332B	Gowrie Ck Oakey	Oakey Creek	30/05/1996				1181	OK	130									
422332B	Gowrie Ck Oakey	Oakey Creek	20/06/1996				1420	OK	130									
422332B	Gowrie Ck Oakey	Oakey Creek	16/07/1996				1380	OK	130	1412	OK	130	2265	OK	130			
422332B	Gowrie Ck Oakey	Oakey Creek	28/07/1996				441	OK	130	423	OK	130	3500	OK	130			
422332B	Gowrie Ck Oakey	Oakey Creek	28/07/1996				342	OK	130	327	OK	130	1940	OK	130			
422332B	Gowrie Ck Oakey	Oakey Creek	28/07/1996															
422332B	Gowrie Ck Oakey	Oakey Creek	4/09/1996				1286	OK	130									
422332B	Gowrie Ck Oakey	Oakey Creek	4/09/1996				1286	OK	130									
422332B	Gowrie Ck Oakey	Oakey Creek	24/09/1996				1351	OK	130									
422332B	Gowrie Ck Oakey	Oakey Creek	3/10/1996				937	OK	130									
422332B	Gowrie Ck Oakey	Oakey Creek	3/10/1996				958	OK	130									
422332B	Gowrie Ck Oakey	Oakey Creek	31/10/1996				1229	OK	130									
422332B	Gowrie Ck Oakey	Oakey Creek	5/11/1996				1477	OK	130									
422332B	Gowrie Ck Oakey	Oakey Creek	4/12/1996				954	OK	130	950	OK	130	7647	OK	130			
422332B	Gowrie Ck Oakey	Oakey Creek	4/12/1996				950	OK	130									
422332B	Gowrie Ck Oakey	Oakey Creek	4/12/1996				950	OK	130									
422332B	Gowrie Ck Oakey	Oakey Creek	4/12/1996				438	OK	130	379	OK	130	2897	OK	130			
422332B	Gowrie Ck Oakey	Oakey Creek	4/12/1996				493	OK	130	420	OK	130	9999	OK	130			
422332B	Gowrie Ck Oakey	Oakey Creek	5/12/1996				298	OK	130	242	OK	130	6594	OK	130			
422332B	Gowrie Ck Oakey	Oakey Creek	5/12/1996				248	OK	130	209	OK	130	3525	OK	130			
422332B	Gowrie Ck Oakey	Oakey Creek	8/12/1996				701	OK	130	720	OK	130	32	OK	130	26	OK	130
422332B	Gowrie Ck Oakey	Oakey Creek	6/01/1997				1196	OK	130									
422332B	Gowrie Ck Oakey	Oakey Creek	22/01/1997				1173	OK	130									
422332B	Gowrie Ck Oakey	Oakey Creek	11/02/1997				1410	OK	130	1500	OK	130	19.4	OK	130	26	OK	130
422332B	Gowrie Ck Oakey	Oakey Creek	11/02/1997							1500	OK	130						
422332B	Gowrie Ck Oakey	Oakey Creek	14/02/1997							244	OK	130						
422332B	Gowrie Ck Oakey	Oakey Creek	25/02/1997							1203	OK	130						
422332B	Gowrie Ck Oakey	Oakey Creek	25/02/1997				1147	OK	130	1205	OK	130	10	OK	130	18	OK	130
422332B	Gowrie Ck Oakey	Oakey Creek	28/04/1997							1650	OK	130						
422332B	Gowrie Ck Oakey	Oakey Creek	16/05/1997							1398	OK	130						
422332B	Gowrie Ck Oakey	Oakey Creek	3/06/1997				1570	OK	130	1586	OK	130	26.8	OK	130	31	OK	130
422332B	Gowrie Ck Oakey	Oakey Creek	4/06/1997							1512	OK	130						
422332B	Gowrie Ck Oakey	Oakey Creek	22/07/1997				1680	OK	130	1742	OK	130	3.7	OK	130	15.6	OK	130
422332B	Gowrie Ck Oakey	Oakey Creek	18/09/1997							1762	OK	130						
422332B	Gowrie Ck Oakey	Oakey Creek	3/11/1997				515	OK	130	229	OK	130	2000	OK	130			
422332B	Gowrie Ck Oakey	Oakey Creek	3/11/1997				664	OK	130	600	OK	130	2000	OK	130			
422332B	Gowrie Ck Oakey	Oakey Creek	3/11/1997				281	OK	130	170	OK	130	2000	OK	130			
422332B	Gowrie Ck Oakey	Oakey Creek	3/11/1997				245	OK	130	161	OK	130	2000	OK	130			
422332B	Gowrie Ck Oakey	Oakey Creek	3/11/1997				288	OK	130	239	OK	130	2000	OK	130			
422332B	Gowrie Ck Oakey	Oakey Creek	3/11/1997							294	OK	130						
422332B	Gowrie Ck Oakey	Oakey Creek	4/11/1997															
422332B	Gowrie Ck Oakey	Oakey Creek	17/11/1997				959	OK	130	975	OK	130	49.6	OK	130	64	OK	130
422332B	Gowrie Ck Oakey	Oakey Creek	28/11/1997							1328	OK	130						
422332B	Gowrie Ck Oakey	Oakey Creek	28/11/1997				1298	OK	130	1325	OK	130	16.7	OK	130	22	OK	130
422332B	Gowrie Ck Oakey	Oakey Creek	28/11/1997							1328	OK	130						
422332B	Gowrie Ck Oakey	Oakey Creek	11/01/1998							1230	OK	130						
422332B	Gowrie Ck Oakey	Oakey Creek	30/01/1998				288	OK	130	258	OK	130	3950	OK	130	3900	OK	130
422332B	Gowrie Ck Oakey	Oakey Creek	11/02/1998							577	OK	130						
422332B	Gowrie Ck Oakey	Oakey Creek	1/05/1998							1213	OK	130						
422332B	Gowrie Ck Oakey	Oakey Creek	22/07/1998							1205	OK	130						
422332B	Gowrie Ck Oakey	Oakey Creek	4/10/1998				1410	OK	130	1422	OK	130	19.5	OK	130			
422332B	Gowrie Ck Oakey	Oakey Creek	5/10/1998							1432	OK	130						
422332B	Gowrie Ck Oakey	Oakey Creek	5/10/1998							1432	OK	130						

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Station	Station Name	Receiving Creek/ River	Date	V2010.00	F2010.00	Q2010.00	V2010.50	F2010.50	Q2010.50	V2030.00	F2030.00	Q2030.00	V2030.50	F2030.50	Q2030.50	V2030.51	F2030.51	Q2030.51
				Conductivity @ 25C (uS/cm)			Conductivity @ 25C FLD			Turbidity (NTU)			Turbidity (NTU) FLD			Turbidity (NTU) FLD Webb test only		
422332B	Gowrie Ck Oakey	Oakey Creek	10/01/1999	255	OK	130	420	OK	130	1201	OK	130						
422332B	Gowrie Ck Oakey	Oakey Creek	10/01/1999				409	OK	130									
422332B	Gowrie Ck Oakey	Oakey Creek	10/01/1999				416	OK	130									
422332B	Gowrie Ck Oakey	Oakey Creek	10/01/1999				358	OK	130									
422332B	Gowrie Ck Oakey	Oakey Creek	10/01/1999				336	OK	130									
422332B	Gowrie Ck Oakey	Oakey Creek	11/01/1999				450	OK	130									
422332B	Gowrie Ck Oakey	Oakey Creek	11/01/1999	335	OK	130	500	OK	130	690	OK	130						
422332B	Gowrie Ck Oakey	Oakey Creek	12/01/1999				421	OK	130									
422332B	Gowrie Ck Oakey	Oakey Creek	12/01/1999	456	OK	130	448	OK	130	1251	OK	130	1000	>	130			
422332B	Gowrie Ck Oakey	Oakey Creek	13/01/1999				595	OK	130									
422332B	Gowrie Ck Oakey	Oakey Creek	15/01/1999				882	OK	130									
422332B	Gowrie Ck Oakey	Oakey Creek	8/02/1999	572	OK	130				5578	OK	130						
422332B	Gowrie Ck Oakey	Oakey Creek	8/02/1999				216	OK	130									
422332B	Gowrie Ck Oakey	Oakey Creek	8/02/1999	267	OK	130	172	OK	130	7526	OK	130						
422332B	Gowrie Ck Oakey	Oakey Creek	9/02/1999				230	OK	130									
422332B	Gowrie Ck Oakey	Oakey Creek	9/02/1999	275	OK	130	211	OK	130	2000	>	130						
422332B	Gowrie Ck Oakey	Oakey Creek	9/02/1999				237	OK	130									
422332B	Gowrie Ck Oakey	Oakey Creek	9/02/1999	305	OK	130	228	OK	130	2227	OK	130						
422332B	Gowrie Ck Oakey	Oakey Creek	9/02/1999				181	OK	130									
422332B	Gowrie Ck Oakey	Oakey Creek	9/02/1999	323	OK	130	246	OK	130	2203	OK	130						
422332B	Gowrie Ck Oakey	Oakey Creek	9/02/1999															
422332B	Gowrie Ck Oakey	Oakey Creek	10/04/1999				1227	OK	130				23	OK	130			
422332B	Gowrie Ck Oakey	Oakey Creek	28/04/1999				1328	OK	130				12.3	OK	130			
422332B	Gowrie Ck Oakey	Oakey Creek	28/04/1999										12.3	OK	130			
422332B	Gowrie Ck Oakey	Oakey Creek	16/06/1999	1291.6	OK	130	1372	OK	130	16.8	OK	130	22	OK	130			
422332B	Gowrie Ck Oakey	Oakey Creek	28/06/1999				1431	OK	130				17	OK	130			
422332B	Gowrie Ck Oakey	Oakey Creek	28/06/1999				1431	OK	130				17	OK	130			
422332B	Gowrie Ck Oakey	Oakey Creek	1/09/1999	1007	OK	130				34.3	OK	130						
422332B	Gowrie Ck Oakey	Oakey Creek	1/09/1999				1047	OK	130				43	OK	130			
422332B	Gowrie Ck Oakey	Oakey Creek	18/10/1999				1217	OK	130				33.6	OK	130			
422332B	Gowrie Ck Oakey	Oakey Creek	19/10/1999				1056	OK	130				38.2	OK	130			
422332B	Gowrie Ck Oakey	Oakey Creek	2/11/1999				426	OK	130				209	OK	130			
422332B	Gowrie Ck Oakey	Oakey Creek	6/11/1999				1231	OK	130				21	OK	130			
422332B	Gowrie Ck Oakey	Oakey Creek	9/11/1999	650	OK	130				1800	OK	130						
422332B	Gowrie Ck Oakey	Oakey Creek	9/11/1999	216.63	OK	130				1750	OK	130						
422332B	Gowrie Ck Oakey	Oakey Creek	9/11/1999	286.3	OK	130				2855	OK	130						
422332B	Gowrie Ck Oakey	Oakey Creek	9/11/1999	235.92	OK	130				2123	OK	130						
422332B	Gowrie Ck Oakey	Oakey Creek	9/11/1999															
422332B	Gowrie Ck Oakey	Oakey Creek	9/11/1999	211.75	OK	130				1277	OK	130						
422332B	Gowrie Ck Oakey	Oakey Creek	9/11/1999	215.01	OK	130				1109	OK	130						
422332B	Gowrie Ck Oakey	Oakey Creek	9/11/1999	215.43	OK	130				758	OK	130						
422332B	Gowrie Ck Oakey	Oakey Creek	9/11/1999															
422332B	Gowrie Ck Oakey	Oakey Creek	19/12/1999				390	OK	130				21.6	OK	130			
422332B	Gowrie Ck Oakey	Oakey Creek	5/01/2000	878	OK	130				440	OK	130						
422332B	Gowrie Ck Oakey	Oakey Creek	5/01/2000	563	OK	130				4500	OK	130						
422332B	Gowrie Ck Oakey	Oakey Creek	5/01/2000															
422332B	Gowrie Ck Oakey	Oakey Creek	5/01/2000															
422332B	Gowrie Ck Oakey	Oakey Creek	5/01/2000	290	OK	130				686	OK	130						
422332B	Gowrie Ck Oakey	Oakey Creek	5/01/2000				279	OK	130				7.82	OK	130			
422332B	Gowrie Ck Oakey	Oakey Creek	18/01/2000	330	OK	130				3335	OK	130						
422332B	Gowrie Ck Oakey	Oakey Creek	18/01/2000	254	OK	130				711	OK	130						
422332B	Gowrie Ck Oakey	Oakey Creek	18/01/2000				285	OK	130				60.6	OK	130			
422332B	Gowrie Ck Oakey	Oakey Creek	17/02/2000				904	OK	130				33.6	OK	130			
422332B	Gowrie Ck Oakey	Oakey Creek	2/05/2000	883.77	OK	130	858	OK	130	509	OK	130	520	OK	130			
422332B	Gowrie Ck Oakey	Oakey Creek	2/05/2000	949.11	OK	130	903	OK	130	1245	OK	130	1012	OK	130			
422332B	Gowrie Ck Oakey	Oakey Creek	2/05/2000				368	OK	130				2832	OK	130			
422332B	Gowrie Ck Oakey	Oakey Creek	2/05/2000				233	OK	130				677	OK	130			
422332B	Gowrie Ck Oakey	Oakey Creek	2/05/2000				276	OK	130	430	OK	130	545	OK	130			
422332B	Gowrie Ck Oakey	Oakey Creek	3/05/2000	275	OK	130	345	OK	130				415	OK	130			
422332B	Gowrie Ck Oakey	Oakey Creek	29/05/2000				868	OK	130				34	OK	130			
422332B	Gowrie Ck Oakey	Oakey Creek	19/06/2000	1350	OK	130	1428	OK	130	24	OK	130	26	OK	130			
422332B	Gowrie Ck Oakey	Oakey Creek	23/08/2000				1611	OK	130				18	OK	130			
422332B	Gowrie Ck Oakey	Oakey Creek	30/08/2000				1736	OK	130				22	OK	130			
422332B	Gowrie Ck Oakey	Oakey Creek	5/09/2000				1632	OK	130				14	OK	130			
422332B	Gowrie Ck Oakey	Oakey Creek	8/09/2000				1471	OK	130				19	OK	130			
422332B	Gowrie Ck Oakey	Oakey Creek	25/10/2000	1610	OK	130	1648	OK	130	219	OK	130	100	OK	130			
422332B	Gowrie Ck Oakey	Oakey Creek	25/10/2000				1685	OK	130				55	OK	130			
422332B	Gowrie Ck Oakey	Oakey Creek	25/10/2000	1520	OK	130	1539	OK	130	235	OK	130	298	OK	130			
422332B	Gowrie Ck Oakey	Oakey Creek	25/10/2000	728	OK	130	746	OK	130	248	OK	130	275	OK	130			
422332B	Gowrie Ck Oakey	Oakey Creek	25/10/2000	454	OK	130	472	OK	130	179	OK	130	191	OK	130			
422332B	Gowrie Ck Oakey	Oakey Creek	26/10/2000	480	OK	130	478	OK	130	212	OK	130	212	OK	130			

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Station	Station Name	Receiving Creek/ River	Date	V2010.00	F2010.00	Q2010.00	V2010.50	F2010.50	Q2010.50	V2030.00	F2030.00	Q2030.00	V2030.50	F2030.50	Q2030.50	V2030.51	F2030.51	Q2030.51
				Conductivity @ 25C (uS/cm)			Conductivity @ 25C FLD			Turbidity (NTU)			Turbidity (NTU) FLD			Turbidity (NTU) FLD Webb test only		
422332B	Gowrie Ck Oakey	Oakey Creek	1/02/2001				220	OK	130				3840	OK	130			
422332B	Gowrie Ck Oakey	Oakey Creek	2/02/2001	342	OK	130	306	OK	130	6250	OK	130	6550	OK	130			
422332B	Gowrie Ck Oakey	Oakey Creek	3/02/2001	256.7	OK	130	237	OK	130	1015	OK	130	1820	OK	130			
422332B	Gowrie Ck Oakey	Oakey Creek	3/02/2001	299.5	OK	130	310	OK	130	1605	OK	130	2264	OK	130			
422332B	Gowrie Ck Oakey	Oakey Creek	3/02/2001	238	OK	130	316	OK	130	2000	<	130	4224	OK	130			
422332B	Gowrie Ck Oakey	Oakey Creek	3/02/2001	222.5	OK	130	230	OK	130	3096	OK	130	4480	OK	130			
422332B	Gowrie Ck Oakey	Oakey Creek	4/02/2001	254.7	OK	130	275	OK	130	1315	OK	130	2044	OK	130			
422332B	Gowrie Ck Oakey	Oakey Creek	4/02/2001	343.1	OK	130	337	OK	130	639	OK	130	706	OK	130			
422332B	Gowrie Ck Oakey	Oakey Creek	6/02/2001	613	OK	130	608	OK	130	66.2	OK	130	75	OK	130			
422332B	Gowrie Ck Oakey	Oakey Creek	6/02/2001				608	OK	130				75	OK	130			
422332B	Gowrie Ck Oakey	Oakey Creek	5/06/2001				1446	OK	130				19	OK	130	21	OK	130
422332B	Gowrie Ck Oakey	Oakey Creek	13/06/2001	1460	OK	130	1494	OK	130	4.1	OK	130	10	OK	130			
422332B	Gowrie Ck Oakey	Oakey Creek	24/10/2001				1349	OK	130				9	OK	130			
422332B	Gowrie Ck Oakey	Oakey Creek	17/04/2002	1371	OK	130				7.4	OK	130						
422332B	Gowrie Ck Oakey	Oakey Creek	1/05/2002				983	OK	130				27	OK	130	27	OK	130
422332B	Gowrie Ck Oakey	Oakey Creek	18/07/2002				1550	OK	130				9	OK	130	9	OK	130
422332B	Gowrie Ck Oakey	Oakey Creek	10/12/2002	269	OK	130				1085	OK	130	1000	>	130			
422332B	Gowrie Ck Oakey	Oakey Creek	6/12/2003															
422332B	Gowrie Ck Oakey	Oakey Creek	6/12/2003	205	OK	130	176	OK	130	870	OK	130	1000	>	130			
422332B	Gowrie Ck Oakey	Oakey Creek	8/12/2003	550	OK	130	575	OK	130	46	OK	130	61	OK	130			
422332B	Gowrie Ck Oakey	Oakey Creek	10/03/2004	870	OK	130	934	OK	130	17	OK	130	20	OK	130			
422332B	Gowrie Ck Oakey	Oakey Creek	20/12/2005	697	OK	130	707	OK	130	31	OK	130	30	OK	130			
422332B	Gowrie Ck Oakey	Oakey Creek	20/03/2006	2190	OK	130	2270	OK	130	9	OK	130						
422332B	Gowrie Ck Oakey	Oakey Creek	16/08/2006	1720	OK	131	1752	OK	130	6	OK	131	4	OK	130			
422332B	Gowrie Ck Oakey	Oakey Creek	15/08/2007	2140	OK	10	2170	OK	130	6	OK	10	5	OK	130			
422332B	Gowrie Ck Oakey	Oakey Creek	25/08/2008	1680	OK	10	1631	OK	1	8	OK	10						
422332B	Gowrie Ck Oakey	Oakey Creek	14/01/2009				1403	OK	130				10	OK	130			
422332B	Gowrie Ck Oakey	Oakey Creek	27/04/2009				1598	OK	130				13	OK	130			
422332B	Gowrie Ck Oakey	Oakey Creek	14/09/2009				1361	OK	130				23	OK	130			
422347B	N Condamine R Pampas	Condamine Rvr	7/06/1989															
422347B	N Condamine R Pampas	Condamine Rvr	8/06/1989															
422347B	N Condamine R Pampas	Condamine Rvr	8/06/1989															
422347B	N Condamine R Pampas	Condamine Rvr	8/06/1989															
422347B	N Condamine R Pampas	Condamine Rvr	8/06/1989															
422347B	N Condamine R Pampas	Condamine Rvr	8/06/1989															
422347B	N Condamine R Pampas	Condamine Rvr	8/06/1989															
422347B	N Condamine R Pampas	Condamine Rvr	23/08/1989	550	OK	125	465	OK	130									
422347B	N Condamine R Pampas	Condamine Rvr	6/12/1989	147	OK	125	107	OK	130	200	OK	151						
422347B	N Condamine R Pampas	Condamine Rvr	30/03/1990	475	OK	125	503	OK	130	21	OK	125						
422347B	N Condamine R Pampas	Condamine Rvr	6/03/1991				393	OK	130									
422347B	N Condamine R Pampas	Condamine Rvr	3/02/1992	217	OK	125	227	OK	130	200	OK	151						
422347B	N Condamine R Pampas	Condamine Rvr	4/02/1992				260	OK	130									
422347B	N Condamine R Pampas	Condamine Rvr	25/02/1992				307	OK	130									
422347B	N Condamine R Pampas	Condamine Rvr	21/10/1992				398	OK	130									
422347B	N Condamine R Pampas	Condamine Rvr	21/10/1992	434	OK	125				16	OK	125						
422347B	N Condamine R Pampas	Condamine Rvr	5/02/1993	406	OK	125	459	OK	130	7	OK	125						
422347B	N Condamine R Pampas	Condamine Rvr	9/06/1993				533	OK	130									
422347B	N Condamine R Pampas	Condamine Rvr	4/03/1994				181	OK	130									
422347B	N Condamine R Pampas	Condamine Rvr	2/02/1996				289	OK	130									
422347B	N Condamine R Pampas	Condamine Rvr	27/05/1996				263	OK	130									
422347B	N Condamine R Pampas	Condamine Rvr	6/09/1996				464	OK	130				205	OK	130			
422347B	N Condamine R Pampas	Condamine Rvr	3/12/1996				524	OK	130				35	OK	130			
422353A	Yarramalong	Condamine Rvr	21/01/1988	210	OK	125				100	OK	125						
422353A	Yarramalong	Condamine Rvr	21/01/1988				222	OK	130									
422353A	Yarramalong	Condamine Rvr	11/05/1989				265	OK	130									
422353A	Yarramalong	Condamine Rvr	23/08/1989	760	OK	125	670	OK	130									
422353A	Yarramalong	Condamine Rvr	2/07/1990	420	OK	125	340	OK	130	20	OK	125						
422353A	Yarramalong	Condamine Rvr	17/10/1990	477	OK	125	495	OK	130	9	OK	125						
422353A	Yarramalong	Condamine Rvr	6/03/1991				420	OK	130									
422353A	Yarramalong	Condamine Rvr	6/06/1991				400	OK	130									
422353A	Yarramalong	Condamine Rvr	25/11/1991				436	OK	130									
422353A	Yarramalong	Condamine Rvr	7/02/1992	266	OK	125	289	OK	130	189	OK	151						
422353A	Yarramalong	Condamine Rvr	3/07/1992				497	OK	130									
422353A	Yarramalong	Condamine Rvr	3/07/1992	613	OK	125												
422353A	Yarramalong	Condamine Rvr	26/10/1992				421	OK	130									
422353A	Yarramalong	Condamine Rvr	26/10/1992	432	OK	125				11	OK	125						
422353A	Yarramalong	Condamine Rvr	8/02/1993	394	OK	125	477	OK	130	13	OK	125						
422353A	Yarramalong	Condamine Rvr	10/06/1993				467	OK	130									
422353A	Yarramalong	Condamine Rvr	10/06/1993	481	OK	125				1	OK	125						
422353A	Yarramalong	Condamine Rvr	4/03/1994				260	OK	130									

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Station	Station Name	Receiving Creek/ River	Date	V2010.00 F2010.00 Q2010.00			V2010.50 F2010.50 Q2010.50			V2030.00 F2030.00 Q2030.00			V2030.50 F2030.50 Q2030.50			V2030.51 F2030.51 Q2030.51		
				Conductivity @ 25C (uS/cm)			Conductivity @ 25C FLD			Turbidity (NTU)			Turbidity (NTU) FLD			Turbidity (NTU) FLD Webb test only		
422353A	Yarramalong	Condamine River	30/08/1995				395	OK	130				255	OK	130			
422353A	Yarramalong	Condamine River	13/09/1995				287	OK	130									
422353A	Yarramalong	Condamine River	27/05/1996				339	OK	130				85.9	OK	130			
422353A	Yarramalong	Condamine River	5/07/1996				609	OK	130				10.1	OK	130			
422353A	Yarramalong	Condamine River	18/07/1996				680	OK	130				9.6	OK	130			
422353A	Yarramalong	Condamine River	6/09/1996				469	OK	130				180	OK	130			
422353A	Yarramalong	Condamine River	6/12/1996				475	OK	130				90.6	OK	130			
422353A	Yarramalong	Condamine River	5/06/1997	342	OK	130	334	OK	130	23.2	OK	130	25	OK	130			
422353A	Yarramalong	Condamine River	24/07/1997				290	OK	130				17.9	OK	130			
422353A	Yarramalong	Condamine River	18/11/1997	352	OK	130				67.1	OK	130						
422353A	Yarramalong	Condamine River	18/11/1997				352	OK	130				82.1	OK	130			
422353A	Yarramalong	Condamine River	3/09/1998				488	OK	130									
422353A	Yarramalong	Condamine River	17/03/2001	216	OK	130				311	OK	130						
422353A	Yarramalong	Condamine River	9/11/2001	348.1	OK	130				14.5	OK	130						
422353A	Yarramalong	Condamine River	5/05/2006	338	OK	130				125	OK	130						
422353A	Yarramalong	Condamine River	19/11/2007	191	OK	10				216	OK	10						
422354A	NCondamine_R_Glendon	Condamine River	22/08/1989	485	OK	125				1	OK	125						
422354A	NCondamine_R_Glendon	Condamine River	22/08/1989				390	OK	130									
422354A	NCondamine_R_Glendon	Condamine River	28/03/1990	316	OK	135	360	OK	130	23	OK	125						
422354A	NCondamine_R_Glendon	Condamine River	2/07/1990	337	OK	125				78	OK	125						
422354A	NCondamine_R_Glendon	Condamine River	2/07/1990				268	OK	130									
422354A	NCondamine_R_Glendon	Condamine River	20/02/1992	227	OK	125	251	OK	130	200	OK	151						

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Station	Station Name	Receiving Creek/ River	Date	V2080.50	F2080.50	Q2080.50	V2100.00	F2100.00	Q2100.00	V2100.50	F2100.50	Q2100.50	V2132.00	F2132.00	Q2132.00	V2169.00	F2169.00	Q2169.00	V2172.00	F2172.00	Q2172.00	V2311.00	F2311.00	Q2311.00	V2331.00	F2331.00	Q2331.00
				Water Temperature FLD			pH (pH units)			pH (pH units) FLD			Hardness as CaCO3 (mg/L)			Total Diss. Solids (mg/L)			Total Suspended Solids			Chloride as Cl (mg/L)			Nitrate as NO3(mg/L)		
1303139	GAP CK GLENMORAL GAP	Dawson River	6/06/2001	14.9	OK	130	7.35	OK	130	7.6	OK	130	42	OK	120	100	OK	130	10	OK	130	19	OK	130	0.9	OK	130
1303139	GAP CK GLENMORAL GAP	Dawson River	9/10/2001	20.5	OK	130	7.41	OK	130	7.3	OK	130	60.28	OK	130	120.29	OK	130	31	OK	130	22.78	OK	130	1.02	OK	130
130344A	Juandah Ck Windamere	Dawson River	9/01/1985	26	OK	130	6.9	OK	135				31	OK	125	100	OK	151	1012	OK	125	13	OK	135	4.5	OK	135
130344A	Juandah Ck Windamere	Dawson River	7/01/1987	25	OK	130	7.4	OK	135				33	OK	125	110	OK	125	2100	OK	125	10	OK	125	1.5	OK	135
130344A	Juandah Ck Windamere	Dawson River	12/02/1988	30	OK	130	7.2	OK	135				36	OK	125	150	OK	125	520	OK	125	18	OK	125	2.3	OK	135
130344A	Juandah Ck Windamere	Dawson River	19/05/1988	14	OK	130	7.2	OK	135				23	OK	125	150	OK	125	3600	OK	125	27	OK	125	2.9	OK	135
130344A	Juandah Ck Windamere	Dawson River	12/01/1989	25	OK	130	6.9	OK	135				31	OK	125	130	OK	125	1975	OK	125	11.5	OK	135	1.9	OK	135
130344A	Juandah Ck Windamere	Dawson River	26/04/1989				7	OK	135				36	OK	151	100	OK	151	970	OK	125	21.5	OK	151	4.4	OK	151
130344A	Juandah Ck Windamere	Dawson River	6/05/1989				7.7	OK	135				42	OK	125	130	OK	125	240	OK	125	12	OK	125			
130344A	Juandah Ck Windamere	Dawson River	2/12/1989				8.1	OK	130				150	OK	130	400	OK	130	12	OK	130	90	OK	130	0.6	OK	130
130344A	Juandah Ck Windamere	Dawson River	2/12/1989	31	OK	130																					
130344A	Juandah Ck Windamere	Dawson River	11/07/1990	13	OK	130	8.4	OK	135	8.1	OK	130	102	OK	125	283	OK	125	12	OK	125	51	OK	125	0.6	OK	135
130344A	Juandah Ck Windamere	Dawson River	9/12/1993	19.9	OK	130	7	OK	135	7	OK	130	19	OK	125	77	OK	125	1227	OK	125	8.1	OK	125	6.2	OK	135
130344A	Juandah Ck Windamere	Dawson River	10/12/1993	19.6	OK	130	7.1	OK	135				20	OK	125	88	OK	125	1211	OK	125	10.3	OK	125	6.4	OK	135
130344A	Juandah Ck Windamere	Dawson River	28/11/1995	30.6	OK	130	7.63	OK	130	7.43	OK	130	45.86	OK	130	129.47	OK	130	132	OK	130	17.81	OK	130	1.38	OK	130
130344A	Juandah Ck Windamere	Dawson River	26/03/1997	21.4	OK	130	7.9	OK	130	8.22	OK	130	130	OK	130	330	OK	130	10	OK	130	39.5	OK	130	0.5	<	130
130344A	Juandah Ck Windamere	Dawson River	19/11/1997	22.1	OK	130	7.25	OK	130	7.6	OK	130	20	OK	130	140	OK	130	1600	OK	130	27.5	OK	130	2.7	OK	130
130344A	Juandah Ck Windamere	Dawson River	7/10/1998	24.7	OK	130	7.91	OK	130	7.9	OK	130	148.21	OK	130	417.19	OK	130	33	OK	130	85.89	OK	130	0.42	OK	130
130344A	Juandah Ck Windamere	Dawson River	18/11/1998	27	OK	130	8.07	OK	130	8	OK	130	185.78	OK	130	588.47	OK	130	14	OK	130	164.61	OK	130	0.74	OK	130
130344A	Juandah Ck Windamere	Dawson River	25/02/1999	23	OK	130	7.95	OK	130	7.9	OK	130	110	OK	130	340	OK	130	30	OK	130	63	OK	130	0.8	OK	130
130344A	Juandah Ck Windamere	Dawson River	31/10/2000	20.5	OK	130	6.88	OK	130	7	OK	130	27.36	OK	130	85.29	OK	130	964	OK	130	7.99	OK	130	3.95	OK	130
130344A	Juandah Ck Windamere	Dawson River	5/12/2001	26.7	OK	130	7.65	OK	130	7.7	OK	130	46	OK	130	160	OK	130	30	OK	130	20	OK	130	1.4	OK	130
130344A	Juandah Ck Windamere	Dawson River	7/07/2005	17.7	OK	1	7.32	OK	130	7.5	OK	1	20	OK	130	101	OK	130	210	OK	130	8.3	OK	130	1.4	OK	130
130344A	Juandah Ck Windamere	Dawson River	16/11/2005	30.5	OK	1	7.27	OK	130	7.5	OK	1	30	OK	130	106	OK	130	391	OK	130	10	OK	130	1.2	OK	130
130344A	Juandah Ck Windamere	Dawson River	7/12/2007	28.7	OK	1	6.93	OK	10	6.8	OK	1	17	OK	10	99	OK	10	2740	OK	10	8.8	OK	10	4.8	OK	10
4164055	CANNING CK MRHI	Macintyre Brook	6/10/1994	16.2	OK	130				7.5	OK	130															
4164055	CANNING CK MRHI	Macintyre Brook	8/05/1995	17.6	OK	130				7.6	OK	130															
4164055	CANNING CK MRHI	Macintyre Brook	15/09/1995	16.2	OK	130				7.2	OK	130															
4164055	CANNING CK MRHI	Macintyre Brook	15/09/1995																								
4164055	CANNING CK MRHI	Macintyre Brook	28/08/1996	16.3	OK	130	7.42	OK	130	7.5	OK	130	89.24	OK	130	315.47	OK	130	36	OK	130	89.09	OK	130	0.72	OK	130
4164055	CANNING CK MRHI	Macintyre Brook	14/11/1996	25.2	OK	130	7.52	OK	130	7.7	OK	130	79.58	OK	130	262.57	OK	130	81	OK	130	78.29	OK	130	2.21	OK	130
416407A	Woodspring	Macintyre Brook	12/03/1962				6.5	OK	135				21	OK	125	172	OK	125				26	OK	125			
416407A	Woodspring	Macintyre Brook	11/04/1962				7.7	OK	135				119	OK	125	443	OK	125				149	OK	125			
416407A	Woodspring	Macintyre Brook	18/11/1962				7.6	OK	135				117	OK	125	430	OK	125				156	OK	125			
416407A	Woodspring	Macintyre Brook	21/03/1963				6.8	OK	135				54	OK	125	210	OK	125				60	OK	125			
416407A	Woodspring	Macintyre Brook	25/05/1963				7	OK	135				92	OK	125	250	OK	125				56	OK	125			
416407A	Woodspring	Macintyre Brook	6/12/1965				6.7	OK	135				40	OK	125	107	OK	125				22	OK	125			
416407A	Woodspring	Macintyre Brook	17/12/1965	25	OK	130	7.7	OK	135				70	OK	125	184	OK	125				60	OK	125			
416407A	Woodspring	Macintyre Brook	16/03/1971				7.8	OK	135				123	OK	125	359	OK	125				132	OK	125			
416407A	Woodspring	Macintyre Brook	16/03/1971	23	OK	130																					
416407A	Woodspring	Macintyre Brook	18/12/1974				7.2	OK	135				60	OK	125	191	OK	125	36	OK	125	60	OK	125			
416407A	Woodspring	Macintyre Brook	18/12/1974	29	OK	130																					
416407A	Woodspring	Macintyre Brook	8/04/1975				7.1	OK	135				51	OK	125	155	OK	125	18	OK	125	40	OK	125			
416407A	Woodspring	Macintyre Brook	27/08/1975				7	OK	135				49	OK	125	137	OK	125	560	OK	125	37	OK	125			
416407A	Woodspring	Macintyre Brook	19/05/1976				8	OK	135				120	OK	125	388	OK	125	25	OK	125	126	OK	125			
416407A	Woodspring	Macintyre Brook	19/05/1976	16	OK	130																					
416407A	Woodspring	Macintyre Brook	4/08/1976				8.3	OK	135				103	OK	125	389	OK	125	35	OK	125	132	OK	125	1.1	OK	135
416407A	Woodspring	Macintyre Brook	27/10/1976	21	OK	130	7.8	OK	135				87	OK	125	697	OK	151	10	OK	125	124	OK	125	0.9	OK	135
416407A	Woodspring	Macintyre Brook	1/11/1976				6.9	OK	135				25	OK	125	88	OK	125	770	OK	125	25	OK	125	6.2	OK	135
416407A	Woodspring	Macintyre Brook	25/03/1977				7.5	OK	135				68	OK	125	209	OK	125	91	OK	125	50	OK	125	3.6	OK	135
422202A	Dogwood Ck Miles	Balonne River	2/12/2005																								

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Station	Station Name	Receiving Creek/ River	Date	V2080.50	F2080.50	Q2080.50	V2100.00	F2100.00	Q2100.00	V2100.50	F2100.50	Q2100.50	V2132.00	F2132.00	Q2132.00	V2169.00	F2169.00	Q2169.00	V2172.00	F2172.00	Q2172.00	V2311.00	F2311.00	Q2311.00	V2331.00	F2331.00	Q2331.00
				Water Temperature FLD			pH (pH units)			pH (pH units) FLD			Hardness as CaCO3 (mg/L)			Total Diss. Solids (mg/L)			Total Suspended Solids			Chloride as Cl (mg/L)			Nitrate as NO3(mg/L)		
422202B	Dogwood_Ck_Gilweir	Balonne River	16/12/1980	25	OK	130	8.9	OK	135	15	OK	125	15	OK	125	58	OK	125	340	OK	125	6.1	OK	135	2	OK	135
422202B	Dogwood_Ck_Gilweir	Balonne River	17/02/1981				7.4	OK	135	21	OK	125	79	OK	125	50	OK	125	12	OK	135	12	OK	135	2	OK	135
422202B	Dogwood_Ck_Gilweir	Balonne River	10/08/1981	11	OK	130	7.4	OK	135	12	OK	125	60	OK	125	10	OK	125	15	OK	135	15	OK	135	1	OK	135
422202B	Dogwood_Ck_Gilweir	Balonne River	3/11/1981	22	OK	130	7.8	OK	135	16	OK	125	69	OK	125	10	OK	125	15	OK	135	15	OK	135	4	OK	135
422202B	Dogwood_Ck_Gilweir	Balonne River	5/02/1982	25	OK	130	7.8	OK	135	18	OK	125	70	OK	125	100	OK	125	11	OK	135	2	OK	135	1	OK	135
422202B	Dogwood_Ck_Gilweir	Balonne River	17/01/1983	25	OK	130	6.9	OK	135	23	OK	125	64	OK	125	100	OK	125	12	OK	135	12	OK	135	2.1	OK	135
422202B	Dogwood_Ck_Gilweir	Balonne River	25/07/1983	12	OK	130	7.5	OK	135	24	OK	151	180	OK	151	90	OK	125	32	OK	151	0.9	OK	151	1.8	OK	151
422202B	Dogwood_Ck_Gilweir	Balonne River	9/11/1983	26	OK	130	6.8	OK	135	13	OK	151	130	OK	151	86	OK	125	12	OK	151	1.8	OK	151	0.9	OK	151
422202B	Dogwood_Ck_Gilweir	Balonne River	2/02/1984	28	OK	130	8.6	OK	135	14	OK	151	58	OK	151	30	OK	125	12	OK	151	0.5	OK	151	1.8	OK	151
422202B	Dogwood_Ck_Gilweir	Balonne River	11/05/1984				7.6	OK	135	22	OK	125	120	OK	125	80	OK	125	21	OK	135	1.8	OK	135	1.8	OK	135
422202B	Dogwood_Ck_Gilweir	Balonne River	31/08/1984				6.7	OK	135	16	OK	125	92	OK	125	10	OK	125	23	OK	135						
422202B	Dogwood_Ck_Gilweir	Balonne River	7/03/1985				6.5	OK	135	19	OK	125	140	OK	125	13	OK	125	13	OK	135	2.7	OK	135	1.6	OK	135
422202B	Dogwood_Ck_Gilweir	Balonne River	19/05/1988	16	OK	130	6.5	OK	135	28	OK	125	100	OK	125	130	OK	125	17	OK	135	1.6	OK	135	1.6	OK	135
422202B	Dogwood_Ck_Gilweir	Balonne River	24/01/1994	28.1	OK	130	6.9	OK	135	24	OK	125	86	OK	125	222	OK	125	19.6	OK	135	1.6	OK	135	5.57	OK	130
422202B	Dogwood_Ck_Gilweir	Balonne River	29/11/1994				6.58	OK	130	26.37	OK	130	101.46	OK	130	69	OK	130	22.02	OK	130	5.57	OK	130	1	OK	130
422202B	Dogwood_Ck_Gilweir	Balonne River	16/02/1995				5.94	OK	130	5.2	OK	130	40.6	OK	130	8	OK	130	11.87	OK	130	1	OK	130	0.74	OK	130
422202B	Dogwood_Ck_Gilweir	Balonne River	19/02/1995				6.11	OK	130	11.07	OK	130	52.71	OK	130	70	OK	130	17.01	OK	130	0.74	OK	130	1.29	OK	130
422202B	Dogwood_Ck_Gilweir	Balonne River	11/04/1995				7.44	OK	130	77.16	OK	130	177.46	OK	130	50	OK	130	31.6	OK	130	1.29	OK	130	1.8	OK	130
422202B	Dogwood_Ck_Gilweir	Balonne River	31/07/1995	14	OK	130	6.98	OK	130	20.92	OK	130	66.42	OK	130	8	OK	130	13.4	OK	130	1.8	OK	130	0.2	OK	130
422202B	Dogwood_Ck_Gilweir	Balonne River	6/11/1995	27.7	OK	130	7.14	OK	130	8.2	OK	130	22.07	OK	130	63.25	OK	130	6	OK	130	16.4	OK	130	0.2	OK	130
422202B	Dogwood_Ck_Gilweir	Balonne River	20/02/1996	28.2	OK	130	6.6	OK	130	8	OK	130	26.92	OK	130	99.87	OK	130	65	OK	130	22.2	OK	130	1.52	OK	130
422202B	Dogwood_Ck_Gilweir	Balonne River	20/06/1996	13.8	OK	130	6.6	OK	130	6.2	OK	130	20.42	OK	130	75.21	OK	130	45	OK	130	18.81	OK	130	0	ND	130
422202B	Dogwood_Ck_Gilweir	Balonne River	8/10/1996	20.2	OK	130	6.38	OK	130	8.02	OK	130	46.73	OK	130	51	OK	130	12.09	OK	130	0.15	OK	130	1.5	OK	130
422202B	Dogwood_Ck_Gilweir	Balonne River	17/02/1997	26.7	OK	130	6.56	OK	130	7.4	OK	130	19.92	OK	130	93.06	OK	130	219	OK	130	20.4	OK	130	1.5	OK	130
422202B	Dogwood_Ck_Gilweir	Balonne River	17/06/1997	12.8	OK	130	6.83	OK	130	8.1	OK	130	25.21	OK	130	84.56	OK	130	17	OK	130	22.71	OK	130	0.94	OK	130
422202B	Dogwood_Ck_Gilweir	Balonne River	15/10/1997	21.1	OK	130	6.22	OK	130	7.6	OK	130	11.82	OK	130	62.86	OK	130	29	OK	130	20.23	OK	130	0.22	OK	130
422202B	Dogwood_Ck_Gilweir	Balonne River	16/03/1998	31.2	OK	130	6.51	OK	130	6.4	OK	130	26.37	OK	130	91.28	OK	130	20	OK	130	25.48	OK	130	1.6	OK	130
422202B	Dogwood_Ck_Gilweir	Balonne River	10/08/1998	13.3	OK	130	6.48	OK	130	6.7	OK	130	17.94	OK	130	86.01	OK	130	18	OK	130	29.72	OK	130	1.69	OK	130
422202B	Dogwood_Ck_Gilweir	Balonne River	11/01/1999																80	OK	130						
422202B	Dogwood_Ck_Gilweir	Balonne River	28/01/1999	25.2	OK	130	7.42	OK	130	7.3	OK	130	22.65	OK	130	91.77	OK	130	20	OK	130	26.33	OK	130	1.2	OK	130
422202B	Dogwood_Ck_Gilweir	Balonne River	12/04/1999																								
422202B	Dogwood_Ck_Gilweir	Balonne River	19/04/1999																20	OK	130						
422202B	Dogwood_Ck_Gilweir	Balonne River	20/04/1999	19.2	OK	130	6.93	OK	130	7.1	OK	130	17.35	OK	130	69.21	OK	130	13	OK	130	13.48	OK	130	1.57	OK	130
422202B	Dogwood_Ck_Gilweir	Balonne River	12/07/1999																10	OK	130						
422202B	Dogwood_Ck_Gilweir	Balonne River	19/08/1999	16.6	OK	130	6.81	OK	130	6.7	OK	130	14.71	OK	130	69.52	OK	130	17	OK	130	17.04	OK	130	1.75	OK	130
422202B	Dogwood_Ck_Gilweir	Balonne River	16/12/1999	24.6	OK	130	6.71	OK	130	7.7	OK	130	17.85	OK	130	76.17	OK	130	19	OK	130	23.38	OK	130	0.8	OK	130
422202B	Dogwood_Ck_Gilweir	Balonne River	14/04/2000	20.3	OK	130	6.88	OK	130	8	OK	130	14.71	OK	130	57.77	OK	130	12	OK	130	15.79	OK	130	0.93	OK	130
422202B	Dogwood_Ck_Gilweir	Balonne River	4/09/2000	21.1	OK	130	6.79	OK	130	7.2	OK	130	14.3	OK	130	67.61	OK	130	69	OK	130	16.81	OK	130	1.62	OK	130
422202B	Dogwood_Ck_Gilweir	Balonne River	1/05/2001	23.5	OK	130	7.28	OK	130	8.4	OK	130	26.96	OK	130	84.51	OK	130	16	OK	130	21.8	OK	130	1	OK	130
422202B	Dogwood_Ck_Gilweir	Balonne River	1/10/2001	27.4	OK	130	6.63	OK	130	7.5	OK	130	22.98	OK	130	94.04	OK	130	64	OK	130	24.78	OK	130	5.1	OK	130
422202B	Dogwood_Ck_Gilweir	Balonne River	3/02/2002	33.9	OK	130	6.94	OK	130	6.7	OK	130	19.01	OK	130	70.21	OK	130	28	OK	130	15.01	OK	130	0	ND	130
422202B	Dogwood_Ck_Gilweir	Balonne River	29/07/2002	16.7	OK	130	7.27	OK	130	8.1	OK	130	15.71	OK	130	73.24	OK	130	192	OK	130	11.16	OK	130	1.37	OK	130
422202B	Dogwood_Ck_Gilweir	Balonne River	12/03/2004	25.1	OK	130	6.2	OK	130	8.6	OK	130	76	OK	130	76	OK	130	70	OK	130	7	OK	130	1.6	OK	130
422202B	Dogwood_Ck_Gilweir	Balonne River	27/02/2005	33.5	OK	130	6.9	OK	130	7.6	OK	130	21	OK	130	79	OK	130	59	OK	130	11	OK	130	0.5	<	130
422202B	Dogwood_Ck_Gilweir	Balonne River	24/10/2005	24.5	OK	130	6.54	OK	130	8.5	OK	130	13	OK	130	55	OK	130	43	OK	130	13	OK	130	1.1	OK	130
422202B	Dogwood_Ck_Gilweir	Balonne River	14/02/2006	26.8	OK	130	6.55	OK	10	7.5	OK	130	22	OK	10	90	OK	10	53	OK	10	14	OK	10	1.2	OK	10
422202B	Dogwood_Ck_Gilweir	Balonne River	11/02/2008	24.4	OK	130	6.94	OK	10	7.3	OK	130	18	OK	10	69	OK	10	32	OK	10	9.7	OK	10	1.2	OK	10
422202B	Dogwood_Ck_Gilweir	Balonne River	27/10/2008	22.2	OK	130	6.62	OK	10	6.6	OK	130	13	OK	10	69	OK	10	50	OK	10	9.9	OK	10	1.9	OK	10
4223005	CONDAMINE AT MCLEANS	Condamine River	17/03/2001				7.6	OK	130	72.96	OK	130	129.91	OK	130	148	OK	130	19.71	OK	130	2.83	OK	130	0	ND	130
4223005	CONDAMINE AT MCLEANS	Condamine River	9/11/2001				7.56	OK	130	91.12	OK	130	142.78	OK	130	79	OK	130	23.95	OK	130	0	ND	130	0	ND	130
4223006	CHINCHILLA WEIR	Condamine River	16/03/2001				7.4	OK	130	66.92	OK	130	130.26	OK	130	28	OK	130	15.69	OK	130	0.91	OK	130	0.91	OK	130
4223006	CHINCHILLA WEIR	Condamine River	8/11/2001				7.95	OK	130	94.6	OK	130	164.8	OK	130	15	OK	130	26.17	OK	130	0	ND	130	0	ND	130
4223030	CECIL PL DALBY RD	Oakey Creek	29/08/2006				8.1	OK	10	486	OK	10	1330	OK	10	26	OK	10	406	OK	10	1.5	OK	10	1.5	OK	10

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Station	Station Name	Receiving Creek/ River	Date	V2080.50	F2080.50	Q2080.50	V2100.00	F2100.00	Q2100.00	V2100.50	F2100.50	Q2100.50	V2132.00	F2132.00	Q2132.00	V2169.00	F2169.00	Q2169.00	V2172.00	F2172.00	Q2172.00	V2311.00	F2311.00	Q2311.00	V2331.00	F2331.00	Q2331.00	
				Water Temperature FLD			pH (pH units)			pH (pH units) FLD			Hardness as CaCO3 (mg/L)			Total Diss. Solids (mg/L)			Total Suspended Solids			Chloride as Cl (mg/L)			Nitrate as NO3(mg/L)			
4223051	CONDAMINE R. KAREE	Condamine River	21/03/1973				7.5	OK	135				104	OK	125	167	OK	125				36	OK	125				
4223068	LAKE BROADWATER DIWF	Condamine River	7/08/1996				7.13	OK	130				12.41	OK	130	46.29	OK	130				10.53	OK	130	0	ND	130	
4223068	LAKE BROADWATER DIWF	Condamine River	27/02/1997				7.28	OK	130				18.1	OK	130	77.63	OK	130	23	OK	130	20.17	OK	130	0	ND	130	
4223068	LAKE BROADWATER DIWF	Condamine River	20/05/1997				7.47	OK	130				15.45	OK	130	85.16	OK	130	3	OK	130	22	OK	130	0	ND	130	
4223068	LAKE BROADWATER DIWF	Condamine River	5/09/1997				6.94	OK	130				16.77	OK	130	95.42	OK	130	10	OK	130	26.24	OK	130	1.42	OK	130	
4223068	LAKE BROADWATER DIWF	Condamine River	21/11/1997				7.1	OK	130				17.6	OK	130	113.49	OK	130	12	OK	130	32.49	OK	130	1.71	OK	130	
4223068	LAKE BROADWATER DIWF	Condamine River	17/02/1998				7.3	OK	130				20.74	OK	130	152.35	OK	130	27	OK	130	44.09	OK	130	0.15	OK	130	
4223068	LAKE BROADWATER DIWF	Condamine River	29/05/1998				7.1	OK	130				22.07	OK	130	159.5	OK	130	155	OK	130	50.05	OK	130	2.31	OK	130	
4223069	SPRINGVALE BR DIWF	Condamine River	9/08/1996				8.34	OK	130				251.78	OK	130	380.59	OK	130	13	OK	130	113.36	OK	130	0	ND	130	
4223069	SPRINGVALE BR DIWF	Condamine River	29/11/1996				7.77	OK	130				110.42	OK	130	220.28	OK	130	55	OK	130	41.21	OK	130	9.64	OK	130	
4223069	SPRINGVALE BR DIWF	Condamine River	25/02/1997				7.75	OK	130				76	OK	130	140.06	OK	130	195	OK	130	20.75	OK	130	1.17	OK	130	
4223069	SPRINGVALE BR DIWF	Condamine River	21/05/1997				7.82	OK	130				127.96	OK	130	193.18	OK	130	64	OK	130	25.1	OK	130	0.2	OK	130	
4223069	SPRINGVALE BR DIWF	Condamine River	16/09/1997				7.62	OK	130				359.87	OK	130	865.48	OK	130	18	OK	130	336.12	OK	130	1.48	OK	130	
4223069	SPRINGVALE BR DIWF	Condamine River	19/11/1997				7.36	OK	130				70.72	OK	130	138.15	OK	130	76	OK	130	32.62	OK	130	2.04	OK	130	
4223069	SPRINGVALE BR DIWF	Condamine River	19/02/1998				7.66	OK	130				74.42	OK	130	163.52	OK	130	44	OK	130	43.65	OK	130	0	ND	130	
4223069	SPRINGVALE BR DIWF	Condamine River	27/05/1998				7.29	OK	130				33.74	OK	130	70.08	OK	130	240	OK	130	10.31	OK	130	2.14	OK	130	
4223073	BOWENVILLE Rd	Condamine River	26/05/1997	16.4	OK	130	7.68	OK	130	8	OK	130	152.05	OK	130	257.26	OK	130	29	OK	130	40.86	OK	130	1.87	OK	130	
4223073	BOWENVILLE Rd	Condamine River	1/09/2006				7.04	OK	10				114	OK	10	191	OK	10	24	OK	10	21	OK	10	5	OK	10	
4223074	W. BROOK CK WYREMA RD	Oakey Creek	18/05/1998	19.9	OK	130				8.3	OK	130																
4223074	W. BROOK CK WYREMA RD	Oakey Creek	2/11/1998	23.4	OK	130	8.18	OK	130	8.4	OK	130	680.11	OK	130	941.45	OK	130	18	OK	130	370.76	OK	130	13.56	OK	130	
4223076	WEST CK ALDERLY ST	Oakey Creek	22/05/1998	10.6	OK	130	7.01	OK	130	7.5	OK	130	42.41	OK	130	89.84	OK	130	24	OK	130	26.49	OK	130	1.27	OK	130	
4223076	WEST CK ALDERLY ST	Oakey Creek	13/06/1998				7.08	OK	130				153.37	OK	130	294.6	OK	130	53	OK	130	114.57	OK	130	1.57	OK	130	
4223076	WEST CK ALDERLY ST	Oakey Creek	26/09/1998				7.76	OK	130				96.68	OK	130	185.58	OK	130	5	OK	130	54.5	OK	130	0.57	OK	130	
4223076	WEST CK ALDERLY ST	Oakey Creek	3/11/1998	17.8	OK	130	7.76	OK	130	7.5	OK	130	53.89	OK	130	117.37	OK	130	27	OK	130	38.79	OK	130	1.31	OK	130	
4223076	WEST CK ALDERLY ST	Oakey Creek	5/12/1998				7.41	OK	130				68.9	OK	130	128.8	OK	130	18	OK	130	39.21	OK	130	1.72	OK	130	
4223076	WEST CK ALDERLY ST	Oakey Creek	17/03/1999				7.53	OK	130				132.93	OK	130	246.55	OK	130	36	OK	130	66.3	OK	130	0.96	OK	130	
4223078	EAST CREEK	Oakey Creek	22/05/1998	15.7	OK	130	6.69	OK	130	7.4	OK	130	31.54	OK	130	101.83	OK	130	8	OK	130	33.94	OK	130	3.15	OK	130	
4223078	EAST CREEK	Oakey Creek	3/11/1998	19.1	OK	130	7.74	OK	130	7.9	OK	130	49.64	OK	130	143.38	OK	130	5	OK	130	51.53	OK	130	1.71	OK	130	
4223079	GOWRIE CK WILLIMS RD	Oakey Creek	18/05/1998	21.3	OK	130				7.4	OK	130																
4223079	GOWRIE CK WILLIMS RD	Oakey Creek	2/11/1998	24.6	OK	130				7.4	OK	130				776.42	OK	130										
4223080	SPRING CREEK	Oakey Creek	18/05/1998	18.2	OK	130				7.9	OK	130																
4223080	SPRING CREEK	Oakey Creek	3/11/1998	21.8	OK	130	8.18	OK	130	7.9	OK	130	508.64	OK	130	665.75	OK	130	18	OK	130	258.23	OK	130	2.59	OK	130	
422308B	Chinchilla	Condamine River	28/08/2006				7.85	OK	10				99	OK	10	245	OK	10	104	OK	10	44	OK	10	1	OK	10	
422308C	Condamine Chinchilla	Condamine River	22/11/1962				7.5	OK	135				213	OK	125	384	OK	125				132	OK	125				
422308C	Condamine Chinchilla	Condamine River	12/03/1963				7.9	OK	135				133	OK	125	320	OK	125				128	OK	125				
422308C	Condamine Chinchilla	Condamine River	24/09/1963	22	OK	130	7.5	OK	135				201	OK	125	340	OK	125				104	OK	125				
422308C	Condamine Chinchilla	Condamine River	28/04/1964				8.2	OK	135				120	OK	125	194	OK	125				28	OK	125	0.2	OK	135	
422308C	Condamine Chinchilla	Condamine River	16/12/1964	26.6	OK	130	7.5	OK	135				190	OK	125	400	OK	125				135	OK	125				
422308C	Condamine Chinchilla	Condamine River	13/09/1965	18.9	OK	130	8	OK	135				231	OK	125	460	OK	125				160	OK	125				
422308C	Condamine Chinchilla	Condamine River	3/02/1966	30	OK	130	7.6	OK	135				122	OK	125	207	OK	125				46	OK	125				
422308C	Condamine Chinchilla	Condamine River	15/04/1966	22	OK	130	8	OK	135				103	OK	125	183	OK	125				26	OK	125				
422308C	Condamine Chinchilla	Condamine River	29/06/1966	12.2	OK	130																						
422308C	Condamine Chinchilla	Condamine River	22/07/1966	9.4	OK	130																						
422308C	Condamine Chinchilla	Condamine River	14/05/1968	16.7	OK	130																						
422308C	Condamine Chinchilla	Condamine River	17/09/1968	19.4	OK	130																						
422308C	Condamine Chinchilla	Condamine River	19/03/1971	21	OK	130	7.6	OK	135				123	OK	125	201	OK	125				44	OK	125				
422308C	Condamine Chinchilla	Condamine River	4/10/1971	23	OK	130	6.8	OK	135				246	OK	125	376	OK	125				125	OK	125				
422308C	Condamine Chinchilla	Condamine River	17/01/1972	21	OK	130	7.2	OK	135				70	OK	125	117	OK	125				24	OK	125				
422308C	Condamine Chinchilla	Condamine River	7/02/1972	23	OK	130	7.3	OK	135				78	OK	125	152	OK	125				32	OK	125				
422308C	Condamine Chinchilla	Condamine River	26/06/1972	13.3	OK	130																						
422308C	Condamine Chinchilla	Condamine River	1/12/1972	18	OK	130	7.6	OK	135				70	OK	125	126	OK											

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Station	Station Name	Receiving Creek/ River	Date	V2080.50	F2080.50	Q2080.50	V2100.00	F2100.00	Q2100.00	V2100.50	F2100.50	Q2100.50	V2132.00	F2132.00	Q2132.00	V2169.00	F2169.00	Q2169.00	V2172.00	F2172.00	Q2172.00	V2311.00	F2311.00	Q2311.00	V2331.00	F2331.00	Q2331.00	
				Water Temperature FLD			pH (pH units)			pH (pH units) FLD			Hardness as CaCO3 (mg/L)			Total Dis. Solids (mg/L)			Total Suspended Solids			Chloride as Cl (mg/L)			Nitrate as NO3(mg/L)			
422308C	Condamine Chinchilla	Condamine River	14/03/1978	27	OK	130	7.4	OK	135																			
422308C	Condamine Chinchilla	Condamine River	22/05/1978	18	OK	130	7.5	OK	135																			
422308C	Condamine Chinchilla	Condamine River	18/07/1979	14	OK	130																						
422308C	Condamine Chinchilla	Condamine River	13/02/1980	23	OK	130	7.4	OK	135																			
422308C	Condamine Chinchilla	Condamine River	28/04/1980	23	OK	130	7.8	OK	135																			
422308C	Condamine Chinchilla	Condamine River	22/07/1980	14	OK	130	7.9	OK	135																			
422308C	Condamine Chinchilla	Condamine River	6/10/1980				7.4	OK	135																			
422308C	Condamine Chinchilla	Condamine River	21/02/1981				7.5	OK	135																			
422308C	Condamine Chinchilla	Condamine River	18/05/1981				7.6	OK	135																			
422308C	Condamine Chinchilla	Condamine River	10/08/1981	14	OK	130	7.5	OK	135																			
422308C	Condamine Chinchilla	Condamine River	2/11/1981	22	OK	130	8	OK	135																			
422308C	Condamine Chinchilla	Condamine River	17/12/1981	24	OK	130	7.5	OK	135																			
422308C	Condamine Chinchilla	Condamine River	4/02/1982	27	OK	130	7.5	OK	135																			
422308C	Condamine Chinchilla	Condamine River	5/05/1982	19	OK	130	7.5	OK	135																			
422308C	Condamine Chinchilla	Condamine River	25/05/1982	16	OK	130																						
422308C	Condamine Chinchilla	Condamine River	2/08/1982				8.3	OK	135																			
422308C	Condamine Chinchilla	Condamine River	12/10/1982	17	OK	130	8.1	OK	135																			
422308C	Condamine Chinchilla	Condamine River	17/01/1983	31	OK	130	7.4	OK	135																			
422308C	Condamine Chinchilla	Condamine River	5/04/1983				8	OK	135																			
422308C	Condamine Chinchilla	Condamine River	25/07/1983	15	OK	130	7.7	OK	135																			
422308C	Condamine Chinchilla	Condamine River	8/11/1983	25	OK	130	8.5	OK	135																			
422308C	Condamine Chinchilla	Condamine River	31/01/1984	28	OK	130	7.9	OK	135																			
422308C	Condamine Chinchilla	Condamine River	10/05/1984				7.6	OK	135																			
422308C	Condamine Chinchilla	Condamine River	29/08/1984				7.4	OK	135																			
422308C	Condamine Chinchilla	Condamine River	28/11/1984	27	OK	130	7.3	OK	135																			
422308C	Condamine Chinchilla	Condamine River	5/03/1985	19	OK	130																						
422308C	Condamine Chinchilla	Condamine River	16/05/1985	17	OK	130																						
422308C	Condamine Chinchilla	Condamine River	31/07/1985	13	OK	130	7	OK	135																			
422308C	Condamine Chinchilla	Condamine River	29/11/1985				7.5	OK	135																			
422308C	Condamine Chinchilla	Condamine River	4/02/1986	24	OK	130																						
422308C	Condamine Chinchilla	Condamine River	26/05/1986	20	OK	130																						
422308C	Condamine Chinchilla	Condamine River	5/09/1986	26	OK	130	7.9	OK	135																			
422308C	Condamine Chinchilla	Condamine River	18/11/1986				8.5	OK	135																			
422308C	Condamine Chinchilla	Condamine River	27/05/1987	18	OK	130	7.6	OK	135																			
422308C	Condamine Chinchilla	Condamine River	4/08/1987	16	OK	130	8.1	OK	135																			
422308C	Condamine Chinchilla	Condamine River	3/02/1988	28	OK	130	7.6	OK	135																			
422308C	Condamine Chinchilla	Condamine River	18/05/1988	18	OK	130	7.5	OK	135																			
422308C	Condamine Chinchilla	Condamine River	10/08/1988	14	OK	130	7.5	OK	135																			
422308C	Condamine Chinchilla	Condamine River	16/11/1988	25	OK	130	7.8	OK	135																			
422308C	Condamine Chinchilla	Condamine River	15/02/1989	24	OK	130	7.8	OK	135																			
422308C	Condamine Chinchilla	Condamine River	30/05/1989	17	OK	130																						
422308C	Condamine Chinchilla	Condamine River	25/09/1989	21	OK	130	7.7	OK	135																			
422308C	Condamine Chinchilla	Condamine River	8/01/1990	30	OK	130																						
422308C	Condamine Chinchilla	Condamine River	13/02/1990	24	OK	130																						
422308C	Condamine Chinchilla	Condamine River	16/03/1990	23.5	OK	130																						
422308C	Condamine Chinchilla	Condamine River	16/09/1990	17	OK	130	8	OK	135																			
422308C	Condamine Chinchilla	Condamine River	8/05/1991	19	OK	130	8.3	OK	135																			
422308C	Condamine Chinchilla	Condamine River	7/01/1992	26	OK	130																						
422308C	Condamine Chinchilla	Condamine River	11/01/1993	29	OK	130	7.4	OK	135																			
422308C	Condamine Chinchilla	Condamine River	24/01/1994	31.3	OK	130				7.2	OK	130																
422308C	Condamine Chinchilla	Condamine River	19/05/1994	16	OK	130	7.7	OK	135	7.5	OK	130	66	OK	125	149	OK	125	81	OK	125	24.1	OK	125	2.1	OK	135	
422308C	Condamine Chinchilla	Condamine River	30/07/1994	16.5	OK	130	7.9	OK	135	8.5	OK	130	67	OK	125	143	OK	125	78	OK	125	21	OK	125	1	OK	135	
422308C	Condamine Chinchilla	Condamine River	11/04/1995	25.4	OK	130	6.34	OK	130	7.4	OK	130	18.44	OK	130	66	OK	130	48	OK	130	11.9	OK	130	1.82	OK	130	
422308C	Condamine Chinchilla	Condamine River	5/05/1995	21.4	OK	130	7.55	OK	130	7.8	OK	130	79.14	OK	130	161.36	OK	130	40	OK	130	25.5	OK	130	0.55	OK	130	
422308C	Condamine Chinchilla	Condamine River	25/07/1995	13.1	OK	130																						
422308C	Condamine Chinchilla	Condamine River	31/07/1995	12.8	OK	130	7.66	OK	130	7.6	OK	130	121.6	OK	130	346	OK	130	12	OK	130	82.5	OK	130	0.6	OK	130	
422308C	Condamine Chinchilla	Condamine River	14/08/1995				8.1	OK	130				81	OK	130	170	OK	130	10	<	130	29	OK	130	0.5	<	130	
422308C	Condamine Chinchilla	Condamine River	27/09/1995				7.63	OK	130				101.31	OK	130	198.9	OK	130	16	OK	130	35.3	OK	130	0.2	OK	130	

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Station	Station Name	Receiving Creek/ River	Date	V2080.50	F2080.50	Q2080.50	V2100.00	F2100.00	Q2100.00	V2100.50	F2100.50	Q2100.50	V2132.00	F2132.00	Q2132.00	V2169.00	F2169.00	Q2169.00	V2172.00	F2172.00	Q2172.00	V2311.00	F2311.00	Q2311.00	V2331.00	F2331.00	Q2331.00	
				Water Temperature FLD			pH (pH units)			pH (pH units) FLD			Hardness as CaCO3 (mg/L)			Total Diss. Solids (mg/L)			Total Suspended Solids			Chloride as Cl (mg/L)			Nitrate as NO3(mg/L)			
422332B	Gowrie Ck Oakey	Oakey Creek	17/07/1992	10	OK	130																						
422332B	Gowrie Ck Oakey	Oakey Creek	12/10/1992				7.6	OK	135				250	OK	125	691	OK	125	34	OK	125	236.2	OK	125	48.5	OK	135	
422332B	Gowrie Ck Oakey	Oakey Creek	12/10/1992	20	OK	130																						
422332B	Gowrie Ck Oakey	Oakey Creek	29/10/1992	16	OK	130	7	OK	135				76	OK	125	193	OK	125	1330	OK	125	50.7	OK	125	3.1	OK	135	
422332B	Gowrie Ck Oakey	Oakey Creek	2/02/1993				7.4	OK	135				320	OK	125	991	OK	125	46	OK	125	352	OK	125	57	OK	135	
422332B	Gowrie Ck Oakey	Oakey Creek	2/02/1993	28	OK	130																						
422332B	Gowrie Ck Oakey	Oakey Creek	20/01/1994	25.3	OK	130				7.4	OK	130																
422332B	Gowrie Ck Oakey	Oakey Creek	18/02/1994				7	OK	135				260	OK	125	814	OK	125	570	OK	125	284.3	OK	125	8.6	OK	135	
422332B	Gowrie Ck Oakey	Oakey Creek	18/02/1994				7.8	OK	135				274	OK	125	895	OK	125	1225	OK	125	313.6	OK	125	35.4	OK	135	
422332B	Gowrie Ck Oakey	Oakey Creek	18/02/1994				7.2	OK	135				247	OK	125	794	OK	125	1370	OK	125	275.4	OK	125	21.8	OK	135	
422332B	Gowrie Ck Oakey	Oakey Creek	18/02/1994				7.4	OK	135				101	OK	125	331	OK	125	400	OK	125	99.7	OK	125	8.4	OK	135	
422332B	Gowrie Ck Oakey	Oakey Creek	18/02/1994				7.3	OK	135				76	OK	125	268	OK	125	825	OK	125	78.6	OK	125	10.7	OK	135	
422332B	Gowrie Ck Oakey	Oakey Creek	18/02/1994				7.3	OK	135				64	OK	125	228	OK	125	690	OK	125	63.8	OK	125	10.1	OK	135	
422332B	Gowrie Ck Oakey	Oakey Creek	18/02/1994				7.5	OK	135				59	OK	125	215	OK	125	460	OK	125	58.3	OK	125	12.9	OK	135	
422332B	Gowrie Ck Oakey	Oakey Creek	18/02/1994				7.3	OK	135				58	OK	125	210	OK	125	480	OK	125	58.1	OK	125	13.8	OK	135	
422332B	Gowrie Ck Oakey	Oakey Creek	18/02/1994				7.4	OK	135				59	OK	125	210	OK	125	425	OK	125	58.3	OK	125	14.6	OK	135	
422332B	Gowrie Ck Oakey	Oakey Creek	18/02/1994				7.4	OK	135				177	OK	125	560	OK	125	1800	OK	125	184.9	OK	125	9.6	OK	135	
422332B	Gowrie Ck Oakey	Oakey Creek	19/02/1994				7.4	OK	135				61	OK	125	212	OK	125	346	OK	125	59.4	OK	125	15.4	OK	135	
422332B	Gowrie Ck Oakey	Oakey Creek	19/02/1994				7.4	OK	135				62	OK	125	213	OK	125	284	OK	125	61.1	OK	125	16.3	OK	135	
422332B	Gowrie Ck Oakey	Oakey Creek	19/02/1994				7.4	OK	135				64	OK	125	217	OK	125	261	OK	125	63.6	OK	125	16.9	OK	135	
422332B	Gowrie Ck Oakey	Oakey Creek	28/02/1994				7.1	OK	135				278	OK	125	835	OK	125	777	OK	125	319.7	OK	125	8.2	OK	135	
422332B	Gowrie Ck Oakey	Oakey Creek	1/03/1994				7.2	OK	135				277	OK	125	828	OK	125	2133	OK	125	300.7	OK	125	45	OK	135	
422332B	Gowrie Ck Oakey	Oakey Creek	1/03/1994				7.1	OK	135				278	OK	125	799	OK	125	2519	OK	125	276.5	OK	125	41.7	OK	135	
422332B	Gowrie Ck Oakey	Oakey Creek	1/03/1994				7.4	OK	135				162	OK	125	414	OK	125	4713	OK	125	118.5	OK	125	7.5	OK	135	
422332B	Gowrie Ck Oakey	Oakey Creek	1/03/1994				7.6	OK	135				108	OK	125	224	OK	125	4563	OK	125	40.9	OK	125	2.4	OK	135	
422332B	Gowrie Ck Oakey	Oakey Creek	1/03/1994				7.5	OK	135				107	OK	125	214	OK	125	5603	OK	125	33.4	OK	125	2.1	OK	135	
422332B	Gowrie Ck Oakey	Oakey Creek	1/03/1994				7.5	OK	135				88	OK	125	167	OK	125	5533	OK	125	24	OK	125	1.7	OK	135	
422332B	Gowrie Ck Oakey	Oakey Creek	1/03/1994				7.6	OK	135				87	OK	125	165	OK	125	4047	OK	125	24.4	OK	125	4.1	OK	135	
422332B	Gowrie Ck Oakey	Oakey Creek	1/03/1994				7.5	OK	135				80	OK	125	152	OK	125	3478	OK	125	20.6	OK	125	5.7	OK	135	
422332B	Gowrie Ck Oakey	Oakey Creek	1/03/1994				7.4	OK	135				76	OK	125	148	OK	125	2728	OK	125	20.7	OK	125	8.7	OK	135	
422332B	Gowrie Ck Oakey	Oakey Creek	1/03/1994				7.6	OK	135				72	OK	125	149	OK	125	2333	OK	125	23.3	OK	125	12	OK	135	
422332B	Gowrie Ck Oakey	Oakey Creek	1/03/1994				7.5	OK	135				80	OK	125	168	OK	125	2398	OK	125	27.2	OK	125	15.1	OK	135	
422332B	Gowrie Ck Oakey	Oakey Creek	1/03/1994				7.8	OK	135				84	OK	125	185	OK	125	1843	OK	125	33	OK	125	18.7	OK	135	
422332B	Gowrie Ck Oakey	Oakey Creek	1/03/1994				7.9	OK	135				88	OK	125	197	OK	125	1583	OK	125	38	OK	125	18.9	OK	135	
422332B	Gowrie Ck Oakey	Oakey Creek	1/03/1994				7.9	OK	135				91	OK	125	212	OK	125	1463	OK	125	42.2	OK	125	20.3	OK	135	
422332B	Gowrie Ck Oakey	Oakey Creek	1/03/1994				7.4	OK	135				97	OK	125	217	OK	125	1393	OK	125	44.2	OK	125	21	OK	135	
422332B	Gowrie Ck Oakey	Oakey Creek	6/04/1994	22	OK	130				7.4	OK	130																
422332B	Gowrie Ck Oakey	Oakey Creek	13/07/1994				7.6	OK	135				274	OK	125	913	OK	125	9	OK	125	299	OK	125	133.8	OK	135	
422332B	Gowrie Ck Oakey	Oakey Creek	13/07/1994	15.3	OK	130				7.2	OK	130																
422332B	Gowrie Ck Oakey	Oakey Creek	22/11/1994	22.2	OK	130																						
422332B	Gowrie Ck Oakey	Oakey Creek	8/12/1994	19.5	OK	130				8	OK	130																
422332B	Gowrie Ck Oakey	Oakey Creek	8/12/1994	21.6	OK	130	6.96	OK	130	7.8	OK	130	311.09	OK	130	1108.28	OK	130	24	OK	130	384.8	OK	130	104.04	OK	130	
422332B	Gowrie Ck Oakey	Oakey Creek	12/05/1995	18	OK	130				7.7	OK	130																
422332B	Gowrie Ck Oakey	Oakey Creek	12/05/1995	18	OK	130	7.13	OK	130	7.5	OK	130	233.82	OK	130	803.21	OK	130	63	OK	130	249.1	OK	130	112.04	OK	130	
422332B	Gowrie Ck Oakey	Oakey Creek	18/08/1995	13.3	OK	130	6.85	OK	130	7.8	OK	130	98.86	OK	130	352.46	OK	130	35	OK	130	95.25	OK	130	52.87	OK	130	
422332B	Gowrie Ck Oakey	Oakey Creek	23/10/1995				7.25	OK	130				302.21	OK	130	896.21	OK	130	2477	OK	130	323.6	OK	130	0	ND	130	
422332B	Gowrie Ck Oakey	Oakey Creek	23/10/1995				7.71	OK	130				342.71	OK	130	1130.56	OK	130	3146	OK	130	361.8	OK	130	21.6	OK	130	
422332B	Gowrie Ck Oakey	Oakey Creek	23/10/1995				7.71	OK	130				331.89	OK	130	1074.33	OK	130	3346	OK	130	339	OK	130	13.1	OK	130	
422332B	Gowrie Ck Oakey	Oakey Creek	23/10/1995				7.5	OK	130				118.83	OK	130	451.16	OK	130	1508	OK	130	130.8	OK	130	11.7	OK	130	
422332B	Gowrie Ck Oakey	Oakey Creek	23/10/1995				7.39	OK	130				92.39	OK	130	359.12	OK	130	1388	OK	130	99.9	OK	130	13.4	OK	130	
422332B	Gowrie Ck Oakey	Oakey Creek	23/10/1995																									

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Station	Station Name	Receiving Creek/ River	Date	V2080.50	F2080.50	Q2080.50	V2100.00	F2100.00	Q2100.00	V2100.50	F2100.50	Q2100.50	V2132.00	F2132.00	Q2132.00	V2169.00	F2169.00	Q2169.00	V2172.00	F2172.00	Q2172.00	V2311.00	F2311.00	Q2311.00	V2331.00	F2331.00	Q2331.00	
				Water Temperature FLD			pH (pH units)			pH (pH units) FLD			Hardness as CaCO ₃ (mg/L)			Total Diss. Solids (mg/L)			Total Suspended Solids			Chloride as Cl (mg/L)			Nitrate as NO ₃ (mg/L)			
422332B	Gowrie Ck Oakey	Oakey Creek	21/11/1995	20.7	OK	130				8.2	OK	130																
422332B	Gowrie Ck Oakey	Oakey Creek	28/11/1995	29.7	OK	130																						
422332B	Gowrie Ck Oakey	Oakey Creek	12/12/1995	22.3	OK	130				7.8	OK	130																
422332B	Gowrie Ck Oakey	Oakey Creek	13/12/1995	24.9	OK	130				7.6	OK	130																
422332B	Gowrie Ck Oakey	Oakey Creek	6/02/1996	28.8	OK	130				8.1	OK	130																
422332B	Gowrie Ck Oakey	Oakey Creek	1/05/1996																									
422332B	Gowrie Ck Oakey	Oakey Creek	2/05/1996																									
422332B	Gowrie Ck Oakey	Oakey Creek	2/05/1996																									
422332B	Gowrie Ck Oakey	Oakey Creek	3/05/1996																									
422332B	Gowrie Ck Oakey	Oakey Creek	3/05/1996																									
422332B	Gowrie Ck Oakey	Oakey Creek	3/05/1996																									
422332B	Gowrie Ck Oakey	Oakey Creek	3/05/1996																									
422332B	Gowrie Ck Oakey	Oakey Creek	3/05/1996																									
422332B	Gowrie Ck Oakey	Oakey Creek	3/05/1996																									
422332B	Gowrie Ck Oakey	Oakey Creek	3/05/1996																									
422332B	Gowrie Ck Oakey	Oakey Creek	3/05/1996	19.1	OK	130				8.3	OK	130																
422332B	Gowrie Ck Oakey	Oakey Creek	29/05/1996	16.5	OK	130	7.06	OK	130	7.9	OK	130	252.3	OK	130	594.96	OK	130	8	OK	130	191.1	OK	130	55.5	OK	130	
422332B	Gowrie Ck Oakey	Oakey Creek	30/05/1996	14.1	OK	130				7.73	OK	130																
422332B	Gowrie Ck Oakey	Oakey Creek	30/05/1996	14.6	OK	130				7.84	OK	130																
422332B	Gowrie Ck Oakey	Oakey Creek	20/06/1996	14.7	OK	130				7.76	OK	130																
422332B	Gowrie Ck Oakey	Oakey Creek	16/07/1996	10.6	OK	130				7.65	OK	130																
422332B	Gowrie Ck Oakey	Oakey Creek	28/07/1996				7.42	OK	130				288.03	OK	130	755.87	OK	130	4110	OK	130	249.08	OK	130	3.44	OK	130	
422332B	Gowrie Ck Oakey	Oakey Creek	28/07/1996				7.46	OK	130				99.4	OK	130	246.04	OK	130	4004	OK	130	60.74	OK	130	7.17	OK	130	
422332B	Gowrie Ck Oakey	Oakey Creek	28/07/1996				7.45	OK	130				76.34	OK	130	193.49	OK	130	2016	OK	130	43.92	OK	130	14.02	OK	130	
422332B	Gowrie Ck Oakey	Oakey Creek	4/09/1996																									
422332B	Gowrie Ck Oakey	Oakey Creek	4/09/1996	13.2	OK	130				7.85	OK	130																
422332B	Gowrie Ck Oakey	Oakey Creek	24/09/1996	15.6	OK	130				7.9	OK	130																
422332B	Gowrie Ck Oakey	Oakey Creek	3/10/1996	19.8	OK	130				7.7	OK	130																
422332B	Gowrie Ck Oakey	Oakey Creek	3/10/1996	20.5	OK	130				7.63	OK	130																
422332B	Gowrie Ck Oakey	Oakey Creek	31/10/1996	24.6	OK	130				7.9	OK	130																
422332B	Gowrie Ck Oakey	Oakey Creek	5/11/1996	19.6	OK	130				7.9	OK	130																
422332B	Gowrie Ck Oakey	Oakey Creek	4/12/1996				7.13	OK	130				205.4	OK	130	537.46	OK	130	10990	OK	130	168.39	OK	130	0.91	OK	130	
422332B	Gowrie Ck Oakey	Oakey Creek	4/12/1996																									
422332B	Gowrie Ck Oakey	Oakey Creek	4/12/1996																									
422332B	Gowrie Ck Oakey	Oakey Creek	4/12/1996				7.46	OK	130				110.7	OK	130	250	OK	130	4200	OK	130	50.7	OK	130	16.46	OK	130	
422332B	Gowrie Ck Oakey	Oakey Creek	4/12/1996				7.49	OK	130				127.9	OK	130	285.81	OK	130	8300	OK	130	60.74	OK	130	10.94	OK	130	
422332B	Gowrie Ck Oakey	Oakey Creek	5/12/1996				7.48	OK	130				84.97	OK	130	172.86	OK	130	5050	OK	130	27.08	OK	130	7.68	OK	130	
422332B	Gowrie Ck Oakey	Oakey Creek	5/12/1996				7.37	OK	130				67.02	OK	130	143.96	OK	130	3640	OK	130	20.86	OK	130	10.08	OK	130	
422332B	Gowrie Ck Oakey	Oakey Creek	5/12/1996																									
422332B	Gowrie Ck Oakey	Oakey Creek	8/12/1996	24.7	OK	130	7.22	OK	130	7.6	OK	130	159.22	OK	130	398.33	OK	130	67	OK	130	122.4	OK	130	31.9	OK	130	
422332B	Gowrie Ck Oakey	Oakey Creek	6/01/1997	22.9	OK	130				7.86	OK	130																
422332B	Gowrie Ck Oakey	Oakey Creek	22/01/1997	21.8	OK	130				7.78	OK	130																
422332B	Gowrie Ck Oakey	Oakey Creek	11/02/1997	25.9	OK	130	7.87	OK	130	8	OK	130	315.53	OK	130	843.18	OK	130	40	OK	130	309.28	OK	130	45.5	OK	130	
422332B	Gowrie Ck Oakey	Oakey Creek	11/02/1997	25.9	OK	130				8	OK	130																
422332B	Gowrie Ck Oakey	Oakey Creek	14/02/1997	25	OK	130																						
422332B	Gowrie Ck Oakey	Oakey Creek	25/02/1997	28.4	OK	130				8.44	OK	130																
422332B	Gowrie Ck Oakey	Oakey Creek	25/02/1997	28.4	OK	130	7.93	OK	130	8.3	OK	130	267.09	OK	130	686.55	OK	130	24	OK	130	218.1	OK	130	50.5	OK	130	
422332B	Gowrie Ck Oakey	Oakey Creek	28/04/1997	19.8	OK	130				7.67	OK	130																
422332B	Gowrie Ck Oakey	Oakey Creek	16/05/1997	16.9	OK	130				7.5	OK	130																
422332B	Gowrie Ck Oakey	Oakey Creek	3/06/1997	15.6	OK	130	7.06	OK	130	7.8	OK	130	301.6	OK	130	902.39	OK	130	36	OK	130	289.9	OK	130	91.1	OK	130	
422332B	Gowrie Ck Oakey	Oakey Creek	4/06/1997	15	OK	130				7.85	OK	130																
422332B	Gowrie Ck Oakey	Oakey Creek	22/07/1997	9.9	OK	130	7.06	OK	130	7.8	OK	130	294.64	OK	130	975.01	OK	130	22	OK	130	294.78	OK	130	82.36	OK	130	
422332B	Gowrie Ck Oakey	Oakey Creek	18/09/1997	19.4	OK	130				7.8	OK	130																
422332B	Gowrie Ck Oakey	Oakey Creek	3/11/1997	17.9	OK	130	7.8	OK	130	7.7	OK	130	133.17	OK	130	296.29	OK	130	6704	OK	130	82.46	OK	130	1.36	OK	130	
422332B	Gowrie Ck Oakey	Oakey Creek	3/11/1997	20.3	OK	130	7.41	OK	130	7.8	OK	130	149.3	OK	130	368.47	OK											

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Station	Station Name	Receiving Creek/ River	Date	V2080.50 F2080.50 Q2080.50			V2100.00 F2100.00 Q2100.00			V2100.50 F2100.50 Q2100.50			V2132.00 F2132.00 Q2132.00			V2169.00 F2169.00 Q2169.00			V2172.00 F2172.00 Q2172.00			V2311.00 F2311.00 Q2311.00			V2331.00 F2331.00 Q2331.00		
				Water Temperature	FLD		pH (pH units)			pH (pH units)			Hardness as CaCO ₃ (mg/L)			Total Diss. Solids (mg/L)			Total Suspended Solids			Chloride as Cl (mg/L)			Nitrate as NO ₃ (mg/L)		
422332B	Gowrie Ck Oakey	Oakey Creek	10/01/1999	23.4	OK	130	7.53	OK	130	8.8	OK	130	66.84	OK	130	150.31	OK	130	959	OK	130	28.06	OK	130	7.97	OK	130
422332B	Gowrie Ck Oakey	Oakey Creek	10/01/1999	23.3	OK	130				8	OK	130															
422332B	Gowrie Ck Oakey	Oakey Creek	10/01/1999	22.9	OK	130				8	OK	130															
422332B	Gowrie Ck Oakey	Oakey Creek	10/01/1999	23.3	OK	130	1	OK	130	8	OK	130	0.5	OK	130	62.89	OK	130				0	ND	130	0	ND	130
422332B	Gowrie Ck Oakey	Oakey Creek	10/01/1999	21.1	OK	130				8.7	OK	130															
422332B	Gowrie Ck Oakey	Oakey Creek	11/01/1999	21.4	OK	130				8	OK	130															
422332B	Gowrie Ck Oakey	Oakey Creek	11/01/1999	25.4	OK	130	7.59	OK	130	8	OK	130	93.8	OK	130	197.62	OK	130	605	OK	130	45.75	OK	130	12.42	OK	130
422332B	Gowrie Ck Oakey	Oakey Creek	12/01/1999	24.6	OK	130				8.2	OK	130															
422332B	Gowrie Ck Oakey	Oakey Creek	12/01/1999	26.3	OK	130	7.64	OK	130	8	OK	130	123.45	OK	130	268.26	OK	130	985	OK	130	67.51	OK	130	12.61	OK	130
422332B	Gowrie Ck Oakey	Oakey Creek	13/01/1999	25.9	OK	130				8.1	OK	130															
422332B	Gowrie Ck Oakey	Oakey Creek	15/01/1999	26.2	OK	130				8	OK	130															
422332B	Gowrie Ck Oakey	Oakey Creek	8/02/1999				7.52	OK	130				177.89	OK	130	332.42	OK	130	6800	OK	130	61	OK	130	11.56	OK	130
422332B	Gowrie Ck Oakey	Oakey Creek	8/02/1999																								
422332B	Gowrie Ck Oakey	Oakey Creek	8/02/1999				7.58	OK	130				94.51	OK	130	158.83	OK	130	5100	OK	130	12.86	OK	130	7.62	OK	130
422332B	Gowrie Ck Oakey	Oakey Creek	9/02/1999																								
422332B	Gowrie Ck Oakey	Oakey Creek	9/02/1999				7.8	OK	130				96	OK	130	160	OK	130	2900	OK	130	17	OK	130	12	OK	130
422332B	Gowrie Ck Oakey	Oakey Creek	9/02/1999																								
422332B	Gowrie Ck Oakey	Oakey Creek	9/02/1999				7.84	OK	130				108.84	OK	130	182	OK	130	2920	OK	130	18.72	OK	130	12.65	OK	130
422332B	Gowrie Ck Oakey	Oakey Creek	9/02/1999																								
422332B	Gowrie Ck Oakey	Oakey Creek	9/02/1999				7.88	OK	130				119.28	OK	130	193.16	OK	130	3200	OK	130	20.46	OK	130	11.88	OK	130
422332B	Gowrie Ck Oakey	Oakey Creek	9/02/1999																								
422332B	Gowrie Ck Oakey	Oakey Creek	10/4/1999	23	OK	130				8.8	OK	130															
422332B	Gowrie Ck Oakey	Oakey Creek	28/04/1999	16	OK	130																					
422332B	Gowrie Ck Oakey	Oakey Creek	28/04/1999	16.4	OK	130																					
422332B	Gowrie Ck Oakey	Oakey Creek	16/06/1999	8.6	OK	130	7.83	OK	130	8.5	OK	130	271.7	OK	130	765.78	OK	130	27	OK	130	265.62	OK	130	41.26	OK	130
422332B	Gowrie Ck Oakey	Oakey Creek	28/06/1999	12.8	OK	130																					
422332B	Gowrie Ck Oakey	Oakey Creek	28/06/1999	12.6	OK	130																					
422332B	Gowrie Ck Oakey	Oakey Creek	1/09/1999				7.6	OK	130				203.85	OK	130	579.5	OK	130	41	OK	130	198.88	OK	130	24.36	OK	130
422332B	Gowrie Ck Oakey	Oakey Creek	1/09/1999	16.8	OK	130				7.9	OK	130															
422332B	Gowrie Ck Oakey	Oakey Creek	18/10/1999	25.7	OK	130				7.2	OK	130															
422332B	Gowrie Ck Oakey	Oakey Creek	19/10/1999	24.3	OK	130				7.2	OK	130															
422332B	Gowrie Ck Oakey	Oakey Creek	2/11/1999	20.3	OK	130																					
422332B	Gowrie Ck Oakey	Oakey Creek	6/11/1999	21.2	OK	130																					
422332B	Gowrie Ck Oakey	Oakey Creek	9/11/1999				7.8	OK	130				140	OK	130	350	OK	130	2500	OK	130	95	OK	130	19	OK	130
422332B	Gowrie Ck Oakey	Oakey Creek	9/11/1999				7.48	OK	130				56.77	OK	130	128.9	OK	130	1935	OK	130	17.17	OK	130	8.21	OK	130
422332B	Gowrie Ck Oakey	Oakey Creek	9/11/1999				7.93	OK	130				79.29	OK	130	175.08	OK	130	3375	OK	130	28.33	OK	130	8.04	OK	130
422332B	Gowrie Ck Oakey	Oakey Creek	9/11/1999				7.45	OK	130				62.16	OK	130	141.63	OK	130	2370	OK	130	20.19	OK	130	8.66	OK	130
422332B	Gowrie Ck Oakey	Oakey Creek	9/11/1999																								
422332B	Gowrie Ck Oakey	Oakey Creek	9/11/1999				7.54	OK	130				53.63	OK	130	125.06	OK	130	1441	OK	130	17.25	OK	130	8.54	OK	130
422332B	Gowrie Ck Oakey	Oakey Creek	9/11/1999				7.66	OK	130				54.29	OK	130	126.39	OK	130	1174	OK	130	18.31	OK	130	8.29	OK	130
422332B	Gowrie Ck Oakey	Oakey Creek	9/11/1999				7.67	OK	130				51.88	OK	130	125.77	OK	130	746	OK	130	20.29	OK	130	7.96	OK	130
422332B	Gowrie Ck Oakey	Oakey Creek	9/11/1999																								
422332B	Gowrie Ck Oakey	Oakey Creek	19/12/1999	23.4	OK	130																					
422332B	Gowrie Ck Oakey	Oakey Creek	5/01/2000				7.34	OK	130				209.07	OK	130	479.59	OK	130	1651	OK	130	162.42	OK	130	18.24	OK	130
422332B	Gowrie Ck Oakey	Oakey Creek	5/01/2000				7.3	OK	130				151.75	OK	130	310.49	OK	130	4912	OK	130	80.33	OK	130	5.6	OK	130
422332B	Gowrie Ck Oakey	Oakey Creek	5/01/2000																								
422332B	Gowrie Ck Oakey	Oakey Creek	5/01/2000				7.36	OK	130				74.87	OK	130	163.61	OK	130	563	OK	130	37.5	OK	130	6.16	OK	130
422332B	Gowrie Ck Oakey	Oakey Creek	5/01/2000	24.4	OK	130																					
422332B	Gowrie Ck Oakey	Oakey Creek	18/01/2000				7.36	OK	130				90.61	OK	130	198.3	OK	130	1995	OK	130	44.57	OK	130	9.51	OK	130
422332B	Gowrie Ck Oakey	Oakey Creek	18/01/2000				7.57	OK	130				66.02	OK	130	153.54	OK	130	350	OK	130	40.37	OK	130	5.18	OK	130
422332B	Gowrie Ck Oakey	Oakey Creek	18/01/2000	24.6	OK	130																					
422332B	Gowrie Ck Oakey	Oakey Creek	17/02/2000	24.1	OK	130																					
422332B	Gowrie Ck Oakey	Oakey Creek	2/05/2000	16.7	OK	130	7.65	OK	130	8.8	OK	130	178.92	OK	130	488.03	OK	130	543	OK	130	161.93	OK	130	13.71	OK	130
422332B	Gowrie Ck Oakey	Oakey Creek	2/05/2000	17.2	OK	130	7.64	OK	130	8.9	OK	130	194.16	OK	130	533.46	OK	130	1248	OK	130	167.85	OK	130	18.22	OK	130
422332B	Gowrie Ck Oakey	Oakey Creek	2/05/2000	17.8	OK	130				9.2	OK	130															

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Station	Station Name	Receiving Creek/ River	Date	V2080.50	F2080.50	Q2080.50	V2100.00	F2100.00	Q2100.00	V2100.50	F2100.50	Q2100.50	V2132.00	F2132.00	Q2132.00	V2169.00	F2169.00	Q2169.00	V2172.00	F2172.00	Q2172.00	V2311.00	F2311.00	Q2311.00	V2331.00	F2331.00	Q2331.00
				Water Temperature FLD			pH (pH units)			pH (pH units) FLD			Hardness as CaCO ₃ (mg/L)			Total Diss. Solids (mg/L)			Total Suspended Solids			Chloride as Cl (mg/L)			Nitrate as NO ₃ (mg/L)		
				21.1	OK	130																					
422332B	Gowrie Ck Oakey	Oakey Creek	1/02/2001	18	OK	130	7.52	OK	130	7	OK	130	107.33	OK	130	198.66	OK	130	2753	OK	130	32.94	OK	130	2.63	OK	130
422332B	Gowrie Ck Oakey	Oakey Creek	2/02/2001	17.3	OK	130	7.56	OK	130	7.2	OK	130	80.2	OK	130	152.39	OK	130	1097	OK	130	20.67	OK	130	10.08	OK	130
422332B	Gowrie Ck Oakey	Oakey Creek	3/02/2001	18.2	OK	130	7.7	OK	130	7.3	OK	130	107.77	OK	130	179.04	OK	130	2395	OK	130	21.93	OK	130	8.88	OK	130
422332B	Gowrie Ck Oakey	Oakey Creek	3/02/2001	18.2	OK	130	7.67	OK	130	7.4	OK	130	95.98	OK	130	160.08	OK	130	5501	OK	130	10.8	OK	130	2.02	OK	130
422332B	Gowrie Ck Oakey	Oakey Creek	3/02/2001	17.9	OK	130	7.71	OK	130	7.1	OK	130	87.22	OK	130	139.68	OK	130	3069	OK	130	11.52	OK	130	6.7	OK	130
422332B	Gowrie Ck Oakey	Oakey Creek	4/02/2001	16.7	OK	130	7.81	OK	130	7.5	OK	130	89.05	OK	130	156.07	OK	130	1535	OK	130	17.69	OK	130	10.53	OK	130
422332B	Gowrie Ck Oakey	Oakey Creek	4/02/2001	20.4	OK	130	7.7	OK	130	7.4	OK	130	106.17	OK	130	204.37	OK	130	713	OK	130	34.54	OK	130	13.34	OK	130
422332B	Gowrie Ck Oakey	Oakey Creek	6/02/2001	25.4	OK	130	7.66	OK	130	7.4	OK	130	164.98	OK	130	349.6	OK	130	76	OK	130	83.88	OK	130	22.1	OK	130
422332B	Gowrie Ck Oakey	Oakey Creek	6/02/2001	25.4	OK	130																					
422332B	Gowrie Ck Oakey	Oakey Creek	5/06/2001	14.6	OK	130				8.1	OK	130															
422332B	Gowrie Ck Oakey	Oakey Creek	13/06/2001	15.2	OK	130	7.74	OK	130	8.4	OK	130	259.65	OK	130	832.35	OK	130	3	OK	130	276.2	OK	130	54.74	OK	130
422332B	Gowrie Ck Oakey	Oakey Creek	24/10/2001	24.2	OK	130																					
422332B	Gowrie Ck Oakey	Oakey Creek	17/04/2002				7.67	OK	130				259.84	OK	130	779.7	OK	130	10	OK	130	257.58	OK	130	29.82	OK	130
422332B	Gowrie Ck Oakey	Oakey Creek	1/05/2002	18.3	OK	130				8.2	OK	130															
422332B	Gowrie Ck Oakey	Oakey Creek	18/07/2002	8.7	OK	130				8.3	OK	130															
422332B	Gowrie Ck Oakey	Oakey Creek	10/12/2002				7.27	OK	130				49.34	OK	130	148.38	OK	130	1209	OK	130	33.8	OK	130	4.11	OK	130
422332B	Gowrie Ck Oakey	Oakey Creek	6/12/2003																								
422332B	Gowrie Ck Oakey	Oakey Creek	6/12/2003	21.2	OK	130	7.2	OK	130	6.9	OK	130	48.5	OK	130	120	OK	130	1150	OK	130	15	OK	130	7.8	OK	130
422332B	Gowrie Ck Oakey	Oakey Creek	8/12/2003	22.2	OK	130	7.5	OK	130	9	OK	130	115	OK	130	320	OK	130	40	OK	130	84	OK	130	11	OK	130
422332B	Gowrie Ck Oakey	Oakey Creek	10/03/2004	28	OK	130	7.95	OK	130				210	OK	130	520	OK	130	20	OK	130	150	OK	130	15.5	OK	130
422332B	Gowrie Ck Oakey	Oakey Creek	20/12/2005	27.8	OK	130	7.67	OK	130	8.1	OK	130	129	OK	130	398	OK	130	32	OK	130	104	OK	130	6.9	OK	130
422332B	Gowrie Ck Oakey	Oakey Creek	20/03/2006	26.2	OK	130	8.16	OK	130	8.4	OK	130	323	OK	130	1270	OK	130	20	OK	130	465	OK	130	6.8	OK	130
422332B	Gowrie Ck Oakey	Oakey Creek	16/08/2006	13.5	OK	130	8.58	OK	131	8.6	OK	130	301	OK	131	1040	OK	131	17	OK	131	307	OK	131	11	OK	131
422332B	Gowrie Ck Oakey	Oakey Creek	15/08/2007	16.9	OK	130	8.67	OK	10	9.2	OK	130	355	OK	10	1240	OK	10	9	OK	10	414	OK	10	1.5	OK	10
422332B	Gowrie Ck Oakey	Oakey Creek	25/08/2008	14.8	OK	1	8.42	OK	10	8.4	OK	1	294	OK	10	952	OK	10	18	OK	10	283	OK	10	7.5	OK	10
422332B	Gowrie Ck Oakey	Oakey Creek	14/01/2009	25.7	OK	130				9.1	OK	130															
422332B	Gowrie Ck Oakey	Oakey Creek	27/04/2009	18.7	OK	130				8.7	OK	130															
422332B	Gowrie Ck Oakey	Oakey Creek	14/09/2009	19.7	OK	130																					
422347B	N Condamine_R Pampas	Condamine River	7/06/1989	14	OK	130																					
422347B	N Condamine_R Pampas	Condamine River	8/06/1989	13	OK	130																					
422347B	N Condamine_R Pampas	Condamine River	8/06/1989	13	OK	130																					
422347B	N Condamine_R Pampas	Condamine River	8/06/1989	13	OK	130																					
422347B	N Condamine_R Pampas	Condamine River	8/06/1989	13	OK	130																					
422347B	N Condamine_R Pampas	Condamine River	8/06/1989	13	OK	130																					
422347B	N Condamine_R Pampas	Condamine River	8/06/1989	13	OK	130																					
422347B	N Condamine_R Pampas	Condamine River	23/08/1989	13	OK	130	7.8	OK	135				184	OK	125	290	OK	125	5	OK	125	90	OK	125			
422347B	N Condamine_R Pampas	Condamine River	6/12/1989	24	OK	130	7.5	OK	135				34	OK	125	103	OK	125	952	OK	125	6.6	OK	125	13.1	OK	135
422347B	N Condamine_R Pampas	Condamine River	30/03/1990	22	OK	130	7.7	OK	135				152	OK	125	258	OK	125	74	OK	125	75	OK	125	0.6	OK	135
422347B	N Condamine_R Pampas	Condamine River	6/03/1991	21	OK	130																					
422347B	N Condamine_R Pampas	Condamine River	3/02/1992	25	OK	130	6.8	OK	135				55	OK	125	122	OK	125	850	OK	125	20.4	OK	125	3.7	OK	135
422347B	N Condamine_R Pampas	Condamine River	4/02/1992	23	OK	130																					
422347B	N Condamine_R Pampas	Condamine River	25/02/1992	27	OK	130																					
422347B	N Condamine_R Pampas	Condamine River	21/10/1992	19	OK	130																					
422347B	N Condamine_R Pampas	Condamine River	21/10/1992				7	OK	135				90	OK	125	217	OK	125	14	OK	125	77.6	OK	125	1.4	OK	135
422347B	N Condamine_R Pampas	Condamine River	5/02/1993	26	OK	130	7.2	OK	135				85	OK	125	216	OK	125	24	OK	125	77.6	OK	125			
422347B	N Condamine_R Pampas	Condamine River	9/06/1993	15.2	OK	130				8.7	OK	130															
422347B	N Condamine_R Pampas	Condamine River	4/03/1994	21.9	OK	130																					
422347B	N Condamine_R Pampas	Condamine River	2/02/1996	29.7	OK	130				7.7	OK	130															
422347B	N Condamine_R Pampas	Condamine River	27/05/1996	16.8	OK	130				8.8	OK	130															
422347B	N Condamine_R Pampas	Condamine River	6/09/1996	15.6	OK	130				8	OK	130															
422347B	N Condamine_R Pampas	Condamine River	3/12/1996	28.2	OK	130				9.1	OK	130															
422353A	Yarramalong	Condamine River	21/01/1988				7.5	OK	135				59	OK	125	120	OK	125	1680	OK	125	17	OK	125	4.1	OK	135
422353A	Yarramalong	Condamine River	21/01/1988	28	OK	130																					

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Station	Station Name	Receiving Creek/ River	Date	V2080.50 F2080.50 Q2080.50			V2100.00 F2100.00 Q2100.00			V2100.50 F2100.50 Q2100.50			V2132.00 F2132.00 Q2132.00			V2169.00 F2169.00 Q2169.00			V2172.00 F2172.00 Q2172.00			V2311.00 F2311.00 Q2311.00			V2331.00 F2331.00 Q2331.00		
				Water Temperature	FLD		pH (pH units)			pH (pH units)	FLD		Hardness as CaCO3 (mg/L)			Total Diss. Solids (mg/L)			Total Suspended Solids			Chloride as Cl (mg/L)			Nitrate as NO3(mg/L)		
422353A	Yarramalong	Condamine River	30/08/1995	24.8	OK	130			9.3	OK	130																
422353A	Yarramalong	Condamine River	13/09/1995	19.2	OK	130			8.4	OK	130																
422353A	Yarramalong	Condamine River	27/05/1996	16	OK	130			8.2	OK	130																
422353A	Yarramalong	Condamine River	5/07/1996	12.8	OK	130			8.7	OK	130																
422353A	Yarramalong	Condamine River	18/07/1996	10.8	OK	130			8.8	OK	130																
422353A	Yarramalong	Condamine River	6/09/1996	14.6	OK	130			8.2	OK	130																
422353A	Yarramalong	Condamine River	6/12/1996	28.3	OK	130			9.3	OK	130																
422353A	Yarramalong	Condamine River	5/06/1997	16.4	OK	130	7.86	OK	130	8.2	OK	130	94.59	OK	130	181.6	OK	130	16	OK	130	46.51	OK	130	0.54	OK	130
422353A	Yarramalong	Condamine River	24/07/1997	14.7	OK	130			8.4	OK	130																
422353A	Yarramalong	Condamine River	18/11/1997				7.54	OK	130				96.65	OK	130	189.46	OK	130	67	OK	130	48.99	OK	130	2.25	OK	130
422353A	Yarramalong	Condamine River	18/11/1997	25.7	OK	130			7.87	OK	130																
422353A	Yarramalong	Condamine River	3/09/1998	18.4	OK	130																					
422353A	Yarramalong	Condamine River	17/03/2001				7.65	OK	130				70.39	OK	130	125.29	OK	130	246	OK	130	15.78	OK	130	2.38	OK	130
422353A	Yarramalong	Condamine River	9/11/2001				7.94	OK	130				79.64	OK	130	180.53	OK	130	27	OK	130	58.56	OK	130	0	ND	130
422353A	Yarramalong	Condamine River	5/05/2006				8	OK	130				127	OK	130	190	OK	130	108	OK	130	24	OK	130	0.8	OK	130
422353A	Yarramalong	Condamine River	19/11/2007				7.12	OK	10				66	OK	10	121	OK	10	121	OK	10	9.5	OK	10	5.8	OK	10
422354A	NCondamine_R_Glendon	Condamine River	22/08/1989				7.7	OK	135				157	OK	125	260	OK	125	10	OK	125	74	OK	125	0.7	OK	135
422354A	NCondamine_R_Glendon	Condamine River	22/08/1989	16	OK	130																					
422354A	NCondamine_R_Glendon	Condamine River	28/03/1990	21	OK	130			8.2	OK	135				74	OK	125	180	OK	125	40	OK	125	26.9	OK	135	
422354A	NCondamine_R_Glendon	Condamine River	2/07/1990				7.7	OK	135				88	OK	125	191	OK	125	54	OK	125	34.7	OK	125	4.2	OK	135
422354A	NCondamine_R_Glendon	Condamine River	2/07/1990	11	OK	130																					
422354A	NCondamine_R_Glendon	Condamine River	20/02/1992	25	OK	130	7	OK	135				62	OK	125	130	OK	125	286	OK	125	18.4	OK	125			

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Station	Station Name	Receiving Creek/ River	Date	V2343.00	F2343.00	Q2343.00	V2337.00	F2337.00	Q2337.00	V2345.00	F2345.00	Q2345.00	V2351.50	F2351.50	Q2351.50	V2363.00	F2363.00	Q2363.00	V2401.00	F2401.00	Q2401.00	V2551.00	F2551.00	Q2551.00
				Nitrate + nitrite as N - soluble (mg/L)			Total Nitrogen (mg/L)			Ammonia as N - soluble (mg/L)			Oxygen (Dissolved) (mg/L)FLD			Total Phosphorus as P (mg/L)			Sulphate as SO4 (mg/L)			Boron as B (mg/L)		
1303139	GAP CK GLENMORAL GAP	Dawson River	6/06/2001				0.64	OK	130				7.5	OK	130	0.07	OK	130	2	<	130	0.1	<	130
1303139	GAP CK GLENMORAL GAP	Dawson River	9/10/2001				0.599	OK	130				3.9	OK	130	0.0702	OK	130	1.3	OK	130	0.05	OK	130
130344A	Juandah Ck Windamere	Dawson River	9/01/1985																2	OK	135	0.03	OK	135
130344A	Juandah Ck Windamere	Dawson River	7/01/1987																5.7	OK	125			
130344A	Juandah Ck Windamere	Dawson River	12/02/1988																6.1	OK	125	0.02	OK	135
130344A	Juandah Ck Windamere	Dawson River	19/05/1988																6.9	OK	125			
130344A	Juandah Ck Windamere	Dawson River	12/01/1989																3.1	OK	135	0.01	OK	135
130344A	Juandah Ck Windamere	Dawson River	26/04/1989																4.5	OK	151			
130344A	Juandah Ck Windamere	Dawson River	6/05/1989																2.6	OK	125	0.02	OK	135
130344A	Juandah Ck Windamere	Dawson River	2/12/1989																15	OK	130	0.1	<	130
130344A	Juandah Ck Windamere	Dawson River	2/12/1989																					
130344A	Juandah Ck Windamere	Dawson River	11/07/1990																10	OK	125	0.02	OK	135
130344A	Juandah Ck Windamere	Dawson River	9/12/1993																3	OK	125			
130344A	Juandah Ck Windamere	Dawson River	10/12/1993																3.9	OK	125			
130344A	Juandah Ck Windamere	Dawson River	28/11/1995										6.45	OK	130	0.4132	OK	130	2.56	OK	130	0	ND	130
130344A	Juandah Ck Windamere	Dawson River	26/03/1997										7.62	OK	130	0.1	OK	130	7	OK	130	0.1	<	130
130344A	Juandah Ck Windamere	Dawson River	19/11/1997										7.5	OK	130	1	OK	130	9.1	OK	130	0.1	<	130
130344A	Juandah Ck Windamere	Dawson River	7/10/1998				0.5806	OK	130				6.3	OK	130	0.1449	OK	130	15.88	OK	130	0	ND	130
130344A	Juandah Ck Windamere	Dawson River	18/11/1998				0.01	OK	130				7.6	OK	130	0.0145	OK	130	21.76	OK	130	0.1	OK	130
130344A	Juandah Ck Windamere	Dawson River	25/02/1999										7.3	OK	130				11.5	OK	130	0.1	<	130
130344A	Juandah Ck Windamere	Dawson River	31/10/2000	0.4636	OK	130	3.22	OK	130	0.02	OK	130	6.6	OK	130	0.772	OK	130	2.45	OK	130	0	ND	130
130344A	Juandah Ck Windamere	Dawson River	5/12/2001				1.2	OK	130				6.4	OK	130	0.27	OK	130	7	OK	130	0.2	<	130
130344A	Juandah Ck Windamere	Dawson River	7/07/2005				1.454	OK	130				9.2	OK	1	0.286	OK	130	3.5	OK	130	0.08	OK	130
130344A	Juandah Ck Windamere	Dawson River	16/11/2005				1.348	OK	130							0.417	OK	130	3.1	OK	130	0.05	OK	130
130344A	Juandah Ck Windamere	Dawson River	7/12/2007	0.711	OK	10	4.5834	OK	10	0.076	OK	10	4.1	OK	1	1.5191	OK	10	2.4	OK	10	0.06	OK	10
4164055	CANNING CK MRHI	Macintyre Brook	6/10/1994										5.4	OK	130									
4164055	CANNING CK MRHI	Macintyre Brook	8/05/1995										8	OK	130									
4164055	CANNING CK MRHI	Macintyre Brook	15/09/1995										4.2	OK	130									
4164055	CANNING CK MRHI	Macintyre Brook	15/09/1995													0.1136	OK	130						
4164055	CANNING CK MRHI	Macintyre Brook	28/08/1996										8.5	OK	130	0.0506	OK	130	4.23	OK	130	0.1	OK	130
4164055	CANNING CK MRHI	Macintyre Brook	14/11/1996										8.8	OK	130	0.1267	OK	130	3.12	OK	130	0.1	OK	130
416407A	Woodspring	Macintyre Brook	12/03/1962																					
416407A	Woodspring	Macintyre Brook	11/04/1962																46	OK	125			
416407A	Woodspring	Macintyre Brook	18/11/1962																					
416407A	Woodspring	Macintyre Brook	21/03/1963																					
416407A	Woodspring	Macintyre Brook	25/05/1963																					
416407A	Woodspring	Macintyre Brook	6/12/1965																12	OK	125			
416407A	Woodspring	Macintyre Brook	17/12/1965																3	OK	125			
416407A	Woodspring	Macintyre Brook	16/03/1971																6	OK	125			
416407A	Woodspring	Macintyre Brook	16/03/1971																					
416407A	Woodspring	Macintyre Brook	18/12/1974																					
416407A	Woodspring	Macintyre Brook	18/12/1974																					
416407A	Woodspring	Macintyre Brook	8/04/1975																3.8	OK	125			
416407A	Woodspring	Macintyre Brook	27/08/1975																					
416407A	Woodspring	Macintyre Brook	19/05/1976																					
416407A	Woodspring	Macintyre Brook	19/05/1976																					
416407A	Woodspring	Macintyre Brook	4/08/1976																8	OK	125			
416407A	Woodspring	Macintyre Brook	27/10/1976																20	OK	125			
416407A	Woodspring	Macintyre Brook	1/11/1976																					
416407A	Woodspring	Macintyre Brook	25/03/1977																16	OK	125			
422202A	Dogwood Ck Miles	Balonne River	2/12/2005				2.697	OK	10							0.75	OK	10						
422202A	Dogwood Ck Miles	Balonne River	3/12/2005				1.37	OK	10							0.255	OK	10						
422202A	Dogwood Ck Miles	Balonne River	3/12/2005				1.86	OK	10							0.3	OK	10						
422202A	Dogwood Ck Miles	Balonne River	3/12/2005				1.55	OK	10							0.234	OK	10						
422202A	Dogwood Ck Miles	Balonne River	4/12/2005				1.43	OK	10							0.192	OK	10						
422202A	Dogwood Ck Miles	Balonne River	5/12/2005				1.51	OK	10							0.171	OK	10						
422202A	Dogwood Ck Miles	Balonne River	9/12/2005	0.1165	OK	10	1.49	OK	10	0.012	OK	10				0.246	OK	10						
422202A	Dogwood Ck Miles	Balonne River	9/12/2005	0.101	OK	10	1.46	OK	10	0.0174	OK	10				0.228	OK	10						
422202B	Dogwood Ck Gilweir	Balonne River	26/04/1964																					
422202B	Dogwood Ck Gilweir	Balonne River	18/03/1971																40	OK	125			
422202B	Dogwood Ck Gilweir	Balonne River	5/10/1971																3	OK	125			
422202B	Dogwood Ck Gilweir	Balonne River	18/01/1972																					
422202B	Dogwood Ck Gilweir	Balonne River	8/02/1972																					
422202B	Dogwood Ck Gilweir	Balonne River	27/06/1972																					
422202B	Dogwood Ck Gilweir	Balonne River	30/11/1972																					
422202B	Dogwood Ck Gilweir	Balonne River	6/02/1973																					
422202B	Dogwood Ck Gilweir	Balonne River	10/04/1973																			0.03	OK	135
422202B	Dogwood Ck Gilweir	Balonne River	8/08/1973																			0.05	OK	135
422202B	Dogwood Ck Gilweir	Balonne River	2/10/1973																1	OK	135			
422202B	Dogwood Ck Gilweir	Balonne River	19/01/1977																					
422202B	Dogwood Ck Gilweir	Balonne River	29/08/1978																7	OK	135			

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				Nitrate + nitrite as N - soluble (mg/L)			Total Nitrogen (mg/L)			Ammonia as N - soluble (mg/L)			Oxygen (Dissolved) (mg/L)/FLD			Total Phosphorus as P (mg/L)			Sulphate as SO4 (mg/L)			Boron as B (mg/L)		
422202B	Dogwood_Ck_Gilweir	Balonne River	16/12/1980																13	OK	135			
422202B	Dogwood_Ck_Gilweir	Balonne River	17/02/1981																10	OK	135			
422202B	Dogwood_Ck_Gilweir	Balonne River	10/08/1981																10	OK	135			
422202B	Dogwood_Ck_Gilweir	Balonne River	3/11/1981																10	OK	125			
422202B	Dogwood_Ck_Gilweir	Balonne River	5/02/1982																14	OK	135			
422202B	Dogwood_Ck_Gilweir	Balonne River	17/01/1983																2.4	OK	135			
422202B	Dogwood_Ck_Gilweir	Balonne River	25/07/1983																2.1	OK	151	0.04	OK	135
422202B	Dogwood_Ck_Gilweir	Balonne River	9/11/1983																6	OK	151			
422202B	Dogwood_Ck_Gilweir	Balonne River	2/02/1984																9.1	OK	151	0.02	OK	135
422202B	Dogwood_Ck_Gilweir	Balonne River	11/05/1984																5	OK	135	0.03	OK	135
422202B	Dogwood_Ck_Gilweir	Balonne River	31/08/1984																5.7	OK	135			
422202B	Dogwood_Ck_Gilweir	Balonne River	7/03/1985																7.4	OK	135	0.01	OK	135
422202B	Dogwood_Ck_Gilweir	Balonne River	19/05/1988																7.7	OK	135			
422202B	Dogwood_Ck_Gilweir	Balonne River	24/01/1994																2.6	OK	135			
422202B	Dogwood_Ck_Gilweir	Balonne River	29/11/1994																2.89	OK	130	0	ND	130
422202B	Dogwood_Ck_Gilweir	Balonne River	16/02/1995													0.1695	OK	130	1.04	OK	130	0	ND	130
422202B	Dogwood_Ck_Gilweir	Balonne River	19/02/1995													0.122	OK	130	1.71	OK	130	0	ND	130
422202B	Dogwood_Ck_Gilweir	Balonne River	11/04/1995													0.2842	OK	130	4.81	OK	130	0.1	OK	130
422202B	Dogwood_Ck_Gilweir	Balonne River	31/07/1995										6.5	OK	130	0.0661	OK	130	0.8	OK	130	0	ND	130
422202B	Dogwood_Ck_Gilweir	Balonne River	6/11/1995										7.2	OK	130	0.115	OK	130	0	ND	130	0	ND	130
422202B	Dogwood_Ck_Gilweir	Balonne River	20/02/1996										6.3	OK	130	0.1383	OK	130	1.65	OK	130	0	ND	130
422202B	Dogwood_Ck_Gilweir	Balonne River	20/06/1996										1.7	OK	130			2.35	OK	130	0	ND	130	
422202B	Dogwood_Ck_Gilweir	Balonne River	8/10/1996										2.5	OK	130	0.0836	OK	130	1.4	OK	130	0.1	OK	130
422202B	Dogwood_Ck_Gilweir	Balonne River	17/02/1997										6.7	OK	130	0.2286	OK	130	6.3	OK	130	0	ND	130
422202B	Dogwood_Ck_Gilweir	Balonne River	17/06/1997										2.4	OK	130	0.1021	OK	130	2.11	OK	130	0	ND	130
422202B	Dogwood_Ck_Gilweir	Balonne River	15/10/1997										4.2	OK	130	0.1495	OK	130	1.63	OK	130	0	ND	130
422202B	Dogwood_Ck_Gilweir	Balonne River	16/03/1998										5.2	OK	130	0.1145	OK	130	1.32	OK	130	0	ND	130
422202B	Dogwood_Ck_Gilweir	Balonne River	10/08/1998				1.3744	OK	130				8.5	OK	130	0.1567	OK	130	1.88	OK	130	0	ND	130
422202B	Dogwood_Ck_Gilweir	Balonne River	11/01/1999				1.6	OK	130							0.13	OK	130						
422202B	Dogwood_Ck_Gilweir	Balonne River	28/01/1999				0.9903	OK	130				0.9	OK	130	0.1219	OK	130	0.76	OK	130	0	ND	130
422202B	Dogwood_Ck_Gilweir	Balonne River	12/04/1999	0.006	OK	130				0.031	OK	130												
422202B	Dogwood_Ck_Gilweir	Balonne River	19/04/1999				0.98	OK	130							0.09	OK	130						
422202B	Dogwood_Ck_Gilweir	Balonne River	20/04/1999				1.2354	OK	130				2.2	OK	130	0.1403	OK	130	1.07	OK	130	0	ND	130
422202B	Dogwood_Ck_Gilweir	Balonne River	12/07/1999	0.11	OK	130	1.3	OK	130															
422202B	Dogwood_Ck_Gilweir	Balonne River	19/08/1999				1.3756	OK	130				5.2	OK	130	0.1746	OK	130	1.73	OK	130	0	ND	130
422202B	Dogwood_Ck_Gilweir	Balonne River	16/12/1999				1.23	OK	130				14.1	OK	130	0.098	OK	130	4.95	OK	130	0	ND	130
422202B	Dogwood_Ck_Gilweir	Balonne River	14/04/2000				1.1006	OK	130				2.4	OK	130	0.0922	OK	130	0.97	OK	130	0	ND	130
422202B	Dogwood_Ck_Gilweir	Balonne River	4/09/2000				1.2549	OK	130				9	OK	130	0.0711	OK	130	2.4	OK	130	0.1	OK	130
422202B	Dogwood_Ck_Gilweir	Balonne River	1/05/2001				1.2587	OK	130				8.3	OK	130	0.1118	OK	130	0.6	OK	130	0.05	OK	130
422202B	Dogwood_Ck_Gilweir	Balonne River	1/10/2001				2.1297	OK	130				4.7	OK	130	0.2876	OK	130	2.98	OK	130	0.13	OK	130
422202B	Dogwood_Ck_Gilweir	Balonne River	3/02/2002				1.678	OK	130				6.2	OK	130	0.1606	OK	130	2.06	OK	130	0.03	OK	130
422202B	Dogwood_Ck_Gilweir	Balonne River	29/07/2002				0.8689	OK	130				5.9	OK	130	0.054	OK	130	7.28	OK	130	0.03	OK	130
422202B	Dogwood_Ck_Gilweir	Balonne River	12/03/2004				1.4	OK	130				2.9	OK	130	0.19	OK	130	2	<	130	0.1	<	130
422202B	Dogwood_Ck_Gilweir	Balonne River	27/02/2005				1.3	OK	130				5.6	OK	130	0.2	OK	130	8	<	130	0.1	<	130
422202B	Dogwood_Ck_Gilweir	Balonne River	24/10/2005										5.5	OK	130			2.6	OK	130	0.07	OK	130	
422202B	Dogwood_Ck_Gilweir	Balonne River	14/02/2006				1.081	OK	10				1.2	OK	130	0.134	OK	10	3	OK	10	0.04	OK	10
422202B	Dogwood_Ck_Gilweir	Balonne River	11/02/2008				1.1084	OK	10							0.1333	OK	10	1.4	OK	10	0.04	OK	10
422202B	Dogwood_Ck_Gilweir	Balonne River	27/10/2008				1.53	OK	10				6.7	OK	130	0.233	OK	10	3.9	OK	10	0.06	OK	10
4223005	CONDAMINE AT MCLEANS	Condamine River	17/03/2001	0.4481	OK	130	1.1556	OK	130	0.0086	OK	130				0.3858	OK	130	3.28	OK	130	0.02	OK	130
4223005	CONDAMINE AT MCLEANS	Condamine River	9/11/2001	0.0036	OK	130	0.944	OK	130	0.0166	OK	130				0.0913	OK	130	4.08	OK	130	0.05	OK	130
4223006	CHINCHILLA WEIR	Condamine River	16/03/2001	0.0017	OK	130	0.9165	OK	130	0.0082	OK	130				0.5275	OK	130	2.89	OK	130	0.05	OK	130
4223006	CHINCHILLA WEIR	Condamine River	8/11/2001	0.001	OK	130	0.8227	OK	130	0.003	OK	130				0.1034	OK	130	2.67	OK	130	0.06	OK	130
4223030	CECIL PL DALBY RD	Oakey Creek	29/08/2006																322	OK	10	2.8	OK	10
4223031	Oakey_Ck_Oakey	Oakey Creek	26/08/2006																7.1	OK	10	0.09	OK	10
4223049	CONDAMINE R BEMARNG	Condamine River	4/02/1969																					
4223049	CONDAMINE R BEMARNG	Condamine River	1/09/1971																3	OK	125			
4223049	CONDAMINE R BEMARNG	Condamine River	18/11/1971																					
4223049	CONDAMINE R BEMARNG	Condamine River	20/03/1973																1	OK	125			
4223050	CONDAMINE R TIPTONS	Condamine River	18/06/1963																10	OK	125			
4223050	CONDAMINE R TIPTONS	Condamine River	25/09/1963																10	OK	125			
4223050	CONDAMINE R TIPTONS	Condamine River	28/04/1964																8	OK	125			
4223050	CONDAMINE R TIPTONS	Condamine River	8/12/1964																					
4223050	CONDAMINE R TIPTONS	Condamine River	14/09/1965																9	OK	125			
4223050	CONDAMINE R TIPTONS	Condamine River	21/10/1965																5	OK	125			
4223050	CONDAMINE R TIPTONS	Condamine River	29/08/2006																7.3	OK	10	0.06	OK	10
4223051	CONDAMINE R KAREE	Condamine River	17/03/1971																					
4223051	CONDAMINE R KAREE	Condamine River	20/07/1971																1	OK	125			
4223051	CONDAMINE R KAREE	Condamine River	30/08/1971																2	OK	125			
4223051	CONDAMINE R KAREE	Condamine River	21/10/1971																					
4223051	CONDAMINE R KAREE	Condamine River	18/11/1971																					
4223051	CONDAMINE R KAREE	Condamine River	14/03/1972																					

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				Nitrate + nitrite as N - soluble (mg/L)	Total Nitrogen (mg/L)	Ammonia as N - soluble (mg/L)	Oxygen (Dissolved) (mg/L)FLD	Total Phosphorus as P (mg/L)	Sulphate as SO4 (mg/L)	Boron as B (mg/L)															
4223051	CONDAMINE R. KAREE	Condamine River	21/03/1973													2	OK	125							
4223068	LAKE BROADWATER DIWF	Condamine River	7/08/1996													0	ND	130	0	ND	130	0	ND	130	
4223068	LAKE BROADWATER DIWF	Condamine River	27/02/1997													0.0706	OK	130	0	ND	130	0	ND	130	
4223068	LAKE BROADWATER DIWF	Condamine River	20/05/1997													0.0297	OK	130	0	ND	130	0	ND	130	
4223068	LAKE BROADWATER DIWF	Condamine River	5/09/1997													0.072	OK	130	0	ND	130	0	ND	130	
4223068	LAKE BROADWATER DIWF	Condamine River	21/11/1997													0.1689	OK	130	0.36	OK	130	0.1	OK	130	
4223068	LAKE BROADWATER DIWF	Condamine River	17/02/1998													0.182	OK	130	0.7	OK	130	0.1	OK	130	
4223068	LAKE BROADWATER DIWF	Condamine River	29/05/1998	3.2825	OK	130										0.396	OK	130	1.39	OK	130	0.1	OK	130	
4223069	SPRINGVALE BR DIWF	Condamine River	9/08/1996																6.08	OK	130	0	ND	130	
4223069	SPRINGVALE BR DIWF	Condamine River	29/11/1996													0.1722	OK	130	4.26	OK	130	0	ND	130	
4223069	SPRINGVALE BR DIWF	Condamine River	25/02/1997													0.6408	OK	130	3.15	OK	130	0	ND	130	
4223069	SPRINGVALE BR DIWF	Condamine River	21/05/1997													0.1554	OK	130	2.5	OK	130	0	ND	130	
4223069	SPRINGVALE BR DIWF	Condamine River	16/09/1997													0.0768	OK	130	71.72	OK	130	0.9	OK	130	
4223069	SPRINGVALE BR DIWF	Condamine River	19/11/1997													0.2663	OK	130	3.08	OK	130	0	ND	130	
4223069	SPRINGVALE BR DIWF	Condamine River	19/02/1998													0.1411	OK	130	2.62	OK	130	0	ND	130	
4223069	SPRINGVALE BR DIWF	Condamine River	27/05/1998	0.7807	OK	130										0.3681	OK	130	1.2	OK	130	0	ND	130	
4223073	BOWENVILLE Rd	Condamine River	26/05/1997										7.8	OK	130				0.58	OK	130	0.1	OK	130	
4223073	BOWENVILLE Rd	Condamine River	1/09/2006																1	<	10	0.08	OK	10	
4223074	W. BROOK CK WYREMA RD	Oakey Creek	18/05/1998										8.1	OK	130										
4223074	W. BROOK CK WYREMA RD	Oakey Creek	21/11/1998	3.3215	OK	130							12.5	OK	130	0.0554	OK	130	10.06	OK	130	0.1	OK	130	
4223076	WEST CK ALDERLY ST	Oakey Creek	22/05/1998	0.5525	OK	130							7.1	OK	130	0.0517	OK	130	4.1	OK	130	0	ND	130	
4223076	WEST CK ALDERLY ST	Oakey Creek	13/06/1998	0.7238	OK	130										0.0371	OK	130	1.62	OK	130	0	ND	130	
4223076	WEST CK ALDERLY ST	Oakey Creek	26/09/1998	0.4382	OK	130										0.0282	OK	130	1.52	OK	130	0	ND	130	
4223076	WEST CK ALDERLY ST	Oakey Creek	3/11/1998	0.5466	OK	130							4.5	OK	130	0.0541	OK	130	2.27	OK	130	0	ND	130	
4223076	WEST CK ALDERLY ST	Oakey Creek	5/12/1998	0.5267	OK	130										0.0524	OK	130	1.13	OK	130	0	ND	130	
4223076	WEST CK ALDERLY ST	Oakey Creek	17/03/1999	1.5646	OK	130										0.277	OK	130	1.07	OK	130	0.1	OK	130	
4223078	EAST CREEK	Oakey Creek	22/05/1998	0.7173	OK	130							8.5	OK	130	0.0284	OK	130	2.18	OK	130	0	ND	130	
4223078	EAST CREEK	Oakey Creek	3/11/1998	0.052	OK	130							6.6	OK	130	0.035	OK	130	1.74	OK	130	0	ND	130	
4223079	GOWRIE CK WILLIMS RD	Oakey Creek	18/05/1998										7.3	OK	130										
4223079	GOWRIE CK WILLIMS RD	Oakey Creek	2/11/1998	13.3479	OK	130							7.2	OK	130										
4223080	SPRING CREEK	Oakey Creek	18/05/1998										8	OK	130										
4223080	SPRING CREEK	Oakey Creek	3/11/1998	0.8456	OK	130							8	OK	130	0.12	OK	130	4.25	OK	130	0	ND	130	
422308B	Chinchilla	Condamine River	28/08/2006																9.9	OK	10	0.07	OK	10	
422308C	Condamine Chinchilla	Condamine River	22/11/1962																9	OK	125				
422308C	Condamine Chinchilla	Condamine River	12/03/1963																						
422308C	Condamine Chinchilla	Condamine River	24/09/1963																3	OK	125				
422308C	Condamine Chinchilla	Condamine River	28/04/1964																5	OK	125				
422308C	Condamine Chinchilla	Condamine River	16/12/1964																2	OK	125				
422308C	Condamine Chinchilla	Condamine River	13/09/1965																16	OK	125				
422308C	Condamine Chinchilla	Condamine River	3/02/1966																8	OK	125				
422308C	Condamine Chinchilla	Condamine River	15/04/1966																11	OK	125				
422308C	Condamine Chinchilla	Condamine River	29/06/1966																						
422308C	Condamine Chinchilla	Condamine River	22/07/1966																						
422308C	Condamine Chinchilla	Condamine River	14/05/1968																						
422308C	Condamine Chinchilla	Condamine River	17/09/1968																						
422308C	Condamine Chinchilla	Condamine River	19/03/1971																4	OK	125				
422308C	Condamine Chinchilla	Condamine River	4/10/1971																						
422308C	Condamine Chinchilla	Condamine River	17/01/1972																						
422308C	Condamine Chinchilla	Condamine River	7/02/1972																						
422308C	Condamine Chinchilla	Condamine River	26/06/1972																						
422308C	Condamine Chinchilla	Condamine River	1/12/1972																						
422308C	Condamine Chinchilla	Condamine River	8/01/1973																						
422308C	Condamine Chinchilla	Condamine River	5/02/1973																						
422308C	Condamine Chinchilla	Condamine River	9/04/1973																0.6	OK	125	0.03	OK	135	
422308C	Condamine Chinchilla	Condamine River	6/07/1973																			0.06	OK	135	
422308C	Condamine Chinchilla	Condamine River	1/10/1973																						
422308C	Condamine Chinchilla	Condamine River	18/02/1974																						
422308C	Condamine Chinchilla	Condamine River	5/03/1974																						
422308C	Condamine Chinchilla	Condamine River	13/05/1974																3.2	OK	135				
422308C	Condamine Chinchilla	Condamine River	8/10/1974																						
422308C	Condamine Chinchilla	Condamine River	23/10/1974																						
422308C	Condamine Chinchilla	Condamine River	7/01/1975																						
422308C	Condamine Chinchilla	Condamine River	20/01/1975																						
422308C	Condamine Chinchilla	Condamine River	15/07/1975																						
422308C	Condamine Chinchilla	Condamine River	13/10/1975																						
422308C	Condamine Chinchilla	Condamine River	18/05/1976																						

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				Nitrate + nitrite as N - soluble (mg/L)			Total Nitrogen (mg/L)			Ammonia as N - soluble (mg/L)			Oxygen (Dissolved) (mg/L)/LD			Total Phosphorus as P (mg/L)			Sulphate as SO4 (mg/L)			Boron as B (mg/L)			
422308C	Condamine Chinchilla	Condamine River	14/03/1978																						
422308C	Condamine Chinchilla	Condamine River	22/05/1978																	9	OK	125			
422308C	Condamine Chinchilla	Condamine River	18/07/1979																						
422308C	Condamine Chinchilla	Condamine River	13/02/1980																	3	OK	125			
422308C	Condamine Chinchilla	Condamine River	28/04/1980																	5	OK	125			
422308C	Condamine Chinchilla	Condamine River	22/07/1980																	6	OK	125			
422308C	Condamine Chinchilla	Condamine River	6/10/1980																	8	OK	125			
422308C	Condamine Chinchilla	Condamine River	21/02/1981																	5	OK	125			
422308C	Condamine Chinchilla	Condamine River	18/05/1981																	9	OK	125			
422308C	Condamine Chinchilla	Condamine River	10/08/1981																	12	OK	125			
422308C	Condamine Chinchilla	Condamine River	2/11/1981																	8	OK	125			
422308C	Condamine Chinchilla	Condamine River	17/12/1981																	4	OK	125			
422308C	Condamine Chinchilla	Condamine River	4/02/1982																	8	OK	125			
422308C	Condamine Chinchilla	Condamine River	5/05/1982																	4.5	OK	125			
422308C	Condamine Chinchilla	Condamine River	25/05/1982																						
422308C	Condamine Chinchilla	Condamine River	2/08/1982																	7	OK	125	0.05	OK	135
422308C	Condamine Chinchilla	Condamine River	12/10/1982																	9.5	OK	125			
422308C	Condamine Chinchilla	Condamine River	17/01/1983																	6.9	OK	135			
422308C	Condamine Chinchilla	Condamine River	5/04/1983																	8.8	OK	125	0.04	OK	135
422308C	Condamine Chinchilla	Condamine River	25/07/1983																	7	OK	125	0.03	OK	135
422308C	Condamine Chinchilla	Condamine River	8/11/1983																	7.8	OK	125			
422308C	Condamine Chinchilla	Condamine River	31/01/1984																	4	OK	125			
422308C	Condamine Chinchilla	Condamine River	10/05/1984																	4.8	OK	125	0.02	OK	135
422308C	Condamine Chinchilla	Condamine River	29/08/1984																	8.9	OK	125	0.02	OK	135
422308C	Condamine Chinchilla	Condamine River	28/11/1984																	2.3	OK	125	0.05	OK	135
422308C	Condamine Chinchilla	Condamine River	5/03/1985																						
422308C	Condamine Chinchilla	Condamine River	16/05/1985																						
422308C	Condamine Chinchilla	Condamine River	31/07/1985																	7.8	OK	125	0.03	OK	135
422308C	Condamine Chinchilla	Condamine River	29/11/1985																	4.2	OK	125	0.03	OK	135
422308C	Condamine Chinchilla	Condamine River	4/02/1986																						
422308C	Condamine Chinchilla	Condamine River	26/05/1986																						
422308C	Condamine Chinchilla	Condamine River	5/09/1986																	5.6	OK	125			
422308C	Condamine Chinchilla	Condamine River	18/11/1986																						
422308C	Condamine Chinchilla	Condamine River	27/05/1987																	3.2	OK	125	0.05	OK	135
422308C	Condamine Chinchilla	Condamine River	4/08/1987																	4	OK	125	0.05	OK	135
422308C	Condamine Chinchilla	Condamine River	3/02/1988																	3.8	OK	125	0.02	OK	135
422308C	Condamine Chinchilla	Condamine River	18/05/1988																	4.4	OK	125			
422308C	Condamine Chinchilla	Condamine River	10/08/1988																	5.9	OK	125	0.01	OK	135
422308C	Condamine Chinchilla	Condamine River	16/11/1988																	6.1	OK	125	0.03	OK	135
422308C	Condamine Chinchilla	Condamine River	15/02/1989																	5.4	OK	125	0.04	OK	135
422308C	Condamine Chinchilla	Condamine River	30/05/1989																						
422308C	Condamine Chinchilla	Condamine River	25/09/1989																	8.8	OK	125	0.05	OK	135
422308C	Condamine Chinchilla	Condamine River	8/01/1990																						
422308C	Condamine Chinchilla	Condamine River	13/02/1990																						
422308C	Condamine Chinchilla	Condamine River	16/03/1990																						
422308C	Condamine Chinchilla	Condamine River	16/09/1990																	9.8	OK	125	0.05	OK	135
422308C	Condamine Chinchilla	Condamine River	8/05/1991																	4.9	OK	125	0.05	OK	135
422308C	Condamine Chinchilla	Condamine River	7/01/1992																						
422308C	Condamine Chinchilla	Condamine River	11/01/1993																	6.3	OK	125			
422308C	Condamine Chinchilla	Condamine River	24/01/1994																						
422308C	Condamine Chinchilla	Condamine River	19/05/1994																	2.8	OK	125			
422308C	Condamine Chinchilla	Condamine River	30/07/1994							9.3	OK	130								2.8	OK	125			
422308C	Condamine Chinchilla	Condamine River	11/04/1995							6.7	OK	130	0.0944	OK	130	1.17	OK	130	0	ND	130				
422308C	Condamine Chinchilla	Condamine River	5/05/1995							6.7	OK	130	0.2499	OK	130	3.66	OK	130	0.1	OK	130				
422308C	Condamine Chinchilla	Condamine River	25/07/1995																						
422308C	Condamine Chinchilla	Condamine River	31/07/1995							10.5	OK	130	0.1432	OK	130	10.2	OK	130	0.1	OK	130				
422308C	Condamine Chinchilla	Condamine River	14/08/1995																	4.1	OK	130	0.1	OK	130
422308C	Condamine Chinchilla	Condamine River	27/09/1995																	3.3	OK	130	0.1	OK	130
422308C	Condamine Chinchilla	Condamine River	4/10/1995							13.4	OK	130	0.0525	OK	130	2.75	OK	130	0.1	OK	130				
422308C	Condamine Chinchilla	Condamine River	6/11/1995							6.5	OK	130	0.0678	OK	130	3.9	OK	130	0	ND	130				
422308C	Condamine Chinchilla	Condamine River	20/02/1996							7.1	OK	130	0.14	OK	130	4.3	OK	130	0.1	<	130				
422308C	Condamine Chinchilla	Condamine River	19/06/1996							9.6	OK	130	0.1613	OK	130	6.61	OK	130	0	ND	130				
422308C	Condamine Chinchilla	Condamine River	29/08/1996							9.8	OK	130	0.0552	OK	130	11.86	OK	130	0.1	OK	130				
422308C	Condamine Chinchilla	Condamine River	7/10/1996							8.3	OK	130	0.0514	OK	130	13.5	OK	130	0.1	OK	130				
422308C	Condamine Chinchilla	Condamine River	18/11/1996							9.5	OK	130	0.0972	OK	130	11.43	OK	130	0.1	OK	130				
422308C	Condamine Chinchilla	Condamine River	13/03/1997							7.1	OK	130	0.5221	OK	130	2.9	OK	130	0.1	OK	130				
422308C	Condamine Chinchilla	Condamine River	16/06/1997																						
422308C	Condamine Chinchilla	Condamine River	26/06/1997																	4.392	OK	130	13.77	OK	130
422308C	Condamine Chinchilla	Condamine River	15/10/1997							4.2	OK	130	0.3959	OK	130	7.93	OK	130	0	ND	130				
422308C	Condamine Chinchilla	Condamine River	16/03/1998																						
422308C	Condamine Chinchilla	Condamine River	16/03/1998							5.4	OK	130	0.4744	OK	130	6.93	OK	130	0.1	OK	130				

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Station	Station Name	Receiving Creek/ River	Date	V2343.00	F2343.00	Q2343.00	V2337.00	F2337.00	Q2337.00	V2345.00	F2345.00	Q2345.00	V2351.50	F2351.50	Q2351.50	V2363.00	F2363.00	Q2363.00	V2401.00	F2401.00	Q2401.00	V2551.00	F2551.00	Q2551.00
				Nitrate + nitrite as N - soluble (mg/L)			Total Nitrogen (mg/L)			Ammonia as N - soluble (mg/L)			Oxygen (Dissolved) (mg/L)FLD			Total Phosphorus as P (mg/L)			Sulphate as SO4 (mg/L)			Boron as B (mg/L)		
422308C	Condamine Chinchilla	Condamine River	4/06/1998				1.524	OK	130				7	OK	130	0.6668	OK	130	5.02	OK	130	0.1	OK	130
422308C	Condamine Chinchilla	Condamine River	10/08/1998				2.1211	OK	130				8.2	OK	130	0.5828	OK	130	15.07	OK	130	0.3	OK	130
422308C	Condamine Chinchilla	Condamine River	21/10/1998																					
422308C	Condamine Chinchilla	Condamine River	19/11/1998				1.2676	OK	130				4.1	OK	130	0.5217	OK	130	4.14	OK	130	0	ND	130
422308C	Condamine Chinchilla	Condamine River	27/01/1999				1.2799	OK	130				5.1	OK	130	0.5956	OK	130	3.59	OK	130	0.1	OK	130
422308C	Condamine Chinchilla	Condamine River	27/01/1999																					
422308C	Condamine Chinchilla	Condamine River	19/04/1999				1.085	OK	130							0.3698	OK	130	3.9	OK	130	0	ND	130
422308C	Condamine Chinchilla	Condamine River	24/05/1999				0.8136	OK	130				7.5	OK	130	0.2354	OK	130	4.73	OK	130	0.1	OK	130
422308C	Condamine Chinchilla	Condamine River	20/08/1999				0.6915	OK	130				9.2	OK	130	0.0906	OK	130	12.04	OK	130	0.2	OK	130
422308C	Condamine Chinchilla	Condamine River	27/09/1999				0.7571	OK	130							0.1512	OK	130	9.95	OK	130	0.1	OK	130
422308C	Condamine Chinchilla	Condamine River	16/12/1999				1.422	OK	130				12.2	OK	130	0.5039	OK	130	4.1	OK	130	0	ND	130
422308C	Condamine Chinchilla	Condamine River	3/04/2000				0.9055	OK	130				10.2	OK	130	0.3079	OK	130	3.68	OK	130	0	ND	130
422308C	Condamine Chinchilla	Condamine River	15/08/2000										6.5	OK	130				6.2	OK	130	0	ND	130
422308C	Condamine Chinchilla	Condamine River	21/09/2000				0.8312	OK	130				6.5	OK	130	0.1534	OK	130	4.52	OK	130	0	ND	130
422308C	Condamine Chinchilla	Condamine River	9/11/2000				0.6712	OK	130				7.2	OK	130	0.4074	OK	130	10.1	OK	130	0	ND	130
422308C	Condamine Chinchilla	Condamine River	12/12/2000				0.7905	OK	130				7.4	OK	130	0.596	OK	130	11	OK	130	0.04	OK	130
422308C	Condamine Chinchilla	Condamine River	25/01/2001				1.3717	OK	130							0.1933	OK	130						
422308C	Condamine Chinchilla	Condamine River	8/02/2001				1.935	OK	130							0.6326	OK	130						
422308C	Condamine Chinchilla	Condamine River	20/03/2001				1.0476	OK	130							0.6773	OK	130						
422308C	Condamine Chinchilla	Condamine River	1/05/2001				1.4185	OK	130				6.5	OK	130	0.4902	OK	130	2.31	OK	130	0.07	OK	130
422308C	Condamine Chinchilla	Condamine River	20/06/2001				0.6828	OK	130				3.5	OK	130	0.2419	OK	130						
422308C	Condamine Chinchilla	Condamine River	1/10/2001				0.6741	OK	130				5.3	OK	130	0.2884	OK	130	10.1	OK	130	0.07	OK	130
422308C	Condamine Chinchilla	Condamine River	25/02/2002				1.061	OK	130				4.8	OK	130	0.3631	OK	130	3.08	OK	130	0.14	OK	130
422308C	Condamine Chinchilla	Condamine River	29/07/2002				0.661	OK	130				8.4	OK	130	0.4122	OK	130	10.65	OK	130	0.05	OK	130
422308C	Condamine Chinchilla	Condamine River	10/03/2003																					
422308C	Condamine Chinchilla	Condamine River	10/03/2003				1.8325	OK	130				2.1	OK	130	0.4893	OK	130	4.1	OK	130	0.03	OK	130
422308C	Condamine Chinchilla	Condamine River	9/12/2003				1.7	OK	130				7.6	OK	130	0.78	OK	130	2.3	OK	130	0	>	130
422308C	Condamine Chinchilla	Condamine River	12/03/2004				1.2	OK	130				5.4	OK	130	0.6	OK	130	3	<	130	0.1	<	130
422308C	Condamine Chinchilla	Condamine River	5/12/2005																					
422308C	Condamine Chinchilla	Condamine River	5/12/2005				2.05	OK	10							0.786	OK	10						
422308C	Condamine Chinchilla	Condamine River	6/12/2005				1.43	OK	10							0.477	OK	10						
422308C	Condamine Chinchilla	Condamine River	6/12/2005	0.416	OK	10				0.0108	OK	10												
422308C	Condamine Chinchilla	Condamine River	22/12/2005				1.187	OK	10				4.6	OK	130	0.437	OK	10	2.2	OK	130	0.09	OK	130
422308C	Condamine Chinchilla	Condamine River	14/03/2006				1.1734	OK	130				9	OK	130	0.5607	OK	130	3.5	OK	130	0.08	OK	130
422308C	Condamine Chinchilla	Condamine River	29/11/2007				2.0884	OK	10				8.4	OK	130	0.8578	OK	10	1.6	OK	10	0.08	OK	10
422308C	Condamine Chinchilla	Condamine River	6/12/2007				1.3117	OK	10							0.6176	OK	10	1.7	OK	10	0.08	OK	10
422308C	Condamine Chinchilla	Condamine River	8/12/2007										5.1	OK	130									
422308C	Condamine Chinchilla	Condamine River	30/05/2008				1.63	OK	10				5.8	OK	130	0.752	OK	10	3.6	OK	10	0.05	OK	10
422312A	Cooby Ck Dam	Oakey Creek	26/06/1997	0.053	OK	130				0.024	OK	130				0.022	OK	130	7.12	OK	130			
422312A	Cooby Ck Dam	Oakey Creek	12/01/1999	23	OK	130				0	OK	130												
422312A	Cooby Ck Dam	Oakey Creek	14/01/1999				0.77	OK	130							0.05	OK	130						
422312A	Cooby Ck Dam	Oakey Creek	12/04/1999																					
422312A	Cooby Ck Dam	Oakey Creek	12/04/1999	0.002	OK	130				0.002	OK	130												
422312A	Cooby Ck Dam	Oakey Creek	19/07/1999																					
422312A	Cooby Ck Dam	Oakey Creek	19/07/1999	0.0637	OK	130	0.5191	OK	130	0.0435	OK	130				0.0121	OK	130						
422330B	Oakey Ck Oakey	Oakey Creek	29/01/1980																4	OK	125			
422330B	Oakey Ck Oakey	Oakey Creek	29/01/1980																					
422331A	W_brook Ck Arcadia	Oakey Creek	16/03/1971																7	OK	125			
422331A	W_brook Ck Arcadia	Oakey Creek	30/08/1971																8	OK	125			
422331A	W_brook Ck Arcadia	Oakey Creek	26/01/1973																					
422331A	W_brook Ck Arcadia	Oakey Creek	24/07/1973																			0.08	OK	135
422331A	W_brook Ck Arcadia	Oakey Creek	24/07/1973																					
422331A	W_brook Ck Arcadia	Oakey Creek	13/10/1975																11	OK	125			
422331A	W_brook Ck Arcadia	Oakey Creek	8/12/1975																					
422331A	W_brook Ck Arcadia	Oakey Creek	25/02/1976																					
422331A	W_brook Ck Arcadia	Oakey Creek	25/02/1976																					
422331A	W_brook Ck Arcadia	Oakey Creek	23/08/1976																20	OK	125			
422331A	W_brook Ck Arcadia	Oakey Creek	23/01/1978																15	OK	125			
422331A	W_brook Ck Arcadia	Oakey Creek	9/10/1978																12	OK	125			
422331A	W_brook Ck Arcadia	Oakey Creek	9/07/1979																20	OK	125			
422331A	W_brook Ck Arcadia	Oakey Creek	9/07/1979																					
422331A	W_brook Ck Arcadia	Oakey Creek	10/09/1979																19	OK	125			
422331A	W_brook Ck Arcadia	Oakey Creek	10/09/1979																					
422331A	W_brook Ck Arcadia	Oakey Creek	29/01/1980																					
422331A	W_brook Ck Arcadia	Oakey Creek	29/01/1980																					
422331A	W_brook Ck Arcadia	Oakey Creek	1/07/1980																5	OK	125			
422331A	W_brook Ck Arcadia	Oakey Creek	1/07/1980																					
422331A	W_brook Ck Arcadia	Oakey Creek	3/06/1997										9.6	OK	130	0.0178	OK	130	16.52	OK	130	0	ND	130
422331A	W_brook Ck Arcadia	Oakey Creek	28/11/1997													0.0995	OK	130	16.14	OK	130	0	ND	130
422332B	Gowrie Ck Oakey	Oakey Creek	17/07/1992																70.3	OK	125	0.1	OK	135
422332B	Gowrie Ck Oakey	Oakey Creek	17/07/1992																66.1	OK	125	0.1	OK	135

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Station	Station Name	Receiving Creek/ River	Date	V2343.00	F2343.00	Q2343.00	V2337.00	F2337.00	Q2337.00	V2345.00	F2345.00	Q2345.00	V2351.50	F2351.50	Q2351.50	V2363.00	F2363.00	Q2363.00	V2401.00	F2401.00	Q2401.00	V2551.00	F2551.00	Q2551.00	
				Nitrate + nitrite as N - soluble (mg/L)			Total Nitrogen (mg/L)			Ammonia as N - soluble (mg/L)			Oxygen (Dissolved) (mg/L)FLD			Total Phosphorus as P (mg/L)			Sulphate as SO4 (mg/L)			Boron as B (mg/L)			
422332B	Gowrie Ck Oakey	Oakey Creek	17/07/1992																						
422332B	Gowrie Ck Oakey	Oakey Creek	12/10/1992																67.7	OK	125	0.1	OK	135	
422332B	Gowrie Ck Oakey	Oakey Creek	12/10/1992																						
422332B	Gowrie Ck Oakey	Oakey Creek	29/10/1992																12.6	OK	125				
422332B	Gowrie Ck Oakey	Oakey Creek	2/02/1993																98	OK	125	0.2	OK	135	
422332B	Gowrie Ck Oakey	Oakey Creek	2/02/1993																						
422332B	Gowrie Ck Oakey	Oakey Creek	20/01/1994																						
422332B	Gowrie Ck Oakey	Oakey Creek	18/02/1994																86.3	OK	125	0.1	OK	135	
422332B	Gowrie Ck Oakey	Oakey Creek	18/02/1994																99.2	OK	125	0.2	OK	135	
422332B	Gowrie Ck Oakey	Oakey Creek	18/02/1994																82.3	OK	125	0.1	OK	135	
422332B	Gowrie Ck Oakey	Oakey Creek	18/02/1994																26.2	OK	125	0.1	OK	135	
422332B	Gowrie Ck Oakey	Oakey Creek	18/02/1994																20.9	OK	125				
422332B	Gowrie Ck Oakey	Oakey Creek	18/02/1994																16.7	OK	125				
422332B	Gowrie Ck Oakey	Oakey Creek	18/02/1994																16.5	OK	125				
422332B	Gowrie Ck Oakey	Oakey Creek	18/02/1994																15.7	OK	125				
422332B	Gowrie Ck Oakey	Oakey Creek	18/02/1994																15.5	OK	125				
422332B	Gowrie Ck Oakey	Oakey Creek	18/02/1994																49.6	OK	125	0.1	OK	135	
422332B	Gowrie Ck Oakey	Oakey Creek	19/02/1994																16.1	OK	125				
422332B	Gowrie Ck Oakey	Oakey Creek	19/02/1994																16	OK	125				
422332B	Gowrie Ck Oakey	Oakey Creek	19/02/1994																16.4	OK	125				
422332B	Gowrie Ck Oakey	Oakey Creek	28/02/1994																80.9	OK	125	0.1	OK	135	
422332B	Gowrie Ck Oakey	Oakey Creek	1/03/1994																79.4	OK	125	0.1	OK	135	
422332B	Gowrie Ck Oakey	Oakey Creek	1/03/1994																83.6	OK	125	0.1	OK	135	
422332B	Gowrie Ck Oakey	Oakey Creek	1/03/1994																34.3	OK	125	0.1	OK	135	
422332B	Gowrie Ck Oakey	Oakey Creek	1/03/1994																14.7	OK	125				
422332B	Gowrie Ck Oakey	Oakey Creek	1/03/1994																11	OK	125				
422332B	Gowrie Ck Oakey	Oakey Creek	1/03/1994																10.5	OK	125				
422332B	Gowrie Ck Oakey	Oakey Creek	1/03/1994																10	OK	125				
422332B	Gowrie Ck Oakey	Oakey Creek	1/03/1994																10.8	OK	125				
422332B	Gowrie Ck Oakey	Oakey Creek	1/03/1994																9.3	OK	125				
422332B	Gowrie Ck Oakey	Oakey Creek	1/03/1994																10.7	OK	125				
422332B	Gowrie Ck Oakey	Oakey Creek	1/03/1994																12	OK	125				
422332B	Gowrie Ck Oakey	Oakey Creek	1/03/1994																14.9	OK	125				
422332B	Gowrie Ck Oakey	Oakey Creek	1/03/1994																16.3	OK	125				
422332B	Gowrie Ck Oakey	Oakey Creek	1/03/1994																18.1	OK	125				
422332B	Gowrie Ck Oakey	Oakey Creek	1/03/1994																17.9	OK	125				
422332B	Gowrie Ck Oakey	Oakey Creek	6/04/1994																						
422332B	Gowrie Ck Oakey	Oakey Creek	13/07/1994																102	OK	125	0.2	OK	135	
422332B	Gowrie Ck Oakey	Oakey Creek	13/07/1994																						
422332B	Gowrie Ck Oakey	Oakey Creek	22/11/1994																						
422332B	Gowrie Ck Oakey	Oakey Creek	8/12/1994																						
422332B	Gowrie Ck Oakey	Oakey Creek	8/12/1994	14.329	OK	130				7.29	OK	130				5.9551	OK	130	114.09	OK	130	2.2	OK	130	
422332B	Gowrie Ck Oakey	Oakey Creek	12/05/1995																						
422332B	Gowrie Ck Oakey	Oakey Creek	12/05/1995										6.3	OK	130				80.3	OK	130	1.5	OK	130	
422332B	Gowrie Ck Oakey	Oakey Creek	18/08/1995	7.071	OK	130				7.803	OK	130				3.01	OK	130	27.46	OK	130	0.5	OK	130	
422332B	Gowrie Ck Oakey	Oakey Creek	23/10/1995																7.8762	OK	130	54.6	OK	130	2
422332B	Gowrie Ck Oakey	Oakey Creek	23/10/1995																10.0314	OK	130	131.9	OK	130	2.5
422332B	Gowrie Ck Oakey	Oakey Creek	23/10/1995																11.7697	OK	130	128.1	OK	130	2.4
422332B	Gowrie Ck Oakey	Oakey Creek	23/10/1995																4.932	OK	130	43.5	OK	130	0.9
422332B	Gowrie Ck Oakey	Oakey Creek	23/10/1995																4.3848	OK	130	32.5	OK	130	0.7
422332B	Gowrie Ck Oakey	Oakey Creek	23/10/1995																3.149	OK	130	20.4	OK	130	0.5
422332B	Gowrie Ck Oakey	Oakey Creek	23/10/1995																3.0783	OK	130	21	OK	130	0.4
422332B	Gowrie Ck Oakey	Oakey Creek	23/10/1995																2.1179	OK	130	21.1	OK	130	0.4
422332B	Gowrie Ck Oakey	Oakey Creek	23/10/1995																2.2333	OK	130	20.9	OK	130	0.4
422332B	Gowrie Ck Oakey	Oakey Creek	23/10/1995																0.1715	OK	130	22.6	OK	130	0.4
422332B	Gowrie Ck Oakey	Oakey Creek	26/10/1995																						
422332B	Gowrie Ck Oakey	Oakey Creek	26/10/1995																85.1	OK	130	1.6	OK	130	
422332B	Gowrie Ck Oakey	Oakey Creek	26/10/1995																0.7444	OK	130	85.6	OK	130	1.6
422332B	Gowrie Ck Oakey	Oakey Creek	26/10/1995																0.1272	OK	130	52.5	OK	130	1
422332B	Gowrie Ck Oakey	Oakey Creek	27/10/1995																0.1472	OK	130	18.7	OK	130	0.4
422332B	Gowrie Ck Oakey	Oakey Creek	27/10/1995																5.18	OK	130	10.4	OK	130	0.2
422332B	Gowrie Ck Oakey	Oakey Creek	27/10/1995																2.0658	OK	130	11.3	OK	130	0.2
422332B	Gowrie Ck Oakey	Oakey Creek	27/10/1995																1.802	OK	130	14.2	OK	130	0.3
422332B	Gowrie Ck Oakey	Oakey Creek	30/10/1995																						
422332B	Gowrie Ck Oakey	Oakey Creek	30/10/1995																						
422332B	Gowrie Ck Oakey	Oakey Creek	6/11/1995																						
422332B	Gowrie Ck Oakey	Oakey Creek	20/11/1995																3.6264	OK	130	2.4	OK	130	0.6
422332B	Gowrie Ck Oakey	Oakey Creek	20/11/1995																3.4049	OK	130				
422332B	Gowrie Ck Oakey	Oakey Creek	20/11/1995																3.1002	OK	130	7	OK	130	0.1
422332B	Gowrie Ck Oakey	Oakey Creek	20/11/1995																3.613	OK	130	8	OK	130	0.1
422332B	Gowrie Ck Oakey	Oakey Creek	20/11/1995																3.2518	OK	130	8.8	OK	130	0.1
422332B	Gowrie Ck Oakey	Oakey Creek	20/11/1995																3.5877	OK	130	8.4	OK	130	0.1

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Station	Station Name	Receiving Creek/ River	Date	V2343.00	F2343.00	Q2343.00	V2337.00	F2337.00	Q2337.00	V2345.00	F2345.00	Q2345.00	V2351.50	F2351.50	Q2351.50	V2363.00	F2363.00	Q2363.00	V2401.00	F2401.00	Q2401.00	V2551.00	F2551.00	Q2551.00	
				Nitrate + nitrite as N - soluble (mg/L)			Total Nitrogen (mg/L)			Ammonia as N - soluble (mg/L)			Oxygen (Dissolved) (mg/L)FLD			Total Phosphorus as P (mg/L)			Sulphate as SO4 (mg/L)			Boron as B (mg/L)			
422332B	Gowrie Ck Oakey	Oakey Creek	21/11/1995																						
422332B	Gowrie Ck Oakey	Oakey Creek	28/11/1995																						
422332B	Gowrie Ck Oakey	Oakey Creek	12/12/1995																						
422332B	Gowrie Ck Oakey	Oakey Creek	13/12/1995																						
422332B	Gowrie Ck Oakey	Oakey Creek	6/02/1996										6.6	OK	130										
422332B	Gowrie Ck Oakey	Oakey Creek	1/05/1996												4.338	OK	130								
422332B	Gowrie Ck Oakey	Oakey Creek	2/05/1996												4.0709	OK	130								
422332B	Gowrie Ck Oakey	Oakey Creek	2/05/1996												6.6032	OK	130								
422332B	Gowrie Ck Oakey	Oakey Creek	2/05/1996												4.8132	OK	130								
422332B	Gowrie Ck Oakey	Oakey Creek	3/05/1996												8.1071	OK	130								
422332B	Gowrie Ck Oakey	Oakey Creek	3/05/1996																						
422332B	Gowrie Ck Oakey	Oakey Creek	3/05/1996												4.3415	OK	130								
422332B	Gowrie Ck Oakey	Oakey Creek	3/05/1996																						
422332B	Gowrie Ck Oakey	Oakey Creek	3/05/1996												3.1006	OK	130								
422332B	Gowrie Ck Oakey	Oakey Creek	3/05/1996												4.8364	OK	130								
422332B	Gowrie Ck Oakey	Oakey Creek	3/05/1996																						
422332B	Gowrie Ck Oakey	Oakey Creek	29/05/1996										8.6	OK	130	0.4916	OK	130	41.8	OK	130	0.5	OK	130	
422332B	Gowrie Ck Oakey	Oakey Creek	30/05/1996																						
422332B	Gowrie Ck Oakey	Oakey Creek	30/05/1996																						
422332B	Gowrie Ck Oakey	Oakey Creek	20/06/1996																						
422332B	Gowrie Ck Oakey	Oakey Creek	16/07/1996																						
422332B	Gowrie Ck Oakey	Oakey Creek	28/07/1996												6.3247	OK	130	79.52	OK	130	1.2	OK	130		
422332B	Gowrie Ck Oakey	Oakey Creek	28/07/1996												1.9195	OK	130	19.4	OK	130	0.3	OK	130		
422332B	Gowrie Ck Oakey	Oakey Creek	28/07/1996												3.788	OK	130	12.15	OK	130	0.2	OK	130		
422332B	Gowrie Ck Oakey	Oakey Creek	4/09/1996	6.177	OK	130				12.448	OK	130			3.4393	OK	130								
422332B	Gowrie Ck Oakey	Oakey Creek	4/09/1996																						
422332B	Gowrie Ck Oakey	Oakey Creek	24/09/1996																						
422332B	Gowrie Ck Oakey	Oakey Creek	3/10/1996																						
422332B	Gowrie Ck Oakey	Oakey Creek	3/10/1996																						
422332B	Gowrie Ck Oakey	Oakey Creek	31/10/1996																						
422332B	Gowrie Ck Oakey	Oakey Creek	5/11/1996																						
422332B	Gowrie Ck Oakey	Oakey Creek	4/12/1996												9.8123	OK	130	21.83	OK	130	0.6	OK	130		
422332B	Gowrie Ck Oakey	Oakey Creek	4/12/1996																						
422332B	Gowrie Ck Oakey	Oakey Creek	4/12/1996																						
422332B	Gowrie Ck Oakey	Oakey Creek	4/12/1996												5.968	OK	130	14.01	OK	130	0.2	OK	130		
422332B	Gowrie Ck Oakey	Oakey Creek	4/12/1996												7.5381	OK	130	18.36	OK	130	0.3	OK	130		
422332B	Gowrie Ck Oakey	Oakey Creek	5/12/1996												6.9883	OK	130	7.78	OK	130	0.1	OK	130		
422332B	Gowrie Ck Oakey	Oakey Creek	5/12/1996												2.952	OK	130	5.97	OK	130	0.1	OK	130		
422332B	Gowrie Ck Oakey	Oakey Creek	8/12/1996										4.6	OK	130	1.4905	OK	130	28.8	OK	130	0.6	OK	130	
422332B	Gowrie Ck Oakey	Oakey Creek	6/01/1997																						
422332B	Gowrie Ck Oakey	Oakey Creek	22/01/1997																						
422332B	Gowrie Ck Oakey	Oakey Creek	11/02/1997	9.842	OK	130				0.0588	OK	130	6	OK	130	3.2182	OK	130	68.24	OK	130	1.3	OK	130	
422332B	Gowrie Ck Oakey	Oakey Creek	11/02/1997										6	OK	130										
422332B	Gowrie Ck Oakey	Oakey Creek	14/02/1997																						
422332B	Gowrie Ck Oakey	Oakey Creek	25/02/1997																						
422332B	Gowrie Ck Oakey	Oakey Creek	25/02/1997	10.799	OK	130				0.0418	OK	130	1.2	OK	130	2.9733	OK	130	63.5	OK	130	1.4	OK	130	
422332B	Gowrie Ck Oakey	Oakey Creek	28/04/1997																						
422332B	Gowrie Ck Oakey	Oakey Creek	16/05/1997																						
422332B	Gowrie Ck Oakey	Oakey Creek	3/06/1997										6.7	OK	130	3.5242	OK	130	85.18	OK	130	2.1	OK	130	
422332B	Gowrie Ck Oakey	Oakey Creek	4/06/1997																						
422332B	Gowrie Ck Oakey	Oakey Creek	22/07/1997	9.418	OK	130				18.404	OK	130	5.4	OK	130	5.5482	OK	130	101.28	OK	130	3.1	OK	130	
422332B	Gowrie Ck Oakey	Oakey Creek	18/09/1997																						
422332B	Gowrie Ck Oakey	Oakey Creek	3/11/1997												6.1806	OK	130	7.15	OK	130	0.5	OK	130		
422332B	Gowrie Ck Oakey	Oakey Creek	3/11/1997												8.3159	OK	130	34.08	OK	130	0.9	OK	130		
422332B	Gowrie Ck Oakey	Oakey Creek	3/11/1997												7.824	OK	130	8.63	OK	130	0.2	OK	130		
422332B	Gowrie Ck Oakey	Oakey Creek	3/11/1997												4.2	OK	130	8	<	130	0.2	OK	130		
422332B	Gowrie Ck Oakey	Oakey Creek	3/11/1997												3.8535	OK	130	10.72	OK	130	0.2	OK	130		
422332B	Gowrie Ck Oakey	Oakey Creek	3/11/1997																						
422332B	Gowrie Ck Oakey	Oakey Creek	4/11/1997																						
422332B	Gowrie Ck Oakey	Oakey Creek	17/11/1997										7.4	OK	130	2.5623	OK	130	68.5	OK	130	1.9	OK	130	
422332B	Gowrie Ck Oakey	Oakey Creek	28/11/1997																						
422332B	Gowrie Ck Oakey	Oakey Creek	28/11/1997	7.243	OK	130				0.02	OK	130	8.2	OK	130	5.7467	OK	130	80.32	OK	130	2.2	OK	130	
422332B	Gowrie Ck Oakey	Oakey Creek	28/11/1997																						
422332B	Gowrie Ck Oakey	Oakey Creek	11/01/1998																						
422332B	Gowrie Ck Oakey	Oakey Creek	30/01/1998	1.215	OK	130				0.367	OK	130	4.5	OK	130	5.9693	OK	130	8.54	OK	130	0.2	OK	130	
422332B	Gowrie Ck Oakey	Oakey Creek	11/02/1998																						
422332B	Gowrie Ck Oakey	Oakey Creek	1/05/1998																						
422332B	Gowrie Ck Oakey	Oakey Creek	22/07/1998																						
422332B	Gowrie Ck Oakey	Oakey Creek	4/10/1998	8.8	OK	130	8.9	OK	130	0.0933	OK	130	8.9	OK	130	2.9549	OK	130	90.14	OK	130	2.6	OK	130	
422332B	Gowrie Ck Oakey	Oakey Creek	5/10/1998																						
422332B	Gowrie Ck Oakey	Oakey Creek	5/10/1998																						

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Station	Station Name	Receiving Creek/ River	Date	V2343.00	F2343.00	Q2343.00	V2337.00	F2337.00	Q2337.00	V2345.00	F2345.00	Q2345.00	V2351.50	F2351.50	Q2351.50	V2363.00	F2363.00	Q2363.00	V2401.00	F2401.00	Q2401.00	V2551.00	F2551.00	Q2551.00
				Nitrate + nitrite as N - soluble (mg/L)			Total Nitrogen (mg/L)			Ammonia as N - soluble (mg/L)			Oxygen (Dissolved) (mg/L)FLD			Total Phosphorus as P (mg/L)			Sulphate as SO4 (mg/L)			Boron as B (mg/L)		
422332B	Gowrie Ck Oakey	Oakey Creek	10/01/1999				3.3852	OK	130							2.266	OK	130	6.35	OK	130	0.1	OK	130
422332B	Gowrie Ck Oakey	Oakey Creek	10/01/1999				2.3691	OK	130							7.2792	OK	130						
422332B	Gowrie Ck Oakey	Oakey Creek	10/01/1999				4.3323	OK	130							6.9082	OK	130	0	ND	130	0	ND	130
422332B	Gowrie Ck Oakey	Oakey Creek	10/01/1999				4.2694	OK	130							7.0153	OK	130						
422332B	Gowrie Ck Oakey	Oakey Creek	10/01/1999				5.089	OK	130							4.9038	OK	130						
422332B	Gowrie Ck Oakey	Oakey Creek	11/01/1999				6.4498	OK	130							1.9753	OK	130	10.99	OK	130	0.1	OK	130
422332B	Gowrie Ck Oakey	Oakey Creek	11/01/1999				4.2794	OK	130															
422332B	Gowrie Ck Oakey	Oakey Creek	12/01/1999																					
422332B	Gowrie Ck Oakey	Oakey Creek	12/01/1999	1.786	OK	130	3.7986	OK	130	0.332	OK	130	6.4	OK	130	2.6363	OK	130	17.25	OK	130	0.1	OK	130
422332B	Gowrie Ck Oakey	Oakey Creek	13/01/1999																					
422332B	Gowrie Ck Oakey	Oakey Creek	15/01/1999																					
422332B	Gowrie Ck Oakey	Oakey Creek	8/02/1999				13.18	OK	130							12.74	OK	130	20.32	OK	130	0.4	OK	130
422332B	Gowrie Ck Oakey	Oakey Creek	8/02/1999				11.38	OK	130							12.4212	OK	130						
422332B	Gowrie Ck Oakey	Oakey Creek	8/02/1999				10.22	OK	130							10.5572	OK	130	6.46	OK	130	0.1	OK	130
422332B	Gowrie Ck Oakey	Oakey Creek	9/02/1999																					
422332B	Gowrie Ck Oakey	Oakey Creek	9/02/1999				6.4	OK	130							5.2	OK	130	9	<	130	0.1	OK	130
422332B	Gowrie Ck Oakey	Oakey Creek	9/02/1999				6.8	OK	130							5.6593	OK	130						
422332B	Gowrie Ck Oakey	Oakey Creek	9/02/1999				8.01	OK	130							7.0236	OK	130	8.54	OK	130	0.1	OK	130
422332B	Gowrie Ck Oakey	Oakey Creek	9/02/1999				5.36	OK	130							5.0962	OK	130						
422332B	Gowrie Ck Oakey	Oakey Creek	9/02/1999				7.02	OK	130							6.976	OK	130	10.2	OK	130	0.1	OK	130
422332B	Gowrie Ck Oakey	Oakey Creek	9/02/1999				5.42	OK	130							4.652	OK	130						
422332B	Gowrie Ck Oakey	Oakey Creek	10/4/1999																					
422332B	Gowrie Ck Oakey	Oakey Creek	28/04/1999																					
422332B	Gowrie Ck Oakey	Oakey Creek	28/04/1999																					
422332B	Gowrie Ck Oakey	Oakey Creek	16/06/1999	8.574	OK	130	9.9695	OK	130	0.0536	OK	130	9.8	OK	130	3.4471	OK	130	78.66	OK	130	2	OK	130
422332B	Gowrie Ck Oakey	Oakey Creek	28/06/1999																					
422332B	Gowrie Ck Oakey	Oakey Creek	28/06/1999																					
422332B	Gowrie Ck Oakey	Oakey Creek	1/09/1999	4.5454	OK	130	6.0382	OK	130	0.3054	OK	130				2.902	OK	130	47.92	OK	130	1.1	OK	130
422332B	Gowrie Ck Oakey	Oakey Creek	1/09/1999										6.8	OK	130									
422332B	Gowrie Ck Oakey	Oakey Creek	18/10/1999																					
422332B	Gowrie Ck Oakey	Oakey Creek	19/10/1999																					
422332B	Gowrie Ck Oakey	Oakey Creek	2/11/1999																					
422332B	Gowrie Ck Oakey	Oakey Creek	6/11/1999																					
422332B	Gowrie Ck Oakey	Oakey Creek	9/11/1999				5.2	OK	130							4.7	OK	130	23	OK	130	0.5	OK	130
422332B	Gowrie Ck Oakey	Oakey Creek	9/11/1999				7.8935	OK	130							7.9717	OK	130	5.68	OK	130	0.2	OK	130
422332B	Gowrie Ck Oakey	Oakey Creek	9/11/1999				5.0275	OK	130							5.4562	OK	130	8.31	OK	130	0.2	OK	130
422332B	Gowrie Ck Oakey	Oakey Creek	9/11/1999				4.7124	OK	130							5.1978	OK	130	6.19	OK	130	0.2	OK	130
422332B	Gowrie Ck Oakey	Oakey Creek	9/11/1999				3.6746	OK	130							3.3453	OK	130						
422332B	Gowrie Ck Oakey	Oakey Creek	9/11/1999				3.1778	OK	130							3.1335	OK	130	5.62	OK	130	0.1	OK	130
422332B	Gowrie Ck Oakey	Oakey Creek	9/11/1999				3.1027	OK	130							2.4994	OK	130	6.05	OK	130	0.1	OK	130
422332B	Gowrie Ck Oakey	Oakey Creek	9/11/1999				3.9802	OK	130							2.7016	OK	130	6.2	OK	130	0.1	OK	130
422332B	Gowrie Ck Oakey	Oakey Creek	9/11/1999				2.5391	OK	130							1.6341	OK	130						
422332B	Gowrie Ck Oakey	Oakey Creek	19/12/1999																					
422332B	Gowrie Ck Oakey	Oakey Creek	5/01/2000				7.2493	OK	130							8.143	OK	130	21.51	OK	130	0.2	OK	130
422332B	Gowrie Ck Oakey	Oakey Creek	5/01/2000				7.0683	OK	130							8.555	OK	130	11.1	OK	130	0.1	OK	130
422332B	Gowrie Ck Oakey	Oakey Creek	5/01/2000				3.6088	OK	130							4.2143	OK	130						
422332B	Gowrie Ck Oakey	Oakey Creek	5/01/2000				2.1854	OK	130							2.84	OK	130						
422332B	Gowrie Ck Oakey	Oakey Creek	5/01/2000				2.104	OK	130							1.917	OK	130	6.54	OK	130	0.1	OK	130
422332B	Gowrie Ck Oakey	Oakey Creek	5/01/2000																					
422332B	Gowrie Ck Oakey	Oakey Creek	18/01/2000				3.7927	OK	130							5.9484	OK	130	6.61	OK	130	0	ND	130
422332B	Gowrie Ck Oakey	Oakey Creek	18/01/2000				1.6273	OK	130							1.8856	OK	130	5.7	OK	130	0.1	OK	130
422332B	Gowrie Ck Oakey	Oakey Creek	18/01/2000																					
422332B	Gowrie Ck Oakey	Oakey Creek	17/02/2000																					
422332B	Gowrie Ck Oakey	Oakey Creek	2/05/2000				5.72	OK	130							3.9788	OK	130	37.7	OK	130	0.6	OK	130
422332B	Gowrie Ck Oakey	Oakey Creek	2/05/2000				8.075	OK	130							5.9539	OK	130	40.66	OK	130	0.6	OK	130
422332B	Gowrie Ck Oakey	Oakey Creek	2/05/2000				6.73	OK	130							5.5274	OK	130						
422332B	Gowrie Ck Oakey	Oakey Creek	2/05/2000				3.75	OK	130							2.4989	OK	130						
422332B	Gowrie Ck Oakey	Oakey Creek	3/05/2000				2.3	OK	130							1.9	OK	130	9	OK	130	0.1	OK	130
422332B	Gowrie Ck Oakey	Oakey Creek	3/05/2000				2.37	OK	130							1.7804	OK	130						
422332B	Gowrie Ck Oakey	Oakey Creek	29/05/2000																					
422332B	Gowrie Ck Oakey	Oakey Creek	19/06/2000	6.1198	OK	130	13.2255	OK	130	4.6157	OK	130	9.5	OK	130	4.1792	OK	130	90	OK	130	1.4	OK	130
422332B	Gowrie Ck Oakey	Oakey Creek	23/08/2000										5.2	OK	130									
422332B	Gowrie Ck Oakey	Oakey Creek	30/08/2000																					
422332B	Gowrie Ck Oakey	Oakey Creek	5/09/2000																					
422332B	Gowrie Ck Oakey	Oakey Creek	8/09/2000													7.1	OK	130						
422332B	Gowrie Ck Oakey	Oakey Creek	25/10/2000													6.1	OK	130						
422332B	Gowrie Ck Oakey	Oakey Creek	25/10/2000													8.3	OK	130	137.72	OK	130	2.6	OK	130
422332B	Gowrie Ck Oakey	Oakey Creek	25/10/2000				2.9	OK	130							8.3	OK	130	1.8	OK	130			
422332B	Gowrie Ck Oakey	Oakey Creek	25/10/2000				13.5668	OK	130							6.2	OK	130	3.0672	OK	130	125.74	OK	130
422332B	Gowrie Ck Oakey	Oakey Creek	25/10/2000				8.8113	OK	130							7.3	OK	130	1.2451	OK	130	49.23	OK	130
422332B	Gowrie Ck Oakey	Oakey Creek	26/10/2000													6.8	OK	130				27.73	OK	130
422332B	Gowrie Ck Oakey	Oakey Creek	26/10/2000													6.9	OK	130				30.27	OK	130

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				Nitrate + nitrite as N - soluble (mg/L)			Total Nitrogen (mg/L)			Ammonia as N - soluble (mg/L)			Oxygen (Dissolved) (mg/L)/FLD			Total Phosphorus as P (mg/L)			Sulphate as SO4 (mg/L)			Boron as B (mg/L)		
422332B	Gowrie Ck Oakey	Oakey Creek	1/02/2001				13.5907	OK	130							11.8962	OK	130	12.94	OK	130	0.25	OK	130
422332B	Gowrie Ck Oakey	Oakey Creek	2/02/2001				4.7386	OK	130							2.9421	OK	130	10.55	OK	130	0.15	OK	130
422332B	Gowrie Ck Oakey	Oakey Creek	3/02/2001				6.7611	OK	130							5.6919	OK	130	13.76	OK	130	0.18	OK	130
422332B	Gowrie Ck Oakey	Oakey Creek	3/02/2001				9.5271	OK	130							7.0242	OK	130	7.33	OK	130	0.13	OK	130
422332B	Gowrie Ck Oakey	Oakey Creek	3/02/2001				10.4114	OK	130							8.7349	OK	130	6.83	OK	130	0.12	OK	130
422332B	Gowrie Ck Oakey	Oakey Creek	4/02/2001				5.3934	OK	130							3.516	OK	130	11.52	OK	130	0.15	OK	130
422332B	Gowrie Ck Oakey	Oakey Creek	4/02/2001				4.9886	OK	130							2.3713	OK	130	18.1	OK	130	0.18	OK	130
422332B	Gowrie Ck Oakey	Oakey Creek	6/02/2001	4.5011	OK	130	5.977	OK	130	0.4766	OK	130	4.2	OK	130	1.1936	OK	130	37.4	OK	130	0.38	OK	130
422332B	Gowrie Ck Oakey	Oakey Creek	6/02/2001																					
422332B	Gowrie Ck Oakey	Oakey Creek	5/06/2001																					
422332B	Gowrie Ck Oakey	Oakey Creek	13/06/2001	12.1542	OK	130	13.9298	OK	130	0.0448	OK	130	3.1	OK	130	3.13	OK	130	106.08	OK	130	0	ND	130
422332B	Gowrie Ck Oakey	Oakey Creek	24/10/2001										5.4	OK	130									
422332B	Gowrie Ck Oakey	Oakey Creek	17/04/2002	5.2595	OK	130	8.4805	OK	130	1.1503	OK	130				2.8972	OK	130	108.06	OK	130	2.46	OK	130
422332B	Gowrie Ck Oakey	Oakey Creek	1/05/2002										10	OK	130									
422332B	Gowrie Ck Oakey	Oakey Creek	18/07/2002										11	OK	130									
422332B	Gowrie Ck Oakey	Oakey Creek	10/12/2002	0.5476	OK	130	2.2423	OK	130	0.0754	OK	130				1.8556	OK	130	13.94	OK	130	0.29	OK	130
422332B	Gowrie Ck Oakey	Oakey Creek	6/12/2003	1.0678	OK	130	2.7006	OK	130	0.5728	OK	130				1.3173	OK	130						
422332B	Gowrie Ck Oakey	Oakey Creek	6/12/2003	0.84	OK	130	3.1	OK	130	0.2	OK	130				2.5	OK	130	10	OK	130	0.2	OK	130
422332B	Gowrie Ck Oakey	Oakey Creek	8/12/2003	2	OK	130	1.7	OK	130	0.33	OK	130				0.78	OK	130	53	OK	130	0.9	OK	130
422332B	Gowrie Ck Oakey	Oakey Creek	10/03/2004	3.5	OK	130	4	OK	130	0.057	OK	130	6.5	OK	130	0.87	OK	130	83	OK	130	1.5	OK	130
422332B	Gowrie Ck Oakey	Oakey Creek	20/12/2005				3.311	OK	10				6.3	OK	130	1.41	OK	10	74	OK	130	1.1	OK	130
422332B	Gowrie Ck Oakey	Oakey Creek	20/03/2006				3.3398	OK	130				5.6	OK	130	1.937	OK	130	227	OK	130	3.6	OK	130
422332B	Gowrie Ck Oakey	Oakey Creek	16/08/2006				4.0889	OK	10				10.5	OK	130	0.694	OK	10	260	OK	131	3.3	OK	131
422332B	Gowrie Ck Oakey	Oakey Creek	15/08/2007				1.507	OK	10							0.1054	OK	10	289	OK	10	0.18	OK	10
422332B	Gowrie Ck Oakey	Oakey Creek	25/08/2008				3	OK	10							12.8	OK	1	0.1	OK	10	214	OK	10
422332B	Gowrie Ck Oakey	Oakey Creek	14/01/2009										10.4	OK	130									
422332B	Gowrie Ck Oakey	Oakey Creek	27/04/2009										10.9	OK	130									
422332B	Gowrie Ck Oakey	Oakey Creek	14/09/2009										9.2	OK	130									
422347B	N Condamine R Pampas	Condamine River	7/06/1989																					
422347B	N Condamine R Pampas	Condamine River	8/06/1989																					
422347B	N Condamine R Pampas	Condamine River	8/06/1989																					
422347B	N Condamine R Pampas	Condamine River	8/06/1989																					
422347B	N Condamine R Pampas	Condamine River	8/06/1989																					
422347B	N Condamine R Pampas	Condamine River	8/06/1989																					
422347B	N Condamine R Pampas	Condamine River	8/06/1989																					
422347B	N Condamine R Pampas	Condamine River	8/06/1989																					
422347B	N Condamine R Pampas	Condamine River	23/08/1989																					
422347B	N Condamine R Pampas	Condamine River	6/12/1989																5.4	OK	125	0.05	OK	135
422347B	N Condamine R Pampas	Condamine River	6/12/1989																5.3	OK	125	0.02	OK	135
422347B	N Condamine R Pampas	Condamine River	30/03/1990																3.7	OK	125	0.03	OK	135
422347B	N Condamine R Pampas	Condamine River	6/03/1991																					
422347B	N Condamine R Pampas	Condamine River	3/02/1992																					
422347B	N Condamine R Pampas	Condamine River	4/02/1992																3.1	OK	125			
422347B	N Condamine R Pampas	Condamine River	25/02/1992																					
422347B	N Condamine R Pampas	Condamine River	21/10/1992																					
422347B	N Condamine R Pampas	Condamine River	21/10/1992																3.9	OK	125			
422347B	N Condamine R Pampas	Condamine River	5/02/1993																2.3	OK	125			
422347B	N Condamine R Pampas	Condamine River	9/06/1993																					
422347B	N Condamine R Pampas	Condamine River	4/03/1994																					
422347B	N Condamine R Pampas	Condamine River	2/02/1996																					
422347B	N Condamine R Pampas	Condamine River	27/05/1996										11.2	OK	130									
422347B	N Condamine R Pampas	Condamine River	6/09/1996										9.1	OK	130									
422347B	N Condamine R Pampas	Condamine River	3/12/1996										11.2	OK	130									
422353A	Yarramalong	Condamine River	21/01/1988																					
422353A	Yarramalong	Condamine River	21/01/1988																					
422353A	Yarramalong	Condamine River	11/05/1989																					
422353A	Yarramalong	Condamine River	23/08/1989																					
422353A	Yarramalong	Condamine River	2/07/1990																					
422353A	Yarramalong	Condamine River	17/10/1990																					
422353A	Yarramalong	Condamine River	6/03/1991																					
422353A	Yarramalong	Condamine River	6/06/1991																					
422353A	Yarramalong	Condamine River	25/11/1991																					
422353A	Yarramalong	Condamine River	7/02/1992																					
422353A	Yarramalong	Condamine River	3/07/1992																					
422353A	Yarramalong	Condamine River	3/07/1992																					
422353A	Yarramalong	Condamine River	26/10/1992																					
422353A	Yarramalong	Condamine River	26/10/1992																					
422353A	Yarramalong	Condamine River	8/02/1993																					
422353A	Yarramalong	Condamine River	10/06/1993																					
422353A	Yarramalong	Condamine River	10/06/1993																					
422353A	Yarramalong	Condamine River	4/03/1994																					

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Station	Station Name	Receiving Creek/ River	Date	V2574.00 Cadmium as Cd total (ug/L)	F2574.00 Copper as Cu soluble mg/L	Q2574.00 Copper as Cu total (ug/L)	V2622.00 Copper as Cu total (ug/L)	F2622.00 Flouride as F (mg/L)	Q2622.00 Lead as Pb total (ug/L)	V2624.00 Nickel as Ni total (ug/L)	F2624.00 Zinc as Zn soluble (mg/L)	Q2624.00 Zinc as Zn total (ug/L)	V2641.00 Cadmium as Cd total (ug/L)	F2641.00 Copper as Cu soluble mg/L	Q2641.00 Copper as Cu total (ug/L)	V2694.00 Flouride as F (mg/L)	F2694.00 Lead as Pb total (ug/L)	Q2694.00 Nickel as Ni total (ug/L)	V2744.00 Zinc as Zn soluble (mg/L)	F2744.00 Zinc as Zn total (ug/L)	Q2744.00 Zinc as Zn total (ug/L)	V2822.00 Cadmium as Cd total (ug/L)	F2822.00 Copper as Cu soluble mg/L	Q2822.00 Copper as Cu total (ug/L)	V2824.00 Cadmium as Cd total (ug/L)	F2824.00 Copper as Cu soluble mg/L	Q2824.00 Copper as Cu total (ug/L)		
1303139	GAP CK GLENMORAL GAP	Dawson River	6/06/2001		0.05	<	130	0.1	<	130																			
1303139	GAP CK GLENMORAL GAP	Dawson River	9/10/2001		0	ND	130	0.14	OK	130												0.01	OK	130					
130344A	Juandah Ck Windamere	Dawson River	9/01/1985					0.1	OK	125																			
130344A	Juandah Ck Windamere	Dawson River	7/01/1987					0.2	OK	125																			
130344A	Juandah Ck Windamere	Dawson River	12/02/1988					0.2	OK	125																			
130344A	Juandah Ck Windamere	Dawson River	19/05/1988					0.1	OK	125																			
130344A	Juandah Ck Windamere	Dawson River	12/01/1989					0.1	OK	125																			
130344A	Juandah Ck Windamere	Dawson River	26/04/1989					0.1	OK	125																			
130344A	Juandah Ck Windamere	Dawson River	6/05/1989																										
130344A	Juandah Ck Windamere	Dawson River	2/12/1989		0.01	<	130	0.2	OK	130												0.01	<	130					
130344A	Juandah Ck Windamere	Dawson River	2/12/1989																										
130344A	Juandah Ck Windamere	Dawson River	11/07/1990					0.13	OK	125																			
130344A	Juandah Ck Windamere	Dawson River	9/12/1993		0.04	OK	135	0.05	OK	125												0.01	OK	135					
130344A	Juandah Ck Windamere	Dawson River	10/12/1993		0.05	OK	135	0.09	OK	125												0.02	OK	135					
130344A	Juandah Ck Windamere	Dawson River	28/11/1995		0.01	OK	130	0.11	OK	130												0.01	OK	130					
130344A	Juandah Ck Windamere	Dawson River	26/03/1997		0.05	<	130	0.1	OK	130												0.02	<	130					
130344A	Juandah Ck Windamere	Dawson River	19/11/1997		0.05	<	130	0.1	OK	130												0.02	OK	130					
130344A	Juandah Ck Windamere	Dawson River	7/10/1998		0.01	OK	130	0.14	OK	130												0	ND	130					
130344A	Juandah Ck Windamere	Dawson River	18/11/1998		0.01	OK	130	0.17	OK	130												0.02	OK	130					
130344A	Juandah Ck Windamere	Dawson River	25/02/1999		0.05	OK	130	0.2	OK	130												0.02	<	130					
130344A	Juandah Ck Windamere	Dawson River	31/10/2000		0	ND	130	0.06	OK	130												0	ND	130					
130344A	Juandah Ck Windamere	Dawson River	5/12/2001		0.03	<	130	0.1	OK	130												0.01	<	130					
130344A	Juandah Ck Windamere	Dawson River	7/07/2005		0.03	<	130	0.1	<	130												0.08	OK	130					
130344A	Juandah Ck Windamere	Dawson River	16/11/2005		0.03	<	130	0.1	OK	130												0.06	OK	130					
130344A	Juandah Ck Windamere	Dawson River	7/12/2007		0.03	<	10	0.11	OK	10												0.06	OK	10					
4164055	CANNING CK MRHI	Macintyre Brook	6/10/1994																										
4164055	CANNING CK MRHI	Macintyre Brook	8/05/1995																										
4164055	CANNING CK MRHI	Macintyre Brook	15/09/1995																										
4164055	CANNING CK MRHI	Macintyre Brook	15/09/1995																										
4164055	CANNING CK MRHI	Macintyre Brook	28/08/1996		0	ND	130															0	ND	130					
4164055	CANNING CK MRHI	Macintyre Brook	14/11/1996		0.02	OK	130	0.17	OK	130												0.01	OK	130					
416407A	Woodspring	Macintyre Brook	12/03/1962					0.7	OK	125																			
416407A	Woodspring	Macintyre Brook	11/04/1962					0.5	OK	125																			
416407A	Woodspring	Macintyre Brook	18/11/1962					0.4	OK	125																			
416407A	Woodspring	Macintyre Brook	21/03/1963					0.2	OK	125																			
416407A	Woodspring	Macintyre Brook	25/05/1963					0.4	OK	125																			
416407A	Woodspring	Macintyre Brook	6/12/1965					0.3	OK	125																			
416407A	Woodspring	Macintyre Brook	17/12/1965					0.14	OK	125																			
416407A	Woodspring	Macintyre Brook	16/03/1971					0.3	OK	125																			
416407A	Woodspring	Macintyre Brook	16/03/1971																										
416407A	Woodspring	Macintyre Brook	18/12/1974					0.21	OK	125																			
416407A	Woodspring	Macintyre Brook	18/12/1974																										
416407A	Woodspring	Macintyre Brook	8/04/1975					0.15	OK	125																			
416407A	Woodspring	Macintyre Brook	27/08/1975					0.1	OK	125																			
416407A	Woodspring	Macintyre Brook	19/05/1976					0.6	OK	125																			
416407A	Woodspring	Macintyre Brook	19/05/1976																										
416407A	Woodspring	Macintyre Brook	4/08/1976					0.2	OK	125																			
416407A	Woodspring	Macintyre Brook	27/10/1976					0.2	OK	125																			
416407A	Woodspring	Macintyre Brook	1/11/1976					0.6	OK	125																			
416407A	Woodspring	Macintyre Brook	25/03/1977					0.1	OK	125																			
422202A	Dogwood Ck Miles	Balonne River	2/12/2005																										
422202A	Dogwood Ck Miles	Balonne River	3/12/2005																										
422202A	Dogwood Ck Miles	Balonne River	3/12/2005																										
422202A	Dogwood Ck Miles	Balonne River	3/12/2005																										
422202A	Dogwood Ck Miles	Balonne River	4/12/2005																										
422202A	Dogwood Ck Miles	Balonne River	5/12/2005																										
422202A	Dogwood Ck Miles	Balonne River	9/12/2005																										
422202A	Dogwood Ck Miles	Balonne River	9/12/2005																										
422202B	Dogwood Ck Gilweir	Balonne River	26/04/1964					0.4	OK	125																			
422202B	Dogwood Ck Gilweir	Balonne River	18/03/1971					0.15	OK	125																			
422202B	Dogwood Ck Gilweir	Balonne River	5/10/1971					0.1	OK	125																			
422202B	Dogwood Ck Gilweir	Balonne River	18/01/1972					0.5	OK	125																			
422202B	Dogwood Ck Gilweir	Balonne River	8/02/1972					0.6	OK	125																			
422202B	Dogwood Ck Gilweir	Balonne River	27/06/1972					0.1	OK	125																			
422202B	Dogwood Ck Gilweir	Balonne River	30/11/1972					0.05	OK	125																			
422202B	Dogwood Ck Gilweir	Balonne River	6/02/1973					0.05	OK	125																			
422202B	Dogwood Ck Gilweir	Balonne River	10/04/1973																										
422202B	Dogwood Ck Gilweir	Balonne River	8/08/1973																										
422202B	Dogwood Ck Gilweir	Balonne River	2/10/1973																										
422202B	Dogwood Ck Gilweir	Balonne River	19/01/1977					0.4	OK	125																			

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Station	Station Name	Receiving Creek/ River	Date	V2574.00 Cadmium as Cd total (ug/L)	F2574.00 Copper as Cu soluble mg/L	Q2574.00	V2622.00 Copper as Cu total (ug/L)	F2622.00	Q2622.00	V2624.00 Fluoride as F (mg/L)	F2624.00	Q2624.00	V2641.00 Lead as Pb total (ug/L)	F2641.00	Q2641.00	V2694.00 Nickel as Ni total (ug/L)	F2694.00	Q2694.00	V2744.00 Zinc as Zn soluble (mg/L)	F2744.00	Q2744.00	V2822.00 Zinc as Zn total (ug/L)	F2822.00	Q2822.00	V2824.00 Zinc as Zn total (ug/L)	F2824.00	Q2824.00	
422202B	Dogwood_Ck_Gilweir	Balonne River	16/12/1980							0.1	OK	125																
422202B	Dogwood_Ck_Gilweir	Balonne River	17/02/1981							0.1	OK	125																
422202B	Dogwood_Ck_Gilweir	Balonne River	10/08/1981							0.09	OK	125																
422202B	Dogwood_Ck_Gilweir	Balonne River	3/11/1981							0.1	OK	125																
422202B	Dogwood_Ck_Gilweir	Balonne River	5/02/1982							0.09	OK	125																
422202B	Dogwood_Ck_Gilweir	Balonne River	17/01/1983							0.1	OK	125																
422202B	Dogwood_Ck_Gilweir	Balonne River	25/07/1983							0.1	OK	125																
422202B	Dogwood_Ck_Gilweir	Balonne River	9/11/1983																									
422202B	Dogwood_Ck_Gilweir	Balonne River	2/02/1984							0.1	OK	125																
422202B	Dogwood_Ck_Gilweir	Balonne River	11/05/1984																									
422202B	Dogwood_Ck_Gilweir	Balonne River	31/08/1984																									
422202B	Dogwood_Ck_Gilweir	Balonne River	7/03/1985																									
422202B	Dogwood_Ck_Gilweir	Balonne River	19/05/1988																									
422202B	Dogwood_Ck_Gilweir	Balonne River	24/01/1994		0.1	OK	135			0.02	OK	125								0.02	OK	135						
422202B	Dogwood_Ck_Gilweir	Balonne River	29/11/1994		0	ND	130			0.04	OK	130								0	ND	130						
422202B	Dogwood_Ck_Gilweir	Balonne River	16/02/1995		0.04	OK	130			0	ND	130								0.04	OK	130						
422202B	Dogwood_Ck_Gilweir	Balonne River	19/02/1995		0.02	OK	130			0.01	OK	130								0.01	OK	130						
422202B	Dogwood_Ck_Gilweir	Balonne River	11/04/1995		0.06	OK	130			0.22	OK	130								0.01	OK	130						
422202B	Dogwood_Ck_Gilweir	Balonne River	31/07/1995		0.03	OK	130			0.02	OK	130								0.01	OK	130						
422202B	Dogwood_Ck_Gilweir	Balonne River	6/11/1995		0.08	OK	130			0.03	OK	130								0	ND	130						
422202B	Dogwood_Ck_Gilweir	Balonne River	20/02/1996		0.01	OK	130			0	ND	130								0	ND	130						
422202B	Dogwood_Ck_Gilweir	Balonne River	20/06/1996		0	ND	130			0	ND	130								0.02	OK	130						
422202B	Dogwood_Ck_Gilweir	Balonne River	8/10/1996		0.01	OK	130			0	ND	130								0.05	OK	130						
422202B	Dogwood_Ck_Gilweir	Balonne River	17/02/1997		0	ND	130			0.07	OK	130								0	ND	130						
422202B	Dogwood_Ck_Gilweir	Balonne River	17/06/1997		0.01	OK	130			0.01	OK	130								0.01	OK	130						
422202B	Dogwood_Ck_Gilweir	Balonne River	15/10/1997		0.01	OK	130			0.02	OK	130								0.01	OK	130						
422202B	Dogwood_Ck_Gilweir	Balonne River	16/03/1998		0.02	OK	130			0.02	OK	130								0.02	OK	130						
422202B	Dogwood_Ck_Gilweir	Balonne River	10/08/1998		0.01	OK	130			0.01	OK	130								0.01	OK	130						
422202B	Dogwood_Ck_Gilweir	Balonne River	11/01/1999																									
422202B	Dogwood_Ck_Gilweir	Balonne River	28/01/1999		0.01	OK	130			0.02	OK	130								0.02	OK	130						
422202B	Dogwood_Ck_Gilweir	Balonne River	12/04/1999																									
422202B	Dogwood_Ck_Gilweir	Balonne River	19/04/1999																									
422202B	Dogwood_Ck_Gilweir	Balonne River	20/04/1999		0	ND	130			0.01	OK	130								0.06	OK	130						
422202B	Dogwood_Ck_Gilweir	Balonne River	12/07/1999																									
422202B	Dogwood_Ck_Gilweir	Balonne River	19/08/1999		0.01	OK	130			0.01	OK	130								0.06	OK	130						
422202B	Dogwood_Ck_Gilweir	Balonne River	16/12/1999		0.04	OK	130			0.02	OK	130								0	ND	130						
422202B	Dogwood_Ck_Gilweir	Balonne River	14/04/2000		0	ND	130			0	ND	130								0.04	OK	130						
422202B	Dogwood_Ck_Gilweir	Balonne River	4/09/2000		0.01	OK	130			0.01	OK	130								0.07	OK	130						
422202B	Dogwood_Ck_Gilweir	Balonne River	1/05/2001		0.03	OK	130			0.03	OK	130								0.08	OK	130						
422202B	Dogwood_Ck_Gilweir	Balonne River	1/10/2001		0.01	OK	130			0.02	OK	130								0.09	OK	130						
422202B	Dogwood_Ck_Gilweir	Balonne River	3/02/2002		0.01	OK	130			0.02	OK	130								0.07	OK	130						
422202B	Dogwood_Ck_Gilweir	Balonne River	29/07/2002		0.01	OK	130			0	ND	130								0.06	OK	130						
422202B	Dogwood_Ck_Gilweir	Balonne River	12/03/2004		0.03	OK	130			0.1	<	130								0.08	OK	130						
422202B	Dogwood_Ck_Gilweir	Balonne River	27/02/2005		0.03	<	130			0.1	OK	130								0.01	<	130						
422202B	Dogwood_Ck_Gilweir	Balonne River	24/10/2005		0.03	<	130			0.1	<	130								0.12	OK	130						
422202B	Dogwood_Ck_Gilweir	Balonne River	14/02/2006		0.03	<	10			0.1	<	10								0.01	<	10						
422202B	Dogwood_Ck_Gilweir	Balonne River	11/02/2008		0.03	<	10			0.05	OK	10								0.04	OK	10						
422202B	Dogwood_Ck_Gilweir	Balonne River	27/10/2008		0.03	<	10			0.05	OK	10								0.05	OK	10						
4223005	CONDAMINE AT MCLEANS	Condamine River	17/03/2001		0	ND	130			0.1	OK	130								0.01	OK	130						
4223005	CONDAMINE AT MCLEANS	Condamine River	9/11/2001		0.01	OK	130			0.16	OK	130								0.05	OK	130						
4223006	CHINCHILLA WEIR	Condamine River	16/03/2001		0.01	OK	130			0.15	OK	130								0.04	OK	130						
4223006	CHINCHILLA WEIR	Condamine River	8/11/2001		0.01	OK	130			0.16	OK	130								0.04	OK	130						
4223030	CECIL PL DALBY RD	Oakey Creek	29/08/2006		0.03	<	10			0.2	OK	10								0.01	<	10						
4223031	Oakey CK Oakey	Oakey Creek	26/08/2006		0.03	<	10			0.1	OK	10								0.01	OK	10						
4223049	CONDAMINE R BEMARNG	Condamine River	4/02/1969							0.2	OK	125																
4223049	CONDAMINE R BEMARNG	Condamine River	1/09/1971							0.2	OK	125																
4223049	CONDAMINE R BEMARNG	Condamine River	18/11/1971							0.3	OK	125																
4223049	CONDAMINE R BEMARNG	Condamine River	20/03/1973							0.11	OK	125																
4223050	CONDAMINE R TIPTONS	Condamine River	18/06/1963							0.3	OK	125																
4223050	CONDAMINE R TIPTONS	Condamine River	25/09/1963							0.1	OK	125																
4223050	CONDAMINE R TIPTONS	Condamine River	28/04/1964							0.5	OK	125																
4223050	CONDAMINE R TIPTONS	Condamine River	8/12/1964							0.1	OK	125																
4223050	CONDAMINE R TIPTONS	Condamine River	14/09/1965							0.15	OK	125																
4223050	CONDAMINE R TIPTONS	Condamine River	21/10/1965							0.4	OK	125																
4223050	CONDAMINE R TIPTONS	Condamine River	29/08/2006		0.03	<	10			0.2	OK	10								0.01	OK	10						
4223051	CONDAMINE R KAREE	Condamine River	17/03/1971							0.2	OK	125																
4223051	CONDAMINE R KAREE	Condamine River	20/07/1971							0.1	OK	125																
4223051	CONDAMINE R KAREE	Condamine River	30/08/1971							0.15	OK	125																
4223051	CONDAMINE R KAREE	Condamine River																										

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				Cadmium as Cd total (ug/L)			Copper as Cu soluble mg/L			Copper as Cu total (ug/L)			Flouride as F (mg/L)			Lead as Pb total (ug/L)			Nickel as Ni total (ug/L)			Zinc as Zn soluble (mg/L)			Zinc as Zn total (ug/L)			
422308C	Condamine Chinchilla	Condamine River	14/03/1978										0.3	OK	125													
422308C	Condamine Chinchilla	Condamine River	22/05/1978										0.3	OK	125													
422308C	Condamine Chinchilla	Condamine River	18/07/1979																									
422308C	Condamine Chinchilla	Condamine River	13/02/1980										0.2	OK	125													
422308C	Condamine Chinchilla	Condamine River	28/04/1980										2	OK	125													
422308C	Condamine Chinchilla	Condamine River	22/07/1980										0.2	OK	125													
422308C	Condamine Chinchilla	Condamine River	6/10/1980										0.2	OK	125													
422308C	Condamine Chinchilla	Condamine River	21/02/1981										0.3	OK	125													
422308C	Condamine Chinchilla	Condamine River	18/05/1981										0.2	OK	125													
422308C	Condamine Chinchilla	Condamine River	10/08/1981										0.2	OK	125													
422308C	Condamine Chinchilla	Condamine River	2/11/1981										0.2	OK	125													
422308C	Condamine Chinchilla	Condamine River	17/12/1981										0.2	OK	125													
422308C	Condamine Chinchilla	Condamine River	4/02/1982										0.2	OK	125													
422308C	Condamine Chinchilla	Condamine River	5/05/1982										0.1	OK	125													
422308C	Condamine Chinchilla	Condamine River	25/05/1982																									
422308C	Condamine Chinchilla	Condamine River	2/08/1982										0.2	OK	125													
422308C	Condamine Chinchilla	Condamine River	12/10/1982																									
422308C	Condamine Chinchilla	Condamine River	17/01/1983										0.2	OK	125													
422308C	Condamine Chinchilla	Condamine River	5/04/1983										0.2	OK	125													
422308C	Condamine Chinchilla	Condamine River	25/07/1983										0.2	OK	125													
422308C	Condamine Chinchilla	Condamine River	8/11/1983										0.1	OK	125													
422308C	Condamine Chinchilla	Condamine River	31/01/1984										0.2	OK	125													
422308C	Condamine Chinchilla	Condamine River	10/05/1984										0.1	OK	125													
422308C	Condamine Chinchilla	Condamine River	29/08/1984										0.1	OK	125													
422308C	Condamine Chinchilla	Condamine River	28/11/1984										0.2	OK	125													
422308C	Condamine Chinchilla	Condamine River	5/03/1985																									
422308C	Condamine Chinchilla	Condamine River	16/05/1985																									
422308C	Condamine Chinchilla	Condamine River	31/07/1985										0.2	OK	125													
422308C	Condamine Chinchilla	Condamine River	29/11/1985										0.2	OK	125													
422308C	Condamine Chinchilla	Condamine River	4/02/1986																									
422308C	Condamine Chinchilla	Condamine River	26/05/1986																									
422308C	Condamine Chinchilla	Condamine River	5/09/1986										0.2	OK	125													
422308C	Condamine Chinchilla	Condamine River	18/11/1986										0.2	OK	125													
422308C	Condamine Chinchilla	Condamine River	27/05/1987										0.3	OK	125													
422308C	Condamine Chinchilla	Condamine River	4/08/1987										0.2	OK	125													
422308C	Condamine Chinchilla	Condamine River	3/02/1988										0.2	OK	125													
422308C	Condamine Chinchilla	Condamine River	18/05/1988										0.1	OK	125													
422308C	Condamine Chinchilla	Condamine River	10/08/1988										0.1	OK	125													
422308C	Condamine Chinchilla	Condamine River	16/11/1988										0.2	OK	125													
422308C	Condamine Chinchilla	Condamine River	15/02/1989										0.2	OK	125													
422308C	Condamine Chinchilla	Condamine River	30/05/1989																									
422308C	Condamine Chinchilla	Condamine River	25/09/1989										0.1	OK	125													
422308C	Condamine Chinchilla	Condamine River	8/01/1990																									
422308C	Condamine Chinchilla	Condamine River	13/02/1990																									
422308C	Condamine Chinchilla	Condamine River	16/03/1990																									
422308C	Condamine Chinchilla	Condamine River	16/09/1990				0.08	OK	135				0.19	OK	125							0.03	OK	135				
422308C	Condamine Chinchilla	Condamine River	8/05/1991				0.04	OK	135				0.24	OK	125													
422308C	Condamine Chinchilla	Condamine River	7/01/1992																									
422308C	Condamine Chinchilla	Condamine River	11/01/1993										0.19	OK	125													
422308C	Condamine Chinchilla	Condamine River	24/01/1994																									
422308C	Condamine Chinchilla	Condamine River	19/05/1994										0.14	OK	125													
422308C	Condamine Chinchilla	Condamine River	30/07/1994				0.02	OK	135				0.15	OK	125								0.01	OK	135			
422308C	Condamine Chinchilla	Condamine River	11/04/1995				0.06	OK	130				0.01	OK	130								0.03	OK	130			
422308C	Condamine Chinchilla	Condamine River	5/05/1995				0.01	OK	130				0.23	OK	130								0.01	OK	130			
422308C	Condamine Chinchilla	Condamine River	25/07/1995																									
422308C	Condamine Chinchilla	Condamine River	31/07/1995				0.01	OK	130				0.23	OK	130								0	ND	130			
422308C	Condamine Chinchilla	Condamine River	14/08/1995				0.06	OK	130				0.3	OK	130								0.02	<	130			
422308C	Condamine Chinchilla	Condamine River	27/09/1995				0.03	OK	130				0.3	OK	130								0.02	OK	130			
422308C	Condamine Chinchilla	Condamine River	4/10/1995				0.01	OK	130				0.28	OK	130								0.03	OK	130			
422308C	Condamine Chinchilla	Condamine River	6/11/1995				0.1	OK	130				0.26	OK	130								0.03	OK	130			
422308C	Condamine Chinchilla	Condamine River	20/02/1996				0.05	<	130				0.1	OK	130								0.02	<	130			
422308C	Condamine Chinchilla	Condamine River	19/06/1996				0	ND	130				0.11	OK	130								0.02	OK	130			
422308C	Condamine Chinchilla	Condamine River	29/08/1996				0.01	OK	130				0.14	OK	130								0	ND	130			
422308C	Condamine Chinchilla	Condamine River	7/10/1996				0.05	<	130				0.1	OK	130								0.02	<	130			
422308C	Condamine Chinchilla	Condamine River	18/11/1996				0.01	OK	130				0.17	OK	130								0	ND	130			
422308C	Condamine Chinchilla	Condamine River	13/03/1997				0.01	OK	130				0.07	OK	130								0.05	OK	130			
422308C	Condamine Chinchilla	Condamine River	16/06/1997																									
422308C	Condamine Chinchilla	Condamine River	26/06/1997				0.01	OK	130				0.17	OK	130								0	ND	130			
422308C	Condamine Chinchilla	Condamine River	15/10/1997				0.01	OK	130				0.18	OK	130								0.01	OK	130			
422308C	Condamine Chinchilla	Condamine River	16/03/1998																									
422308C	Condamine Chinchilla	Condamine River	16/03/1998				0.01	OK	130				0.22	OK	130								0.01	OK	130			

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				Cadmium as Cd total (ug/L)			Copper as Cu soluble mg/L			Copper as Cu total (ug/L)			Fluoride as F (mg/L)			Lead as Pb total (ug/L)			Nickel as Ni total (ug/L)			Zinc as Zn soluble (mg/L)			Zinc as Zn total (ug/L)		
422308C	Condamine Chinchilla	Condamine River	4/06/1998				0.01	OK	130				0.19	OK	130							0.06	OK	130			
422308C	Condamine Chinchilla	Condamine River	10/08/1998				0.01	OK	130				0.12	OK	130							0	ND	130			
422308C	Condamine Chinchilla	Condamine River	21/10/1998																								
422308C	Condamine Chinchilla	Condamine River	19/11/1998				0.02	OK	130				0.17	OK	130							0	ND	130			
422308C	Condamine Chinchilla	Condamine River	27/01/1999				0.02	OK	130				0.24	OK	130							0.01	OK	130			
422308C	Condamine Chinchilla	Condamine River	27/01/1999																								
422308C	Condamine Chinchilla	Condamine River	19/04/1999				0	ND	130				0.15	OK	130							0.01	OK	130			
422308C	Condamine Chinchilla	Condamine River	24/05/1999				0	ND	130				0.14	OK	130							0	ND	130			
422308C	Condamine Chinchilla	Condamine River	20/08/1999				0	ND	130				0.12	OK	130							0.01	OK	130			
422308C	Condamine Chinchilla	Condamine River	27/09/1999				0.01	OK	130				0.17	OK	130							0.02	OK	130			
422308C	Condamine Chinchilla	Condamine River	16/12/1999				0.04	OK	130				0.14	OK	130							0.01	OK	130			
422308C	Condamine Chinchilla	Condamine River	3/04/2000				0	ND	130				0.17	OK	130							0.01	OK	130			
422308C	Condamine Chinchilla	Condamine River	15/08/2000				0	ND	130				0.19	OK	130							0	ND	130			
422308C	Condamine Chinchilla	Condamine River	21/09/2000				0	ND	130				0.17	OK	130							0	ND	130			
422308C	Condamine Chinchilla	Condamine River	9/11/2000				0	ND	130				0.24	OK	130							0	ND	130			
422308C	Condamine Chinchilla	Condamine River	12/12/2000				0	ND	130				0.28	OK	130							0.01	OK	130			
422308C	Condamine Chinchilla	Condamine River	25/01/2001																								
422308C	Condamine Chinchilla	Condamine River	8/02/2001																								
422308C	Condamine Chinchilla	Condamine River	20/03/2001																								
422308C	Condamine Chinchilla	Condamine River	1/05/2001				0.02	OK	130				0.17	OK	130							0.01	OK	130			
422308C	Condamine Chinchilla	Condamine River	20/06/2001																								
422308C	Condamine Chinchilla	Condamine River	1/10/2001				0.01	OK	130				0.2	OK	130							0	ND	130			
422308C	Condamine Chinchilla	Condamine River	25/02/2002				0	ND	130				0.23	OK	130							0.04	OK	130			
422308C	Condamine Chinchilla	Condamine River	29/07/2002				0	ND	130				0	ND	130							0	ND	130			
422308C	Condamine Chinchilla	Condamine River	10/03/2003																								
422308C	Condamine Chinchilla	Condamine River	10/03/2003				0	ND	130				0.15	OK	130							0	ND	130			
422308C	Condamine Chinchilla	Condamine River	9/12/2003				0.03	<	130				0.1	<	130							0.01	OK	130			
422308C	Condamine Chinchilla	Condamine River	12/03/2004				0.03	<	130				0.1	OK	130							0.02	<	130			
422308C	Condamine Chinchilla	Condamine River	5/12/2005																								
422308C	Condamine Chinchilla	Condamine River	5/12/2005																								
422308C	Condamine Chinchilla	Condamine River	6/12/2005																								
422308C	Condamine Chinchilla	Condamine River	6/12/2005																								
422308C	Condamine Chinchilla	Condamine River	22/12/2005				0.03	<	130				0.1	OK	130							0.08	OK	130			
422308C	Condamine Chinchilla	Condamine River	14/03/2006				0.03	<	130				0.1	OK	130							0.2	OK	130			
422308C	Condamine Chinchilla	Condamine River	29/11/2007				0.03	<	10				0.14	OK	10							0.07	OK	10			
422308C	Condamine Chinchilla	Condamine River	6/12/2007				0.03	<	10				0.13	OK	10							0.09	OK	10			
422308C	Condamine Chinchilla	Condamine River	8/12/2007																								
422308C	Condamine Chinchilla	Condamine River	30/05/2008				0.03	<	10				0.16	OK	10							0.01	<	10			
422312A	Cooby Ck Dam	Oakey Creek	26/06/1997				0.01	OK	130				0.13	OK	130							0	ND	130			
422312A	Cooby Ck Dam	Oakey Creek	12/01/1999																								
422312A	Cooby Ck Dam	Oakey Creek	14/01/1999																								
422312A	Cooby Ck Dam	Oakey Creek	12/04/1999																								
422312A	Cooby Ck Dam	Oakey Creek	12/04/1999																								
422312A	Cooby Ck Dam	Oakey Creek	19/07/1999																								
422312A	Cooby Ck Dam	Oakey Creek	19/07/1999																								
422330B	Oakey Ck Oakey	Oakey Creek	29/01/1980										0.1	OK	125												
422330B	Oakey Ck Oakey	Oakey Creek	29/01/1980																								
422331A	W_brook Ck Arcadia	Oakey Creek	16/03/1971										0.25	OK	125												
422331A	W_brook Ck Arcadia	Oakey Creek	30/08/1971										0.25	OK	125												
422331A	W_brook Ck Arcadia	Oakey Creek	26/01/1973										0.25	OK	125												
422331A	W_brook Ck Arcadia	Oakey Creek	24/07/1973										0.21	OK	125												
422331A	W_brook Ck Arcadia	Oakey Creek	24/07/1973																								
422331A	W_brook Ck Arcadia	Oakey Creek	13/10/1975										0.3	OK	125												
422331A	W_brook Ck Arcadia	Oakey Creek	8/12/1975										0.2	OK	125												
422331A	W_brook Ck Arcadia	Oakey Creek	25/02/1976										0.3	OK	125												
422331A	W_brook Ck Arcadia	Oakey Creek	25/02/1976																								
422331A	W_brook Ck Arcadia	Oakey Creek	23/08/1976										0.4	OK	125												
422331A	W_brook Ck Arcadia	Oakey Creek	23/01/1978										0.3	OK	125												
422331A	W_brook Ck Arcadia	Oakey Creek	9/10/1978										0.2	OK	125												
422331A	W_brook Ck Arcadia	Oakey Creek	9/07/1979										0.2	OK	125												
422331A	W_brook Ck Arcadia	Oakey Creek	9/07/1979																								
422331A	W_brook Ck Arcadia	Oakey Creek	10/09/1979										0.2	OK	125												
422331A	W_brook Ck Arcadia	Oakey Creek	10/09/1979																								
422331A	W_brook Ck Arcadia	Oakey Creek	29/01/1980																								
422331A	W_brook Ck Arcadia	Oakey Creek	29/01/1980																								
422331A	W_brook Ck Arcadia	Oakey Creek	1/07/1980										0.2	OK	125												
422331A	W_brook Ck Arcadia	Oakey Creek	1/07/1980																								
422331A	W_brook Ck Arcadia	Oakey Creek	3/06/1997				0.01	OK	130				0.24	OK	130							0	ND	130			
422331A	W_brook Ck Arcadia	Oakey Creek	28/11/1997				0.01	OK	130				0.25	OK	130							0	ND	130			
422332B	Gowrie Ck Oakey	Oakey Creek	17/07/1992				0.04	OK	135				0.16	OK	125							0.02	OK	135			
422332B	Gowrie Ck Oakey	Oakey Creek	17/07/1992				0.02	OK	135				0.15	OK	125							0.01	OK	135			

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				Cadmium as Cd total (ug/L)			Copper as Cu soluble mg/L			Copper as Cu total (ug/L)			Flouride as F (mg/L)			Lead as Pb total (ug/L)			Nickel as Ni total (ug/L)			Zinc as Zn soluble (mg/L)			Zinc as Zn total (ug/L)			
422332B	Gowrie Ck Oakey	Oakey Creek	17/07/1992										0.15	OK	125									0.01	OK	135		
422332B	Gowrie Ck Oakey	Oakey Creek	12/10/1992																									
422332B	Gowrie Ck Oakey	Oakey Creek	12/10/1992																									
422332B	Gowrie Ck Oakey	Oakey Creek	29/10/1992				0.01	OK	135				0.13	OK	125									0.02	OK	135		
422332B	Gowrie Ck Oakey	Oakey Creek	2/02/1993				0.06	OK	135				0.16	OK	125									0.02	OK	135		
422332B	Gowrie Ck Oakey	Oakey Creek	2/02/1993																									
422332B	Gowrie Ck Oakey	Oakey Creek	20/01/1994																									
422332B	Gowrie Ck Oakey	Oakey Creek	18/02/1994				0.03	OK	135				0.1	OK	125									0.09	OK	135		
422332B	Gowrie Ck Oakey	Oakey Creek	18/02/1994				0.06	OK	135				0.11	OK	125									0.03	OK	135		
422332B	Gowrie Ck Oakey	Oakey Creek	18/02/1994				0.03	OK	135				0.12	OK	125									0.02	OK	135		
422332B	Gowrie Ck Oakey	Oakey Creek	18/02/1994				0.03	OK	135				0.12	OK	125									0.01	OK	135		
422332B	Gowrie Ck Oakey	Oakey Creek	18/02/1994				0.02	OK	135				0.11	OK	125													
422332B	Gowrie Ck Oakey	Oakey Creek	18/02/1994				0.03	OK	135				0.11	OK	125									0.01	OK	135		
422332B	Gowrie Ck Oakey	Oakey Creek	18/02/1994				0.01	OK	135				0.11	OK	125													
422332B	Gowrie Ck Oakey	Oakey Creek	18/02/1994										0.1	OK	125													
422332B	Gowrie Ck Oakey	Oakey Creek	18/02/1994				0.01	OK	135				0.1	OK	125													
422332B	Gowrie Ck Oakey	Oakey Creek	18/02/1994										0.13	OK	125									0.01	OK	135		
422332B	Gowrie Ck Oakey	Oakey Creek	19/02/1994				0.01	OK	135				0.09	OK	125													
422332B	Gowrie Ck Oakey	Oakey Creek	19/02/1994										0.08	OK	125									0.01	OK	135		
422332B	Gowrie Ck Oakey	Oakey Creek	19/02/1994				0.01	OK	135				0.07	OK	125									0.01	OK	135		
422332B	Gowrie Ck Oakey	Oakey Creek	28/02/1994				0.04	OK	135				0.14	OK	125									0.04	OK	135		
422332B	Gowrie Ck Oakey	Oakey Creek	1/03/1994				0.16	OK	135				0.17	OK	125									0.03	OK	135		
422332B	Gowrie Ck Oakey	Oakey Creek	1/03/1994				0.1	OK	135				0.15	OK	125									0.02	OK	135		
422332B	Gowrie Ck Oakey	Oakey Creek	1/03/1994				0.11	OK	135				0.17	OK	125													
422332B	Gowrie Ck Oakey	Oakey Creek	1/03/1994				0.04	OK	135				0.18	OK	125									0.01	OK	135		
422332B	Gowrie Ck Oakey	Oakey Creek	1/03/1994				0.1	OK	135				0.17	OK	125													
422332B	Gowrie Ck Oakey	Oakey Creek	1/03/1994				0.04	OK	135				0.17	OK	125													
422332B	Gowrie Ck Oakey	Oakey Creek	1/03/1994				0.03	OK	135				0.16	OK	125													
422332B	Gowrie Ck Oakey	Oakey Creek	1/03/1994				0.04	OK	135				0.15	OK	125													
422332B	Gowrie Ck Oakey	Oakey Creek	1/03/1994				0.01	OK	135				0.14	OK	125													
422332B	Gowrie Ck Oakey	Oakey Creek	1/03/1994				0.01	OK	135				0.14	OK	125													
422332B	Gowrie Ck Oakey	Oakey Creek	1/03/1994				0.03	OK	135				0.13	OK	125													
422332B	Gowrie Ck Oakey	Oakey Creek	1/03/1994				0.07	OK	135				0.14	OK	125													
422332B	Gowrie Ck Oakey	Oakey Creek	1/03/1994				0.02	OK	135				0.13	OK	125													
422332B	Gowrie Ck Oakey	Oakey Creek	1/03/1994				0.01	OK	135				0.13	OK	125													
422332B	Gowrie Ck Oakey	Oakey Creek	1/03/1994				0.01	OK	135				0.13	OK	125													
422332B	Gowrie Ck Oakey	Oakey Creek	6/04/1994																									
422332B	Gowrie Ck Oakey	Oakey Creek	13/07/1994										0.15	OK	125									0.03	OK	135		
422332B	Gowrie Ck Oakey	Oakey Creek	13/07/1994																									
422332B	Gowrie Ck Oakey	Oakey Creek	22/11/1994																									
422332B	Gowrie Ck Oakey	Oakey Creek	8/12/1994																									
422332B	Gowrie Ck Oakey	Oakey Creek	8/12/1994	1.8	OK	130	0.01	OK	130	7	OK	130	0.15	OK	130	2	OK	130	20	OK	130	0.01	OK	130	20	OK	130	
422332B	Gowrie Ck Oakey	Oakey Creek	12/05/1995																									
422332B	Gowrie Ck Oakey	Oakey Creek	12/05/1995				0.02	OK	130				0.12	OK	130									0.01	OK	130		
422332B	Gowrie Ck Oakey	Oakey Creek	18/08/1995	1.5	OK	130	0.14	OK	130	7	OK	130	0.15	OK	130	4	OK	130	10	OK	130	0.01	OK	130	20	OK	130	
422332B	Gowrie Ck Oakey	Oakey Creek	23/10/1995				0.04	OK	130				0.14	OK	130								3.09	OK	130			
422332B	Gowrie Ck Oakey	Oakey Creek	23/10/1995				0.07	OK	130				0.15	OK	130								0.09	OK	130			
422332B	Gowrie Ck Oakey	Oakey Creek	23/10/1995				0.05	OK	130				0.16	OK	130								0.03	OK	130			
422332B	Gowrie Ck Oakey	Oakey Creek	23/10/1995				0.04	OK	130				0.16	OK	130								0.02	OK	130			
422332B	Gowrie Ck Oakey	Oakey Creek	23/10/1995				0.04	OK	130				0.16	OK	130								0.01	OK	130			
422332B	Gowrie Ck Oakey	Oakey Creek	23/10/1995				0.04	OK	130				0.16	OK	130								0.01	OK	130			
422332B	Gowrie Ck Oakey	Oakey Creek	23/10/1995				0.03	OK	130				0.16	OK	130								0.01	OK	130			
422332B	Gowrie Ck Oakey	Oakey Creek	23/10/1995				0.03	OK	130				0.15	OK	130								0.01	OK	130			
422332B	Gowrie Ck Oakey	Oakey Creek	23/10/1995				0.04	OK	130				0.15	OK	130								0.01	OK	130			
422332B	Gowrie Ck Oakey	Oakey Creek	23/10/1995				0.1	OK	130				0.14	OK	130								0.01	OK	130			
422332B	Gowrie Ck Oakey	Oakey Creek	26/10/1995				0.05	OK	130				0.12	OK	130								0.02	OK	130			
422332B	Gowrie Ck Oakey	Oakey Creek	26/10/1995				0.08	OK	130				0.13	OK	130								0.06	OK	130			
422332B	Gowrie Ck Oakey	Oakey Creek	26/10/1995				0.1	OK	130				0.13	OK	130								0.08	OK	130			
422332B	Gowrie Ck Oakey	Oakey Creek	26/10/1995				0.03	OK	130				0.13	OK	130								0.02	OK	130			
422332B	Gowrie Ck Oakey	Oakey Creek	27/10/1995				0.09	OK	130				0.13	OK	130								0	ND	130			
422332B	Gowrie Ck Oakey	Oakey Creek	27/10/1995				0.09	OK	130				0.11	OK	130								0	ND	130			
422332B	Gowrie Ck Oakey	Oakey Creek	27/10/1995				0.11	OK	130				0.11	OK	130								0	ND	130			
422332B	Gowrie Ck Oakey	Oakey Creek	27/10/1995																									
422332B	Gowrie Ck Oakey	Oakey Creek	30/10/1995																									
422332B	Gowrie Ck Oakey	Oakey Creek	30/10/1995																									
422332B	Gowrie Ck Oakey	Oakey Creek	6/11/1995																									
422332B	Gowrie Ck Oakey	Oakey Creek	20/11/1995				0.05	OK	130				0.16	OK	130													

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Station	Station Name	Receiving Creek/ River	Date	V2574.00	F2574.00	Q2574.00	V2622.00	F2622.00	Q2622.00	V2624.00	F2624.00	Q2624.00	V2641.00	F2641.00	Q2641.00	V2694.00	F2694.00	Q2694.00	V2744.00	F2744.00	Q2744.00	V2822.00	F2822.00	Q2822.00	V2824.00	F2824.00	Q2824.00	
				Cadmium as Cd total (ug/L)			Copper as Cu soluble mg/L			Copper as Cu total (ug/L)			Flouride as F (mg/L)			Lead as Pb total (ug/L)			Nickel as Ni total (ug/L)			Zinc as Zn soluble (mg/L)			Zinc as Zn total (ug/L)			
422332B	Gowrie Ck Oakey	Oakey Creek	21/11/1995																									
422332B	Gowrie Ck Oakey	Oakey Creek	28/11/1995																									
422332B	Gowrie Ck Oakey	Oakey Creek	12/12/1995																									
422332B	Gowrie Ck Oakey	Oakey Creek	13/12/1995																									
422332B	Gowrie Ck Oakey	Oakey Creek	6/02/1996																									
422332B	Gowrie Ck Oakey	Oakey Creek	1/05/1996																									
422332B	Gowrie Ck Oakey	Oakey Creek	2/05/1996																									
422332B	Gowrie Ck Oakey	Oakey Creek	2/05/1996																									
422332B	Gowrie Ck Oakey	Oakey Creek	3/05/1996																									
422332B	Gowrie Ck Oakey	Oakey Creek	3/05/1996																									
422332B	Gowrie Ck Oakey	Oakey Creek	3/05/1996																									
422332B	Gowrie Ck Oakey	Oakey Creek	3/05/1996																									
422332B	Gowrie Ck Oakey	Oakey Creek	3/05/1996																									
422332B	Gowrie Ck Oakey	Oakey Creek	3/05/1996																									
422332B	Gowrie Ck Oakey	Oakey Creek	29/05/1996				0.02	OK	130				0.1	OK	130							0.02	OK	130				
422332B	Gowrie Ck Oakey	Oakey Creek	30/05/1996																									
422332B	Gowrie Ck Oakey	Oakey Creek	30/05/1996																									
422332B	Gowrie Ck Oakey	Oakey Creek	20/06/1996																									
422332B	Gowrie Ck Oakey	Oakey Creek	16/07/1996																									
422332B	Gowrie Ck Oakey	Oakey Creek	28/07/1996				0.02	OK	130				0.12	OK	130							0.05	OK	130				
422332B	Gowrie Ck Oakey	Oakey Creek	28/07/1996				0.02	OK	130				0.14	OK	130							0.01	OK	130				
422332B	Gowrie Ck Oakey	Oakey Creek	28/07/1996				0.01	OK	130				0.12	OK	130							0.01	OK	130				
422332B	Gowrie Ck Oakey	Oakey Creek	4/09/1996																									
422332B	Gowrie Ck Oakey	Oakey Creek	4/09/1996																									
422332B	Gowrie Ck Oakey	Oakey Creek	24/09/1996																									
422332B	Gowrie Ck Oakey	Oakey Creek	3/10/1996																									
422332B	Gowrie Ck Oakey	Oakey Creek	3/10/1996																									
422332B	Gowrie Ck Oakey	Oakey Creek	31/10/1996																									
422332B	Gowrie Ck Oakey	Oakey Creek	5/11/1996																									
422332B	Gowrie Ck Oakey	Oakey Creek	4/12/1996				0.01	OK	130				0.12	OK	130							0.07	OK	130				
422332B	Gowrie Ck Oakey	Oakey Creek	4/12/1996																									
422332B	Gowrie Ck Oakey	Oakey Creek	4/12/1996				0.02	OK	130				0.13	OK	130							0.01	OK	130				
422332B	Gowrie Ck Oakey	Oakey Creek	4/12/1996				0.01	OK	130				0.15	OK	130							0.01	OK	130				
422332B	Gowrie Ck Oakey	Oakey Creek	5/12/1996				0.01	OK	130				0.14	OK	130							0	ND	130				
422332B	Gowrie Ck Oakey	Oakey Creek	5/12/1996				0.01	OK	130				0.13	OK	130							0	ND	130				
422332B	Gowrie Ck Oakey	Oakey Creek	8/12/1996				0.01	OK	130				0.16	OK	130							0	ND	130				
422332B	Gowrie Ck Oakey	Oakey Creek	6/01/1997																									
422332B	Gowrie Ck Oakey	Oakey Creek	22/01/1997																									
422332B	Gowrie Ck Oakey	Oakey Creek	11/02/1997				0.02	OK	130				0.11	OK	130							0.02	OK	130				
422332B	Gowrie Ck Oakey	Oakey Creek	11/02/1997																									
422332B	Gowrie Ck Oakey	Oakey Creek	14/02/1997																									
422332B	Gowrie Ck Oakey	Oakey Creek	25/02/1997																									
422332B	Gowrie Ck Oakey	Oakey Creek	25/02/1997				0.01	OK	130				0.14	OK	130							0.02	OK	130				
422332B	Gowrie Ck Oakey	Oakey Creek	28/04/1997																									
422332B	Gowrie Ck Oakey	Oakey Creek	16/05/1997																									
422332B	Gowrie Ck Oakey	Oakey Creek	3/06/1997				0.03	OK	130				0.13	OK	130							0.04	OK	130				
422332B	Gowrie Ck Oakey	Oakey Creek	4/06/1997																									
422332B	Gowrie Ck Oakey	Oakey Creek	22/07/1997				0.03	OK	130				0.08	OK	130							0.03	OK	130				
422332B	Gowrie Ck Oakey	Oakey Creek	18/09/1997																									
422332B	Gowrie Ck Oakey	Oakey Creek	3/11/1997				0.01	OK	130				0.14	OK	130							0.03	OK	130				
422332B	Gowrie Ck Oakey	Oakey Creek	3/11/1997				0.02	OK	130				0.16	OK	130							0.02	OK	130				
422332B	Gowrie Ck Oakey	Oakey Creek	3/11/1997				0.02	OK	130				0.15	OK	130							0.01	OK	130				
422332B	Gowrie Ck Oakey	Oakey Creek	3/11/1997				0.05	<	130				0.1	OK	130							0.02	<	130				
422332B	Gowrie Ck Oakey	Oakey Creek	3/11/1997				0.01	OK	130				0.12	OK	130							0.01	OK	130				
422332B	Gowrie Ck Oakey	Oakey Creek	3/11/1997																									
422332B	Gowrie Ck Oakey	Oakey Creek	4/11/1997																									
422332B	Gowrie Ck Oakey	Oakey Creek	17/11/1997				0.01	OK	130				0.12	OK	130							0.04	OK	130				
422332B	Gowrie Ck Oakey	Oakey Creek	28/11/1997																									
422332B	Gowrie Ck Oakey	Oakey Creek	28/11/1997				0.01	OK	130				0.13	OK	130							0.02	OK	130				
422332B	Gowrie Ck Oakey	Oakey Creek	28/11/1997																									
422332B	Gowrie Ck Oakey	Oakey Creek	11/01/1998																									
422332B	Gowrie Ck Oakey	Oakey Creek	30/01/1998				0.01	OK	130				0.12	OK	130							0	ND	130				
422332B	Gowrie Ck Oakey	Oakey Creek	11/02/1998																									
422332B	Gowrie Ck Oakey	Oakey Creek	1/05/1998																									
422332B	Gowrie Ck Oakey	Oakey Creek	22/07/1998																									
422332B	Gowrie Ck Oakey	Oakey Creek	4/10/1998				0.03	OK	130				0.11	OK	130							0.01	OK	130				
422332B	Gowrie Ck Oakey	Oakey Creek	5/10/1998																									
422332B	Gowrie Ck Oakey	Oakey Creek	5/10/1998																									

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Station	Station Name	Receiving Creek/ River	Date	V2574.00	F2574.00	Q2574.00	V2622.00	F2622.00	Q2622.00	V2624.00	F2624.00	Q2624.00	V2641.00	F2641.00	Q2641.00	V2694.00	F2694.00	Q2694.00	V2744.00	F2744.00	Q2744.00	V2822.00	F2822.00	Q2822.00	V2824.00	F2824.00	Q2824.00
				Cadmium as Cd total (ug/L)			Copper as Cu soluble mg/L			Copper as Cu total (ug/L)			Flouride as F (mg/L)			Lead as Pb total (ug/L)			Nickel as Ni total (ug/L)			Zinc as Zn soluble (mg/L)			Zinc as Zn total (ug/L)		
422332B	Gowrie Ck Oakey	Oakey Creek	10/01/1999				0.01	OK	130				0.13	OK	130							0.01	OK	130			
422332B	Gowrie Ck Oakey	Oakey Creek	10/01/1999																								
422332B	Gowrie Ck Oakey	Oakey Creek	10/01/1999																								
422332B	Gowrie Ck Oakey	Oakey Creek	10/01/1999				0	ND	130													0	ND	130			
422332B	Gowrie Ck Oakey	Oakey Creek	10/01/1999																								
422332B	Gowrie Ck Oakey	Oakey Creek	11/01/1999																								
422332B	Gowrie Ck Oakey	Oakey Creek	11/01/1999				0.02	OK	130				0.12	OK	130							0.02	OK	130			
422332B	Gowrie Ck Oakey	Oakey Creek	12/01/1999																								
422332B	Gowrie Ck Oakey	Oakey Creek	12/01/1999				0.01	OK	130				0.15	OK	130							0.01	OK	130			
422332B	Gowrie Ck Oakey	Oakey Creek	13/01/1999																								
422332B	Gowrie Ck Oakey	Oakey Creek	15/01/1999																								
422332B	Gowrie Ck Oakey	Oakey Creek	8/02/1999				0.01	OK	130				0.14	OK	130							0.02	OK	130			
422332B	Gowrie Ck Oakey	Oakey Creek	8/02/1999																								
422332B	Gowrie Ck Oakey	Oakey Creek	8/02/1999				0.01	OK	130				0.17	OK	130							0	ND	130			
422332B	Gowrie Ck Oakey	Oakey Creek	9/02/1999																								
422332B	Gowrie Ck Oakey	Oakey Creek	9/02/1999				0.05	<	130				0.2	OK	130							0.02	<	130			
422332B	Gowrie Ck Oakey	Oakey Creek	9/02/1999																								
422332B	Gowrie Ck Oakey	Oakey Creek	9/02/1999				0.07	OK	130				0.15	OK	130							0.01	OK	130			
422332B	Gowrie Ck Oakey	Oakey Creek	9/02/1999																								
422332B	Gowrie Ck Oakey	Oakey Creek	9/02/1999				0.01	OK	130				0.16	OK	130							0.01	OK	130			
422332B	Gowrie Ck Oakey	Oakey Creek	9/02/1999																								
422332B	Gowrie Ck Oakey	Oakey Creek	10/4/1999																								
422332B	Gowrie Ck Oakey	Oakey Creek	28/04/1999																								
422332B	Gowrie Ck Oakey	Oakey Creek	28/04/1999																								
422332B	Gowrie Ck Oakey	Oakey Creek	16/06/1999				0.01	OK	130				0.12	OK	130							0.05	OK	130			
422332B	Gowrie Ck Oakey	Oakey Creek	28/06/1999																								
422332B	Gowrie Ck Oakey	Oakey Creek	28/06/1999																								
422332B	Gowrie Ck Oakey	Oakey Creek	1/09/1999				0.01	OK	130				0.1	OK	130							0.05	OK	130			
422332B	Gowrie Ck Oakey	Oakey Creek	1/09/1999																								
422332B	Gowrie Ck Oakey	Oakey Creek	18/10/1999																								
422332B	Gowrie Ck Oakey	Oakey Creek	19/10/1999																								
422332B	Gowrie Ck Oakey	Oakey Creek	2/11/1999																								
422332B	Gowrie Ck Oakey	Oakey Creek	6/11/1999																								
422332B	Gowrie Ck Oakey	Oakey Creek	9/11/1999				0.05	<	130				0.1	OK	130							0.02	<	130			
422332B	Gowrie Ck Oakey	Oakey Creek	9/11/1999				0.01	OK	130				0.1	OK	130							0.1	OK	130			
422332B	Gowrie Ck Oakey	Oakey Creek	9/11/1999				0.01	OK	130				0.12	OK	130							0.05	OK	130			
422332B	Gowrie Ck Oakey	Oakey Creek	9/11/1999				0.02	OK	130				0.11	OK	130							0.1	OK	130			
422332B	Gowrie Ck Oakey	Oakey Creek	9/11/1999																								
422332B	Gowrie Ck Oakey	Oakey Creek	9/11/1999				0.01	OK	130				0.09	OK	130							0.07	OK	130			
422332B	Gowrie Ck Oakey	Oakey Creek	9/11/1999				0.01	OK	130				0.09	OK	130							0.07	OK	130			
422332B	Gowrie Ck Oakey	Oakey Creek	9/11/1999				0	ND	130				0.08	OK	130							0.06	OK	130			
422332B	Gowrie Ck Oakey	Oakey Creek	9/11/1999																								
422332B	Gowrie Ck Oakey	Oakey Creek	19/12/1999																								
422332B	Gowrie Ck Oakey	Oakey Creek	5/01/2000				0.03	OK	130				0.1	OK	130							0.02	OK	130			
422332B	Gowrie Ck Oakey	Oakey Creek	5/01/2000				0.04	OK	130				0.12	OK	130							0.01	OK	130			
422332B	Gowrie Ck Oakey	Oakey Creek	5/01/2000																								
422332B	Gowrie Ck Oakey	Oakey Creek	5/01/2000																								
422332B	Gowrie Ck Oakey	Oakey Creek	5/01/2000				0.03	OK	130				0.1	OK	130							0	ND	130			
422332B	Gowrie Ck Oakey	Oakey Creek	5/01/2000																								
422332B	Gowrie Ck Oakey	Oakey Creek	18/01/2000				0	ND	130				0.13	OK	130							0.01	OK	130			
422332B	Gowrie Ck Oakey	Oakey Creek	18/01/2000				0	ND	130				0.11	OK	130							0.01	OK	130			
422332B	Gowrie Ck Oakey	Oakey Creek	18/01/2000																								
422332B	Gowrie Ck Oakey	Oakey Creek	17/02/2000																								
422332B	Gowrie Ck Oakey	Oakey Creek	2/05/2000				0.01	OK	130				0.09	OK	130							0.06	OK	130			
422332B	Gowrie Ck Oakey	Oakey Creek	2/05/2000				0.01	OK	130				0.11	OK	130							0.03	OK	130			
422332B	Gowrie Ck Oakey	Oakey Creek	2/05/2000																								
422332B	Gowrie Ck Oakey	Oakey Creek	2/05/2000																								
422332B	Gowrie Ck Oakey	Oakey Creek	3/05/2000				0.05	<	130				0.1	<	130							0.02	<	130			
422332B	Gowrie Ck Oakey	Oakey Creek	3/05/2000																								
422332B	Gowrie Ck Oakey	Oakey Creek	29/05/2000																								
422332B	Gowrie Ck Oakey	Oakey Creek	19/06/2000				0.05	<	130				0.1	OK	130							0.05	OK	130			
422332B	Gowrie Ck Oakey	Oakey Creek	23/08/2000																								
422332B	Gowrie Ck Oakey	Oakey Creek	30/08/2000																								
422332B	Gowrie Ck Oakey	Oakey Creek	5/09/2000																								
422332B	Gowrie Ck Oakey	Oakey Creek	8/09/2000																								
422332B	Gowrie Ck Oakey	Oakey Creek	25/10/2000				0	ND	130				0.11	OK	130							0.09	OK	130			
422332B	Gowrie Ck Oakey	Oakey Creek	25/10/2000																								
422332B	Gowrie Ck Oakey	Oakey Creek	25/10/2000				0	ND	130				0.11	OK	130							0.03	OK	130			
422332B	Gowrie Ck Oakey	Oakey Creek	25/10/2000				0	ND	130				0.13	OK	130							0	ND	130			
422332B	Gowrie Ck Oakey	Oakey Creek	25/10/2000				0	ND	130				0.1	OK	130							0.02	OK	130			
422332B	Gowrie Ck Oakey	Oakey Creek	26/10/2000				0	ND	130				0.1	OK	130							0.01	OK	130			
422332B	Gowrie Ck Oakey	Oakey Creek	26/10/2000				0	ND	130				0.1	OK	130							0.01	OK	130			

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Station	Station Name	Receiving Creek/ River	Date	V2574.00	F2574.00	Q2574.00	V2622.00	F2622.00	Q2622.00	V2624.00	F2624.00	Q2624.00	V2641.00	F2641.00	Q2641.00	V2694.00	F2694.00	Q2694.00	V2744.00	F2744.00	Q2744.00	V2822.00	F2822.00	Q2822.00	V2824.00	F2824.00	Q2824.00	
				Cadmium as Cd total (ug/L)			Copper as Cu soluble mg/L			Copper as Cu total (ug/L)			Flouride as F (mg/L)			Lead as Pb total (ug/L)			Nickel as Ni total (ug/L)			Zinc as Zn soluble (mg/L)			Zinc as Zn total (ug/L)			
422332B	Gowrie Ck Oakey	Oakey Creek	1/02/2001																									
422332B	Gowrie Ck Oakey	Oakey Creek	2/02/2001				0.01	OK	130				0.13	OK	130							0.01	OK	130				
422332B	Gowrie Ck Oakey	Oakey Creek	3/02/2001				0.01	OK	130				0.12	OK	130							0	ND	130				
422332B	Gowrie Ck Oakey	Oakey Creek	3/02/2001				0	ND	130				0.12	OK	130							0.05	OK	130				
422332B	Gowrie Ck Oakey	Oakey Creek	3/02/2001				0.01	OK	130				0.15	OK	130							0.02	OK	130				
422332B	Gowrie Ck Oakey	Oakey Creek	3/02/2001				0.01	OK	130				0.15	OK	130							0.01	OK	130				
422332B	Gowrie Ck Oakey	Oakey Creek	4/02/2001				0.01	OK	130				0.13	OK	130							0.04	OK	130				
422332B	Gowrie Ck Oakey	Oakey Creek	4/02/2001				0	ND	130				0.12	OK	130							0.01	OK	130				
422332B	Gowrie Ck Oakey	Oakey Creek	6/02/2001				0.01	OK	130				0.11	OK	130							0.02	OK	130				
422332B	Gowrie Ck Oakey	Oakey Creek	6/02/2001																									
422332B	Gowrie Ck Oakey	Oakey Creek	5/06/2001																									
422332B	Gowrie Ck Oakey	Oakey Creek	13/06/2001				0.01	OK	130				0.09	OK	130							0.03	OK	130				
422332B	Gowrie Ck Oakey	Oakey Creek	24/10/2001																									
422332B	Gowrie Ck Oakey	Oakey Creek	17/04/2002				0.01	OK	130				0.1	OK	130							0.04	OK	130				
422332B	Gowrie Ck Oakey	Oakey Creek	1/05/2002																									
422332B	Gowrie Ck Oakey	Oakey Creek	18/07/2002																									
422332B	Gowrie Ck Oakey	Oakey Creek	10/12/2002				0.01	OK	130				0.09	OK	130							0.01	OK	130				
422332B	Gowrie Ck Oakey	Oakey Creek	6/12/2003																									
422332B	Gowrie Ck Oakey	Oakey Creek	6/12/2003				0.03	<	130				0.1	OK	130							0.01	<	130				
422332B	Gowrie Ck Oakey	Oakey Creek	8/12/2003				0.3	<	130				0.1	<	130							0.01	OK	130				
422332B	Gowrie Ck Oakey	Oakey Creek	10/03/2004				0.03	<	130				0.1	<	130							0.01	OK	130				
422332B	Gowrie Ck Oakey	Oakey Creek	20/12/2005				0.03	<	130				0.1	OK	130							0.02	OK	130				
422332B	Gowrie Ck Oakey	Oakey Creek	20/03/2006				0.03	<	130				0.2	OK	130							0.15	OK	130				
422332B	Gowrie Ck Oakey	Oakey Creek	16/08/2006				0.03	<	131				0.2	OK	131							0.01	OK	131				
422332B	Gowrie Ck Oakey	Oakey Creek	15/08/2007				0.03	<	10				0.13	OK	10							0.01	<	10				
422332B	Gowrie Ck Oakey	Oakey Creek	25/08/2008				0.03	<	10				0.12	OK	10							0.04	OK	10				
422332B	Gowrie Ck Oakey	Oakey Creek	14/01/2009																									
422332B	Gowrie Ck Oakey	Oakey Creek	27/04/2009																									
422332B	Gowrie Ck Oakey	Oakey Creek	14/09/2009																									
422347B	N Condamine R Pampas	Condamine River	7/06/1989																									
422347B	N Condamine R Pampas	Condamine River	8/06/1989																									
422347B	N Condamine R Pampas	Condamine River	8/06/1989																									
422347B	N Condamine R Pampas	Condamine River	8/06/1989																									
422347B	N Condamine R Pampas	Condamine River	8/06/1989																									
422347B	N Condamine R Pampas	Condamine River	8/06/1989																									
422347B	N Condamine R Pampas	Condamine River	8/06/1989																									
422347B	N Condamine R Pampas	Condamine River	23/08/1989										0.1	OK	125													
422347B	N Condamine R Pampas	Condamine River	6/12/1989										0.27	OK	125													
422347B	N Condamine R Pampas	Condamine River	30/03/1990										0.19	OK	125													
422347B	N Condamine R Pampas	Condamine River	6/03/1991																									
422347B	N Condamine R Pampas	Condamine River	3/02/1992				0.01	OK	135				0.22	OK	125							0.02	OK	135				
422347B	N Condamine R Pampas	Condamine River	4/02/1992																									
422347B	N Condamine R Pampas	Condamine River	25/02/1992																									
422347B	N Condamine R Pampas	Condamine River	21/10/1992																									
422347B	N Condamine R Pampas	Condamine River	21/10/1992										0.15	OK	125							0.03	OK	135				
422347B	N Condamine R Pampas	Condamine River	5/02/1993				0.04	OK	135				0.13	OK	125													
422347B	N Condamine R Pampas	Condamine River	9/06/1993																									
422347B	N Condamine R Pampas	Condamine River	4/03/1994																									
422347B	N Condamine R Pampas	Condamine River	2/02/1996																									
422347B	N Condamine R Pampas	Condamine River	27/05/1996																									
422347B	N Condamine R Pampas	Condamine River	6/09/1996																									
422347B	N Condamine R Pampas	Condamine River	3/12/1996																									
422353A	Yarramalong	Condamine River	21/01/1988										0.2	OK	125													
422353A	Yarramalong	Condamine River	21/01/1988																									
422353A	Yarramalong	Condamine River	11/05/1989																									
422353A	Yarramalong	Condamine River	23/08/1989										0.1	OK	125													
422353A	Yarramalong	Condamine River	2/07/1990										0.11	OK	125													
422353A	Yarramalong	Condamine River	17/10/1990				0.04	OK	135				0.17	OK	125							0.01	OK	135				
422353A	Yarramalong	Condamine River	6/03/1991																									
422353A	Yarramalong	Condamine River	6/06/1991																									
422353A	Yarramalong	Condamine River	25/11/1991																									
422353A	Yarramalong	Condamine River	7/02/1992										0.18	OK	125													
422353A	Yarramalong	Condamine River	3/07/1992																									
422353A	Yarramalong	Condamine River	3/07/1992				0.03	OK	135				0.13	OK	125													
422353A	Yarramalong	Condamine River	26/10/1992																									
422353A	Yarramalong	Condamine River	26/10/1992										0.14	OK	125							0.01	OK	135				
422353A	Yarramalong	Condamine River	8/02/1993				0.02	OK	135				0.17	OK	125													
422353A	Yarramalong	Condamine River	10/06/1993																									
422353A	Yarramalong	Condamine River	10/06/1993				0.05	OK	135				0.16	OK	125							0.12	OK	135				
422353A	Yarramalong	Condamine River	4/03/1994																									

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Station	Station Name	Receiving Creek/ River	Date	V2574.00	F2574.00	Q2574.00	V2622.00	F2622.00	Q2622.00	V2624.00	F2624.00	Q2624.00	V2641.00	F2641.00	Q2641.00	V2694.00	F2694.00	Q2694.00	V2744.00	F2744.00	Q2744.00	V2822.00	F2822.00	Q2822.00	V2824.00	F2824.00	Q2824.00	
				Cadmium as Cd total (ug/L)			Copper as Cu soluble mg/L			Copper as Cu total (ug/L)			Flouride as F (mg/L)			Lead as Pb total (ug/L)			Nickel as Ni total (ug/L)			Zinc as Zn soluble (mg/L)			Zinc as Zn total (ug/L)			
422353A	Yarramalong	Condamine River	30/08/1995																									
422353A	Yarramalong	Condamine River	13/09/1995																									
422353A	Yarramalong	Condamine River	27/05/1996																									
422353A	Yarramalong	Condamine River	5/07/1996																									
422353A	Yarramalong	Condamine River	18/07/1996																									
422353A	Yarramalong	Condamine River	6/09/1996																									
422353A	Yarramalong	Condamine River	6/12/1996																									
422353A	Yarramalong	Condamine River	5/06/1997				0.02	OK	130				0.17	OK	130							0	ND	130				
422353A	Yarramalong	Condamine River	24/07/1997																									
422353A	Yarramalong	Condamine River	18/11/1997				0.01	OK	130				0.16	OK	130							0.01	OK	130				
422353A	Yarramalong	Condamine River	18/11/1997																									
422353A	Yarramalong	Condamine Rivér	3/09/1998																									
422353A	Yarramalong	Condamine River	17/03/2001				0	ND	130				0.11	OK	130							0.01	OK	130				
422353A	Yarramalong	Condamine River	9/11/2001				0	ND	130				0.13	OK	130							0.01	OK	130				
422353A	Yarramalong	Condamine River	5/05/2006				0.03	<	130				0.2	OK	130							0.01	<	130				
422353A	Yarramalong	Condamine River	19/11/2007				0.03	<	10				0.18	OK	10							0.09	OK	10				
422354A	NCondamine_R Glendon	Condamine River	22/08/1989										0.1	OK	125													
422354A	NCondamine_R Glendon	Condamine River	22/08/1989																									
422354A	NCondamine_R Glendon	Condamine River	28/03/1990										0.3	OK	125													
422354A	NCondamine_R Glendon	Condamine River	2/07/1990										0.22	OK	125													
422354A	NCondamine_R Glendon	Condamine River	2/07/1990																									
422354A	NCondamine_R Glendon	Condamine River	20/02/1992				0.02	OK	135				0.24	OK	125													

**Attachment B
Laboratory Chain of Custody,
Water Quality and
Quality Control Results**



CHAIN OF CUSTODY

ALS Laboratory: please tick →

□ Sydney: 277 Woodpark Rd, Smithfield NSW 2176
Ph: 02 8764 8555 E:samples.sydney@alsenviro.com

□ Brisbane: 32 Shand St, Stafford QLD 4053
Ph: 07 3243 7222 E:samples.brisbane@alsenviro.com

□ Melbourne: 2-4 Westall Rd, Springvale VIC 3171
Ph: 03 8548 8600 E:samples.melbourne@alsenviro.com

□ Perth: 10 Hod Way, Melage WA 6090
Ph: 08 9209 7655 E:samples.perth@alsenviro.com

□ Newcastle: 5 Rosegum Rd, Warabrook NSW 2304
Ph: 02 4968 9433 E:samples.newcastle@alsenviro.com

□ Townsville: 14-15 Desma Ct, Bohle QLD 4818
Ph: 07 4796 0600 E:townsville.environment@alsenviro.com

□ Adelaide: 2-1 Burma Rd, Pooraka SA 5065
Ph: 08 8359 0890 E:adelaide@alsenviro.com

□ Launceston: 27 Wellington St, Launceston TAS 7250
Ph: 03 6331 2156 E:launceston@alsenviro.com

CLIENT: <u>ALTA - ALLUVIUM</u>		TURNAROUND REQUIREMENTS : <input type="checkbox"/> Standard TAT (List due date): <input checked="" type="checkbox"/> Non Standard or urgent TAT (List due date):		FOR LABORATORY USE ONLY (Circle)	
OFFICE:		Standard TAT may be longer for some tests e.g., Ultra Trace Organics		Custody Seal Intact? Yes No N/A	
PROJECT: <u>Alluvium Dalby</u>		ALS QUOTE NO.: <u>BN/580109</u>		Free ice / frozen ice bricks present upon receipt? Yes No N/A	
ORDER NUMBER:		COC SEQUENCE NUMBER (Circle)		Random Sample Temperature on Receipt: °C	
PROJECT MANAGER: <u>JASON CARTER</u>		CONTACT PH: <u>4724 2170</u>		Other comment:	
SAMPLER: <u>Anne-Marie CALIN & NATWAF Advancements</u>		SAMPLER MOBILE: <u>0413 409 840</u>		RECEIVED BY: <u>ANN</u>	
COC emailed to ALS? (YES / NO)		EDD FORMAT (or default):		RELINQUISHED BY:	
Email Reports to (will default to PM if no other addresses are listed): <u>anne-marie@natres.com.au</u>		DATE/TIME: <u>15/10/09</u>		DATE/TIME:	
Email Invoice to (will default to PM if no other addresses are listed): <u>Jason.carter@alluvium.com.au</u>		RECEIVED BY: <u>ANN</u>		RECEIVED BY: <u>Christina ALS</u>	
		DATE/TIME: <u>15/10/09</u>		DATE/TIME: <u>16.10.09 9:40</u>	

COMMENTS/SPECIAL HANDLING/STORAGE OR DISPOSAL:

ALS USE ONLY	SAMPLE DETAILS MATRIX: Solid(S) Water(W)			CONTAINER INFORMATION	ANALYSIS REQUIRED including SUITES (NB, Suite Codes must be listed to attract suite price) Where Metals are required, specify Total (unfiltered bottle required) or Dissolved (field filtered bottle required)										Additional Information															
LAB ID	SAMPLE ID	DATE / TIME	MATRIX	TYPE & PRESERVATIVE (refer to codes below)	TOTAL BOTTLES	Total Suspended Solids	Selenium Absorption Ratio	Total Hardness	Sulphate Chloride	Free Cyanide	Fluoride	Nitrite	Nitrate	Ammonia	Total Nitrogen	Total Phosphorus	Total Metals - Ultra Trace	As, B, Cd, Co, Cr, Cu, Pb	Ni, Se, Zn	Dissolved Metals - Ultra	As, B, Cd, Co, Cr, Cu, Pb, Ni, Se, Zn	Total Hg by PMS	Bioassay by Fims	TPH (P.C.B. Superfund)	OC Residues	OP Residues	Monogenic aromatic Hydrocarbons	PAH - Superfund	Comments on likely contaminant levels, dilutions, or samples requiring specific QC analysis etc.	
1	8	14/10/09 / 440pm	FW		13	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	
2	6	14/10/09 / 540pm	FW		13	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	* note that ammonia was not quoted
3	1	15/10/09 / 730am	FW		13	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	LOL required is Sp/lt	
4	3	15/10/09 / 930am	FW																											
5	4	15/10/09 / 1040am	FW		13	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	
					TOTAL																									

Environmental Division
Brisbane
Work Order W
EB0916401

Telephone: +61-7-3243 7222



Water Container Codes: P = Unpreserved Plastic; N = Nitric Preserved Plastic; ORC = Nitric Preserved ORC; SH = Sodium Hydroxide/Cd Preserved; S = Sodium Hydroxide Preserved Plastic; AG = Amber Glass Unpreserved; AP = Airfreight Unpreserved P
V = VOA Vial HCl Preserved; VB = VOA Vial Sodium Bisulphate Preserved; VS = VOA Vial Sulfuric Preserved; AV = Airfreight Unpreserved Vial SG = Sulfuric Preserved Amber Glass; H = HCl preserved Plastic; HS = HCl preserved Speciation bottle; SP = S
Z = Zinc Acetate Preserved Bottle; E = EDTA Preserved Bottles; ST = Sterile Bottle; ASS = Plastic Bag for Acid Sulphate Soils; B = Unpreserved Bag.



Environmental Division

QUALITY CONTROL REPORT

Work Order	: EB0916401	Page	: 1 of 12
Amendment	: 2		
Client	: ALLUVIUM CONSULTING	Laboratory	: Environmental Division Brisbane
Contact	: MS ANNE MARIE CALVI	Contact	: Tim Kilmister
Address	: PO BOX 1581 TOWNSVILLE QLD, AUSTRALIA 4810	Address	: 32 Shand Street Stafford QLD Australia 4053
E-mail	: anne-marie@natres.com.au	E-mail	: Services.Brisbane@alsenviro.com
Telephone	: +61 07 47242170	Telephone	: +61-7-3243 7222
Facsimile	: ----	Facsimile	: +61-7-3243 7218
Project	: Alluvium Dalby	QC Level	: NEPM 1999 Schedule B(3) and ALS QCS3 requirement
Site	: ----		
C-O-C number	: ----	Date Samples Received	: 16-OCT-2009
Sampler	: A.C, M.A	Issue Date	: 10-NOV-2009
Order number	: ----		
Quote number	: BN/580/09	No. of samples received	: 4
		No. of samples analysed	: 4

This report supersedes any previous report(s) with this reference. Results apply to the sample(s) as submitted. All pages of this report have been checked and approved for release.

This Quality Control Report contains the following information:

- Laboratory Duplicate (DUP) Report; Relative Percentage Difference (RPD) and Acceptance Limits
- Method Blank (MB) and Laboratory Control Spike (LCS) Report; Recovery and Acceptance Limits
- Matrix Spike (MS) Report; Recovery and Acceptance Limits



NATA Accredited Laboratory 825

This document is issued in accordance with NATA accreditation requirements.

Accredited for compliance with ISO/IEC 17025.

Signatories

This document has been electronically signed by the authorized signatories indicated below. Electronic signing has been carried out in compliance with procedures specified in 21 CFR Part 11.

<i>Signatories</i>	<i>Position</i>	<i>Accreditation Category</i>
Alex Rossi	Organic Chemist	Organics
Celine Conceicao	Spectroscopist	Inorganics
Edwandy Fadjar	Senior Organic Chemist	Organics
Hoa Nguyen	Inorganic Chemist	Inorganics
Kim McCabe	Senior Inorganic Chemist	Inorganics
Matt Frost	Organic Instrument Chemist	Organics
Sarah Ashworth	Organic Chemist	Organics
Stephen Hislop	Senior Inorganic Chemist	Inorganics
Wisam Abou-Maraseh	Spectroscopist	Inorganics



General Comments

The analytical procedures used by the Environmental Division have been developed from established internationally recognized procedures such as those published by the USEPA, APHA, AS and NEPM. In house developed procedures are employed in the absence of documented standards or by client request.

Where moisture determination has been performed, results are reported on a dry weight basis.

Where a reported less than (<) result is higher than the LOR, this may be due to primary sample extract/digestate dilution and/or insufficient sample for analysis.

Where the LOR of a reported result differs from standard LOR, this may be due to high moisture content, insufficient sample (reduced weight employed) or matrix interference.

Key :
Anonymous = Refers to samples which are not specifically part of this work order but formed part of the QC process lot
CAS Number = CAS registry number from database maintained by Chemical Abstracts Services. The Chemical Abstracts Service is a division of the American Chemical Society.
LOR = Limit of reporting
RPD = Relative Percentage Difference
= Indicates failed QC



Laboratory Duplicate (DUP) Report

The quality control term Laboratory Duplicate refers to a randomly selected intralaboratory split. Laboratory duplicates provide information regarding method precision and sample heterogeneity. The permitted ranges for the Relative Percent Deviation (RPD) of Laboratory Duplicates are specified in ALS Method QWI-EN/38 and are dependent on the magnitude of results in comparison to the level of reporting: Result < 10 times LOR:- No Limit; Result between 10 and 20 times LOR:- 0% - 50%; Result > 20 times LOR:- 0% - 20%.

Sub-Matrix: **WATER**

				Laboratory Duplicate (DUP) Report					
Laboratory sample ID	Client sample ID	Method: Compound	CAS Number	LOR	Unit	Original Result	Duplicate Result	RPD (%)	Recovery Limits (%)
EA025: Suspended Solids (QC Lot: 1139136)									
EB0916401-001	8	EA025H: Suspended Solids (SS)	----	5	mg/L	34	32	6.1	No Limit
EB0916413-008	Anonymous	EA025H: Suspended Solids (SS)	----	5	mg/L	93	88	5.9	0% - 50%
ED040F: Dissolved Major Anions (QC Lot: 1134356)									
EB0916119-007	Anonymous	ED040F: Sulfate as SO4 2-	14808-79-8	1	mg/L	1	1	0.0	No Limit
EB0916401-001	8	ED040F: Sulfate as SO4 2-	14808-79-8	1	mg/L	45	46	0.0	0% - 20%
ED045G: Chloride Discrete analyser (QC Lot: 1134358)									
EB0916119-007	Anonymous	ED045G: Chloride	16887-00-6	1	mg/L	<1	<1	0.0	No Limit
ED093F: Dissolved Major Cations (QC Lot: 1134357)									
EB0916119-007	Anonymous	ED093F: Calcium	7440-70-2	1	mg/L	2	2	0.0	No Limit
		ED093F: Magnesium	7439-95-4	1	mg/L	<1	<1	0.0	No Limit
		ED093F: Sodium	7440-23-5	1	mg/L	<1	<1	0.0	No Limit
EB0916401-001	8	ED093F: Calcium	7440-70-2	1	mg/L	26	25	0.0	0% - 20%
		ED093F: Magnesium	7439-95-4	1	mg/L	17	16	0.0	0% - 50%
		ED093F: Sodium	7440-23-5	1	mg/L	151	152	0.0	0% - 20%
EG035F: Dissolved Mercury by FIMS (QC Lot: 1137767)									
EB0916401-001	8	EG035F: Mercury	7439-97-6	0.0001	mg/L	<0.0001	<0.0001	0.0	No Limit
EB0916488-007	Anonymous	EG035F: Mercury	7439-97-6	0.0001	mg/L	<0.0001	<0.0001	0.0	No Limit
EG035T: Total Recoverable Mercury by FIMS (QC Lot: 1138093)									
EB0916401-001	8	EG035T: Mercury	7439-97-6	0.0001	mg/L	<0.0001	<0.0001	0.0	No Limit
EB0916488-007	Anonymous	EG035T: Mercury	7439-97-6	0.0001	mg/L	<0.0001	<0.0001	0.0	No Limit
EG094F: Dissolved Metals in Fresh Water by ORC-ICPMS (QC Lot: 1137897)									
EB0916315-001	Anonymous	EG094A-F: Cadmium	7440-43-9	0.05	µg/L	0.05	0.06	0.0	No Limit
		EG094A-F: Cobalt	7440-48-4	0.1	µg/L	0.3	0.3	0.0	No Limit
		EG094A-F: Lead	7439-92-1	0.1	µg/L	0.2	0.1	0.0	No Limit
		EG094A-F: Arsenic	7440-38-2	0.2	µg/L	1.9	1.9	0.0	No Limit
		EG094A-F: Vanadium	7440-62-2	0.2	µg/L	1.4	1.3	0.0	No Limit
		EG094A-F: Copper	7440-50-8	0.5	µg/L	0.5	0.5	0.0	No Limit
		EG094A-F: Nickel	7440-02-0	0.5	µg/L	4.0	4.0	0.0	No Limit
		EG094A-F: Zinc	7440-66-6	1	µg/L	<1	2	88.8	No Limit
		EG094A-F: Boron	7440-42-8	5	µg/L	369	360	2.7	0% - 20%
EB0916373-004	Anonymous	EG094A-F: Cadmium	7440-43-9	0.05	µg/L	<0.05	<0.05	0.0	No Limit
		EG094A-F: Cobalt	7440-48-4	0.1	µg/L	0.3	0.3	0.0	No Limit
		EG094A-F: Lead	7439-92-1	0.1	µg/L	<0.1	<0.1	0.0	No Limit
		EG094A-F: Arsenic	7440-38-2	0.2	µg/L	1.4	1.4	0.0	No Limit



Sub-Matrix: WATER				Laboratory Duplicate (DUP) Report					
Laboratory sample ID	Client sample ID	Method: Compound	CAS Number	LOR	Unit	Original Result	Duplicate Result	RPD (%)	Recovery Limits (%)
EG094F: Dissolved Metals in Fresh Water by ORC-ICPMS (QC Lot: 1137897) - continued									
EB0916373-004	Anonymous	EG094A-F: Vanadium	7440-62-2	0.2	µg/L	1.4	1.4	0.0	No Limit
		EG094A-F: Copper	7440-50-8	0.5	µg/L	0.6	0.5	0.0	No Limit
		EG094A-F: Nickel	7440-02-0	0.5	µg/L	3.9	4.0	0.0	No Limit
		EG094A-F: Zinc	7440-66-6	1	µg/L	<1	<1	0.0	No Limit
		EG094A-F: Boron	7440-42-8	5	µg/L	331	326	1.3	0% - 20%
EG094F: Dissolved Metals in Fresh Water by ORC-ICPMS (QC Lot: 1137898)									
EB0916315-001	Anonymous	EG094B-F: Selenium	7782-49-2	0.2	µg/L	7.8	7.9	0.0	0% - 20%
EB0916373-004	Anonymous	EG094B-F: Selenium	7782-49-2	0.2	µg/L	9.2	9.1	1.1	0% - 20%
EG094T: Total metals in Fresh water by ORC-ICPMS (QC Lot: 1137901)									
EB0916401-001	8	EG094A-T: Cadmium	7440-43-9	0.05	µg/L	<0.05	<0.05	0.0	No Limit
		EG094A-T: Cobalt	7440-48-4	0.1	µg/L	1.7	1.7	0.0	0% - 50%
		EG094A-T: Lead	7439-92-1	0.1	µg/L	1.4	1.3	8.0	0% - 50%
		EG094A-T: Arsenic	7440-38-2	0.2	µg/L	2.6	2.7	0.0	0% - 50%
		EG094A-T: Copper	7440-50-8	0.5	µg/L	5.1	5.1	0.0	0% - 50%
		EG094A-T: Nickel	7440-02-0	0.5	µg/L	3.5	3.5	0.0	No Limit
		EG094A-T: Zinc	7440-66-6	1	µg/L	65	64	1.6	0% - 20%
		EG094A-T: Boron	7440-42-8	5	µg/L	119	114	4.2	0% - 20%
EB0916488-007	Anonymous	EG094A-T: Cadmium	7440-43-9	0.05	µg/L	<0.05	<0.05	0.0	No Limit
		EG094A-T: Cobalt	7440-48-4	0.1	µg/L	9.4	9.6	2.4	0% - 20%
		EG094A-T: Lead	7439-92-1	0.1	µg/L	7.1	7.1	0.0	0% - 20%
		EG094A-T: Arsenic	7440-38-2	0.2	µg/L	2.9	3.0	0.0	0% - 50%
		EG094A-T: Copper	7440-50-8	0.5	µg/L	4.4	4.6	4.7	No Limit
		EG094A-T: Nickel	7440-02-0	0.5	µg/L	10.3	10.5	1.7	0% - 20%
		EG094A-T: Zinc	7440-66-6	1	µg/L	19	16	18.4	0% - 50%
		EG094A-T: Boron	7440-42-8	5	µg/L	44	44	0.0	No Limit
EG094T: Total metals in Fresh water by ORC-ICPMS (QC Lot: 1137902)									
EB0916401-001	8	EG094B-T: Selenium	7782-49-2	0.2	µg/L	0.4	0.4	0.0	No Limit
EB0916488-007	Anonymous	EG094B-T: Selenium	7782-49-2	0.2	µg/L	0.4	0.4	0.0	No Limit
EK025G: Free cyanide by Discrete Analyser (QC Lot: 1138461)									
EB0916401-001	8	EK025G: Free Cyanide	----	0.004	mg/L	<0.004	<0.004	0.0	No Limit
EB0916488-006	Anonymous	EK025G: Free Cyanide	----	0.004	mg/L	<0.004	<0.004	0.0	No Limit
EK040P: Fluoride by PC Titrator (QC Lot: 1139317)									
EB0916401-002	6	EK040P: Fluoride	16984-48-8	0.1	mg/L	0.3	0.3	0.0	No Limit
EB0916488-007	Anonymous	EK040P: Fluoride	16984-48-8	0.1	mg/L	0.1	0.1	0.0	No Limit
EK055G: Ammonia as N by Discrete Analyser (QC Lot: 1142790)									
EB0916315-001	Anonymous	EK055G: Ammonia as N	7664-41-7	0.01	mg/L	0.10	0.07	31.6	No Limit
EB0916455-001	Anonymous	EK055G: Ammonia as N	7664-41-7	0.01	mg/L	0.45	0.43	4.8	0% - 20%
EK057G: Nitrite as N by Discrete Analyser (QC Lot: 1134361)									
EB0916401-001	8	EK057G: Nitrite as N	----	0.01	mg/L	<0.01	<0.01	0.0	No Limit



Sub-Matrix: WATER				Laboratory Duplicate (DUP) Report						
Laboratory sample ID	Client sample ID	Method: Compound	CAS Number	LOR	Unit	Original Result	Duplicate Result	RPD (%)	Recovery Limits (%)	
EK057G: Nitrite as N by Discrete Analyser (QC Lot: 1134361) - continued										
EB0916421-004	Anonymous	EK057G: Nitrite as N	----	0.01	mg/L	<0.01	<0.01	0.0	No Limit	
EK059G: NOX as N by Discrete Analyser (QC Lot: 1142789)										
EB0916315-001	Anonymous	EK059G: Nitrite + Nitrate as N	----	0.01	mg/L	2.90	2.98	2.9	0% - 20%	
EB0916455-001	Anonymous	EK059G: Nitrite + Nitrate as N	----	0.01	mg/L	5.40	5.91	9.0	0% - 20%	
EP074A: Monocyclic Aromatic Hydrocarbons (QC Lot: 1134897)										
EB0916344-002	Anonymous	EP074: Benzene	71-43-2	1	µg/L	<1	<1	0.0	No Limit	
		EP074: Toluene	108-88-3	2	µg/L	<2	<2	0.0	No Limit	
		EP074: Ethylbenzene	100-41-4	2	µg/L	<2	<2	0.0	No Limit	
		EP074: meta- & para-Xylene	108-38-3	2	µg/L	<2	<2	0.0	No Limit	
			106-42-3							
		EP074: ortho-Xylene	95-47-6	2	µg/L	<2	<2	0.0	No Limit	
		EP074: Styrene	100-42-5	5	µg/L	<5	<5	0.0	No Limit	
		EP074: Isopropylbenzene	98-82-8	5	µg/L	<5	<5	0.0	No Limit	
		EP074: n-Propylbenzene	103-65-1	5	µg/L	<5	<5	0.0	No Limit	
		EP074: 1.3.5-Trimethylbenzene	108-67-8	5	µg/L	<5	<5	0.0	No Limit	
		EP074: sec-Butylbenzene	135-98-8	5	µg/L	<5	<5	0.0	No Limit	
		EP074: 1.2.4-Trimethylbenzene	95-63-6	5	µg/L	<5	<5	0.0	No Limit	
		EP074: tert-Butylbenzene	98-06-6	5	µg/L	<5	<5	0.0	No Limit	
		EP074: p-Isopropyltoluene	99-87-6	5	µg/L	<5	<5	0.0	No Limit	
EP074: n-Butylbenzene	104-51-8	5	µg/L	<5	<5	0.0	No Limit			
EP080/071: Total Petroleum Hydrocarbons (QC Lot: 1134896)										
EB0916300-001	Anonymous	EP080: C6 - C9 Fraction	----	20	µg/L	60	50	0.0	No Limit	
EB0916401-004	4	EP080: C6 - C9 Fraction	----	20	µg/L	<20	<20	0.0	No Limit	
Ultra-Trace Nutrients (QC Lot: 1136891)										
EB0916401-001	8	EK267PA-CM: Total Phosphorus as P	----	0.005	mg/L	0.387	0.413	6.6	0% - 20%	
EB0916488-006	Anonymous	EK267PA-CM: Total Phosphorus as P	----	0.005	mg/L	0.254	0.268	5.7	0% - 20%	
Ultra-Trace Nutrients (QC Lot: 1136892)										
EB0916401-001	8	EK262PA-CM: Total Nitrogen as N	----	0.05	mg/L	1.41	1.43	1.6	0% - 20%	
EB0916488-006	Anonymous	EK262PA-CM: Total Nitrogen as N	----	0.05	mg/L	1.11	1.02	8.3	0% - 20%	



Method Blank (MB) and Laboratory Control Spike (LCS) Report

The quality control term Method / Laboratory Blank refers to an analyte free matrix to which all reagents are added in the same volumes or proportions as used in standard sample preparation. The purpose of this QC parameter is to monitor potential laboratory contamination. The quality control term Laboratory Control Sample (LCS) refers to a certified reference material, or a known interference free matrix spiked with target analytes. The purpose of this QC parameter is to monitor method precision and accuracy independent of sample matrix. Dynamic Recovery Limits are based on statistical evaluation of processed LCS.

Sub-Matrix: WATER

				Method Blank (MB) Report Result	Laboratory Control Spike (LCS) Report			
					Spike Concentration	Spike Recovery (%) LCS	Recovery Limits (%)	
Method: Compound	CAS Number	LOR	Unit	Low			High	
EA025: Suspended Solids (QCLot: 1139136)								
EA025H: Suspended Solids (SS)	----	5	mg/L	<5	150 mg/L	101	86	108
ED040F: Dissolved Major Anions (QCLot: 1134356)								
ED040F: Sulfate as SO4 2-	14808-79-8	1	mg/L	<1	----	----	----	----
ED045G: Chloride Discrete analyser (QCLot: 1134358)								
ED045G: Chloride	16887-00-6	1	mg/L	<1	1000 mg/L	82.1	90	130
ED093F: Dissolved Major Cations (QCLot: 1134357)								
ED093F: Calcium	7440-70-2	1	mg/L	<1	----	----	----	----
ED093F: Magnesium	7439-95-4	1	mg/L	<1	----	----	----	----
ED093F: Sodium	7440-23-5	1	mg/L	<1	----	----	----	----
EG035F: Dissolved Mercury by FIMS (QCLot: 1137767)								
EG035F: Mercury	7439-97-6	0.0001	mg/L	<0.0001	0.010 mg/L	105	86	116
EG035T: Total Recoverable Mercury by FIMS (QCLot: 1138093)								
EG035T: Mercury	7439-97-6	0.0001	mg/L	<0.0001	0.010 mg/L	102	81	119
EG094F: Dissolved Metals in Fresh Water by ORC-ICPMS (QCLot: 1137897)								
EG094A-F: Arsenic	7440-38-2	0.2	µg/L	<0.2	10 µg/L	107	81	121
EG094A-F: Boron	7440-42-8	5	µg/L	<5	10 µg/L	112	70	130
EG094A-F: Cadmium	7440-43-9	0.05	µg/L	<0.05	10 µg/L	103	70	130
EG094A-F: Cobalt	7440-48-4	0.1	µg/L	<0.1	10 µg/L	109	70	130
EG094A-F: Copper	7440-50-8	0.5	µg/L	<0.5	10 µg/L	114	70	130
EG094A-F: Lead	7439-92-1	0.1	µg/L	<0.1	10 µg/L	109	70	130
EG094A-F: Nickel	7440-02-0	0.5	µg/L	<0.5	10 µg/L	110	70	130
EG094A-F: Vanadium	7440-62-2	0.2	µg/L	<0.2	10 µg/L	99.8	70	130
EG094A-F: Zinc	7440-66-6	1	µg/L	<1	10 µg/L	106	70	130
EG094B: Dissolved Metals in Fresh Water by ORC-ICPMS (QCLot: 1137898)								
EG094B-F: Selenium	7782-49-2	0.2	µg/L	<0.2	10 µg/L	98.2	74	122
EG094T: Total metals in Fresh water by ORC-ICPMS (QCLot: 1137901)								
EG094A-T: Arsenic	7440-38-2	0.2	µg/L	<0.2	10 µg/L	102	70	130
EG094A-T: Boron	7440-42-8	5	µg/L	<5	10 µg/L	117	70	130
EG094A-T: Cadmium	7440-43-9	0.05	µg/L	<0.05	10 µg/L	94.3	70	130
EG094A-T: Cobalt	7440-48-4	0.1	µg/L	<0.1	10 µg/L	106	70	130
EG094A-T: Copper	7440-50-8	0.5	µg/L	<0.5	10 µg/L	101	70	130
EG094A-T: Lead	7439-92-1	0.1	µg/L	<0.1	10 µg/L	98.8	70	130
EG094A-T: Nickel	7440-02-0	0.5	µg/L	<0.5	10 µg/L	104	70	130



Sub-Matrix: **WATER**

Method: Compound	CAS Number	LOR	Unit	Method Blank (MB) Report	Laboratory Control Spike (LCS) Report			
				Result	Spike Concentration	Spike Recovery (%)	Recovery Limits (%)	
						LCS	Low	High
EG094T: Total metals in Fresh water by ORC-ICPMS (QCLot: 1137901) - continued								
EG094A-T: Zinc	7440-66-6	1	µg/L	<1	10 µg/L	101	70	130
EG094T: Total metals in Fresh water by ORC-ICPMS (QCLot: 1137902)								
EG094B-T: Selenium	7782-49-2	0.2	µg/L	<0.2	10 µg/L	95.3	70	130
EK025G: Free cyanide by Discrete Analyser (QCLot: 1138461)								
EK025G: Free Cyanide	----	0.004	mg/L	<0.004	0.5 mg/L	88.6	70	124
EK040P: Fluoride by PC Titrator (QCLot: 1139317)								
EK040P: Fluoride	16984-48-8	0.1	mg/L	<0.1	10 mg/L	110	75	123
EK055G: Ammonia as N by Discrete Analyser (QCLot: 1142790)								
EK055G: Ammonia as N	7664-41-7	0.01	mg/L	<0.01	0.5 mg/L	80.2	70	129
EK057G: Nitrite as N by Discrete Analyser (QCLot: 1134361)								
EK057G: Nitrite as N	----	0.01	mg/L	<0.01	0.5 mg/L	96.2	74	128
EK059G: NOX as N by Discrete Analyser (QCLot: 1142789)								
EK059G: Nitrite + Nitrate as N	----	0.01	mg/L	<0.01	0.5 mg/L	107	70	130
EP074A: Monocyclic Aromatic Hydrocarbons (QCLot: 1134897)								
EP074: Benzene	71-43-2	1	µg/L	<1	10 µg/L	111	75	122
EP074: Toluene	108-88-3	2	µg/L	<2	10 µg/L	111	71.2	124
EP074: Ethylbenzene	100-41-4	2	µg/L	<2	10 µg/L	106	76	120
EP074: meta- & para-Xylene	108-38-3	2	µg/L	<2	20 µg/L	108	68	132
	106-42-3							
EP074: Styrene	100-42-5	5	µg/L	<5	10 µg/L	103	68	127
EP074: ortho-Xylene	95-47-6	2	µg/L	<2	10 µg/L	108	76	122
EP074: Isopropylbenzene	98-82-8	5	µg/L	<5	10 µg/L	102	74	123
EP074: n-Propylbenzene	103-65-1	5	µg/L	<5	10 µg/L	102	69	125
EP074: 1,3,5-Trimethylbenzene	108-67-8	5	µg/L	<5	10 µg/L	104	74	121
EP074: sec-Butylbenzene	135-98-8	5	µg/L	<5	10 µg/L	105	72	124
EP074: 1,2,4-Trimethylbenzene	95-63-6	5	µg/L	<5	10 µg/L	107	73.5	124
EP074: tert-Butylbenzene	98-06-6	5	µg/L	<5	10 µg/L	103	71.6	128
EP074: p-Isopropyltoluene	99-87-6	5	µg/L	<5	10 µg/L	# 146	68.3	130
EP074: n-Butylbenzene	104-51-8	5	µg/L	<5	10 µg/L	104	67	126
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons (QCLot: 1137376)								
EP132-LL: Naphthalene	91-20-3	0.02	µg/L	<0.02	0.025 µg/L	92.3	68.3	116
EP132-LL: Acenaphthylene	208-96-8	0.02	µg/L	<0.02	0.025 µg/L	82.7	72.4	112
EP132-LL: Acenaphthene	83-32-9	0.02	µg/L	<0.02	0.025 µg/L	78.8	73.2	111
EP132-LL: Fluorene	86-73-7	0.02	µg/L	<0.02	0.025 µg/L	100	72.9	114
EP132-LL: Phenanthrene	85-01-8	0.02	µg/L	<0.02	0.025 µg/L	87.2	74.8	112
EP132-LL: Anthracene	120-12-7	0.02	µg/L	<0.02	0.025 µg/L	# 115	73.4	113
EP132-LL: Fluoranthene	206-44-0	0.02	µg/L	<0.02	0.025 µg/L	87.0	74.8	117
EP132-LL: Pyrene	129-00-0	0.02	µg/L	<0.02	0.025 µg/L	95.8	74.1	117



Sub-Matrix: **WATER**

Method: Compound	CAS Number	LOR	Unit	Method Blank (MB) Report	Laboratory Control Spike (LCS) Report				
				Result	Spike Concentration	Spike Recovery (%)		Recovery Limits (%)	
						LCS	Low	High	
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons (QCLot: 1137376) - continued									
EP132-LL: Benz(a)anthracene	56-55-3	0.02	µg/L	<0.02	0.025 µg/L	90.4	73.6	114	
EP132-LL: Chrysene	218-01-9	0.02	µg/L	<0.02	0.025 µg/L	85.1	69.6	120	
EP132-LL: Benzo(b)fluoranthene	205-99-2	0.02	µg/L	<0.02	0.025 µg/L	99.6	71.4	119	
EP132-LL: Benzo(k)fluoranthene	207-08-9	0.02	µg/L	<0.02	0.025 µg/L	81.5	74.8	118	
EP132-LL: Benzo(a)pyrene	50-32-8	0.005	µg/L	<0.005	0.025 µg/L	76.8	75.2	117	
EP132-LL: Indeno(1.2.3.cd)pyrene	193-39-5	0.02	µg/L	<0.02	0.025 µg/L	79.0	67.8	119	
EP132-LL: Dibenz(a,h)anthracene	53-70-3	0.02	µg/L	<0.02	0.025 µg/L	92.3	71.5	117	
EP132-LL: Benzo(g,h,i)perylene	191-24-2	0.02	µg/L	<0.02	0.025 µg/L	80.9	66.6	121	
EP132-LL: Total PAH	----	0.005	µg/L	<0.005	----	----	----	----	
EP080/071: Total Petroleum Hydrocarbons (QCLot: 1134896)									
EP080: C6 - C9 Fraction	----	20	µg/L	<20	160 µg/L	87.1	73	135	
EP080/071: Total Petroleum Hydrocarbons (QCLot: 1135511)									
EP071: C10 - C14 Fraction	----	50	µg/L	<50	1200 µg/L	76.4	49	110	
EP071: C15 - C28 Fraction	----	100	µg/L	<100	2040 µg/L	89.9	58	130	
EP071: C29 - C36 Fraction	----	50	µg/L	<50	----	----	----	----	
EP130A: Organophosphorus Pesticides (Ultra-trace) (QCLot: 1136897)									
EP130-CM: Bromophos-ethyl	4824-78-6	0.10	µg/L	<0.10	1.0 µg/L	76.1	----	----	
EP130-CM: Carbophenothion	786-19-6	0.10	µg/L	<0.10	1.0 µg/L	74.2	----	----	
EP130-CM: Chlorfenvinphos (E)	470-90-6	0.10	µg/L	<0.10	0.1 µg/L	88.0	----	----	
EP130-CM: Chlorfenvinphos (Z)	470-90-8	0.10	µg/L	<0.10	1.0 µg/L	80.2	----	----	
EP130-CM: Chlorpyrifos	2921-88-2	0.05	µg/L	<0.050	1.0 µg/L	73.6	----	----	
EP130-CM: Chlorpyrifos-methyl	5598-13-0	0.10	µg/L	<0.10	1.0 µg/L	79.7	----	----	
EP130-CM: Demeton-S-methyl	919-86-8	0.10	µg/L	<0.10	1.0 µg/L	81.3	----	----	
EP130-CM: Diazinon	333-41-5	0.10	µg/L	<0.10	1.0 µg/L	73.5	----	----	
EP130-CM: Dichlorvos	62-73-7	0.10	µg/L	<0.10	1.0 µg/L	106	----	----	
EP130-CM: Dimethoate	60-51-5	0.10	µg/L	<0.10	1.0 µg/L	89.1	----	----	
EP130-CM: Ethion	563-12-2	0.10	µg/L	<0.10	1.0 µg/L	83.5	----	----	
EP130-CM: Fenamiphos	22224-92-6	0.10	µg/L	<0.10	1.0 µg/L	83.6	----	----	
EP130-CM: Fenthion	55-38-9	0.10	µg/L	<0.10	1.0 µg/L	77.2	----	----	
EP130-CM: Malathion	121-75-5	0.10	µg/L	<0.10	1.0 µg/L	82.9	----	----	
EP130-CM: Azinphos Methyl	----	0.10	µg/L	<0.10	1.0 µg/L	132	----	----	
EP130-CM: Monocrotophos	6923-22-4	0.10	µg/L	<0.10	1.0 µg/L	22.4	----	----	
EP130-CM: Parathion	56-38-2	0.10	µg/L	<0.10	1.0 µg/L	90.4	----	----	
EP130-CM: Parathion-methyl	298-00-0	0.10	µg/L	<0.10	1.0 µg/L	100	----	----	
EP130-CM: Pirimphos-ethyl	23505-41-1	0.10	µg/L	<0.10	1.0 µg/L	75.1	----	----	
EP130-CM: Prothiofos	34643-46-4	0.10	µg/L	<0.10	1.0 µg/L	76.1	----	----	
EP131A: Organochlorine Pesticides (QCLot: 1136896)									
EP131A-CM: Aldrin	309-00-2	0.01	µg/L	<0.010	0.1 µg/L	37.7	----	----	



Sub-Matrix: **WATER**

Method: Compound	CAS Number	LOR	Unit	Method Blank (MB) Report	Laboratory Control Spike (LCS) Report			
				Result	Spike Concentration	Spike Recovery (%)	Recovery Limits (%)	
						LCS	Low	High
EP131A: Organochlorine Pesticides (QCLot: 1136896) - continued								
EP131A-CM: alpha-BHC	319-84-6	0.01	µg/L	<0.010	0.1 µg/L	34.9	----	----
EP131A-CM: beta-BHC	319-85-7	0.01	µg/L	<0.010	0.1 µg/L	51.4	----	----
EP131A-CM: delta-BHC	319-86-8	0.01	µg/L	<0.010	0.1 µg/L	50.9	----	----
EP131A-CM: 4,4'-DDD	72-54-8	0.01	µg/L	<0.010	0.1 µg/L	68.5	----	----
EP131A-CM: 4,4'-DDE	72-55-9	0.01	µg/L	<0.010	0.1 µg/L	58.4	----	----
EP131A-CM: 4,4'-DDT	50-29-3	0.01	µg/L	<0.010	0.1 µg/L	84.2	----	----
EP131A-CM: Dieldrin	60-57-1	0.01	µg/L	<0.010	0.1 µg/L	80.4	----	----
EP131A-CM: alpha-Endosulfan	959-98-8	0.01	µg/L	<0.010	0.1 µg/L	69.3	----	----
EP131A-CM: beta-Endosulfan	33213-65-9	0.01	µg/L	<0.010	0.1 µg/L	90.9	----	----
EP131A-CM: Endosulfan sulfate	1031-07-8	0.01	µg/L	<0.010	0.1 µg/L	85.7	----	----
EP131A-CM: Endrin	72-20-8	0.01	µg/L	<0.010	0.1 µg/L	84.8	----	----
EP131A-CM: Endrin aldehyde	7421-93-4	0.01	µg/L	<0.010	0.1 µg/L	84.2	----	----
EP131A-CM: Endrin ketone	53494-70-5	0.01	µg/L	<0.010	0.1 µg/L	77.6	----	----
EP131A-CM: Heptachlor	76-44-8	0.005	µg/L	<0.005	0.1 µg/L	44.1	----	----
EP131A-CM: Heptachlor epoxide	1024-57-3	0.01	µg/L	<0.010	0.1 µg/L	62.1	----	----
EP131A-CM: Hexachlorobenzene (HCB)	118-74-1	0.01	µg/L	<0.010	0.1 µg/L	24.6	----	----
EP131A-CM: gamma-BHC	58-89-9	0.01	µg/L	<0.010	0.1 µg/L	31.1	----	----
EP131A-CM: Methoxychlor	72-43-5	0.01	µg/L	<0.010	0.1 µg/L	106	----	----
EP131A-CM: cis-Chlordane	5103-71-9	0.01	µg/L	<0.010	0.1 µg/L	84.1	----	----
EP131A-CM: trans-Chlordane	5103-74-2	0.01	µg/L	<0.010	0.1 µg/L	61.8	----	----
EP131B: Polychlorinated Biphenyls (as Aroclors) (QCLot: 1136898)								
EP131B-CM: Aroclor 1254	11097-69-1	0.05	µg/L	<0.05	1 µg/L	75.6	----	----
Ultra-Trace Nutrients (QCLot: 1136891)								
EK267PA-CM: Total Phosphorus as P	----	0.005	mg/L	<0.005	0.44 mg/L	79.8	72	114
Ultra-Trace Nutrients (QCLot: 1136892)								
EK262PA-CM: Total Nitrogen as N	----	0.01	mg/L	<0.01	----	----	----	----
		0.05	mg/L	----	1.0 mg/L	93.8	70	117



Matrix Spike (MS) Report

The quality control term Matrix Spike (MS) refers to an intralaboratory split sample spiked with a representative set of target analytes. The purpose of this QC parameter is to monitor potential matrix effects on analyte recoveries. Static Recovery Limits as per laboratory Data Quality Objectives (DQOs). Ideal recovery ranges stated may be waived in the event of sample matrix interference.

Sub-Matrix: **WATER**

				Matrix Spike (MS) Report			
Laboratory sample ID	Client sample ID	Method: Compound	CAS Number	Spike Concentration	Spike Recovery (%)	Recovery Limits (%)	
					MS	Low	High
ED045G: Chloride Discrete analyser (QCLot: 1134358)							
EB0916119-008	Anonymous	ED045G: Chloride	16887-00-6	400 mg/L	98.6	70	130
EG035F: Dissolved Mercury by FIMS (QCLot: 1137767)							
EB0916401-001	8	EG035F: Mercury	7439-97-6	0.0100 mg/L	109	70	130
EG035T: Total Recoverable Mercury by FIMS (QCLot: 1138093)							
ES0915833-018	Anonymous	EG035T: Mercury	7439-97-6	0.010 mg/L	112	70	130
EG094F: Dissolved Metals in Fresh Water by ORC-ICPMS (QCLot: 1137897)							
EB0916315-001	Anonymous	EG094A-F: Arsenic	7440-38-2	50 µg/L	106	70	130
		EG094A-F: Cadmium	7440-43-9	12.5 µg/L	103	70	130
		EG094A-F: Cobalt	7440-48-4	50 µg/L	118	70	130
		EG094A-F: Copper	7440-50-8	50 µg/L	117	70	130
		EG094A-F: Lead	7439-92-1	50 µg/L	106	70	130
		EG094A-F: Nickel	7440-02-0	50 µg/L	113	70	130
		EG094A-F: Vanadium	7440-62-2	50 µg/L	99.6	70	130
EG094A-F: Zinc	7440-66-6	50 µg/L	117	70	130		
EG094T: Total metals in Fresh water by ORC-ICPMS (QCLot: 1137901)							
EB0916401-001	8	EG094A-T: Arsenic	7440-38-2	50 µg/L	112	70	130
		EG094A-T: Cadmium	7440-43-9	12.5 µg/L	105	70	130
		EG094A-T: Cobalt	7440-48-4	50 µg/L	110	70	130
		EG094A-T: Copper	7440-50-8	50 µg/L	107	70	130
		EG094A-T: Lead	7439-92-1	50 µg/L	105	70	130
		EG094A-T: Nickel	7440-02-0	50 µg/L	105	70	130
		EG094A-T: Zinc	7440-66-6	50 µg/L	121	70	130
EK025G: Free cyanide by Discrete Analyser (QCLot: 1138461)							
EB0916401-002	6	EK025G: Free Cyanide	----	0.2 mg/L	97.0	70	130
EK040P: Fluoride by PC Titrator (QCLot: 1139317)							
EB0916401-001	8	EK040P: Fluoride	16984-48-8	4.9 mg/L	96.7	70	130
EK055G: Ammonia as N by Discrete Analyser (QCLot: 1142790)							
EB0916315-002	Anonymous	EK055G: Ammonia as N	7664-41-7	0.4 mg/L	88.5	70	130
EK057G: Nitrite as N by Discrete Analyser (QCLot: 1134361)							
EB0916401-002	6	EK057G: Nitrite as N	----	0.4 mg/L	97.5	70	130
EK059G: NOX as N by Discrete Analyser (QCLot: 1142789)							
EB0916315-002	Anonymous	EK059G: Nitrite + Nitrate as N	----	0.4 mg/L	90.7	70	130
EP074A: Monocyclic Aromatic Hydrocarbons (QCLot: 1134897)							



Sub-Matrix: WATER

				Matrix Spike (MS) Report			
Laboratory sample ID	Client sample ID	Method: Compound	CAS Number	Spike	Spike Recovery (%)	Recovery Limits (%)	
				Concentration	MS	Low	High
EP074A: Monocyclic Aromatic Hydrocarbons (QCLot: 1134897) - continued							
EB0916344-004	Anonymous	EP074: Benzene	71-43-2	10 µg/L	117	70	130
		EP074: Toluene	108-88-3	10 µg/L	109	70	130
EP080/071: Total Petroleum Hydrocarbons (QCLot: 1134896)							
EB0916300-002	Anonymous	EP080: C6 - C9 Fraction	----	140 µg/L	82.2	70	130
Ultra-Trace Nutrients (QCLot: 1136891)							
EB0916401-001	8	EK267PA-CM: Total Phosphorus as P	----	0.5 mg/L	109	70	130
Ultra-Trace Nutrients (QCLot: 1136892)							
EB0916401-001	8	EK262PA-CM: Total Nitrogen as N	----	0.5 mg/L	84.5	70	130



Environmental Division

INTERPRETIVE QUALITY CONTROL REPORT

Work Order	: EB0916401	Page	: 1 of 12
Amendment	: 2		
Client	: ALLUVIUM CONSULTING	Laboratory	: Environmental Division Brisbane
Contact	: MS ANNE MARIE CALVI	Contact	: Tim Kilmister
Address	: PO BOX 1581 TOWNSVILLE QLD, AUSTRALIA 4810	Address	: 32 Shand Street Stafford QLD Australia 4053
E-mail	: anne-marie@natres.com.au	E-mail	: Services.Brisbane@alsenviro.com
Telephone	: +61 07 47242170	Telephone	: +61-7-3243 7222
Facsimile	: ----	Facsimile	: +61-7-3243 7218
Project	: Alluvium Dalby	QC Level	: NEPM 1999 Schedule B(3) and ALS QCS3 requirement
Site	: ----		
C-O-C number	: ----	Date Samples Received	: 16-OCT-2009
Sampler	: A.C, M.A	Issue Date	: 10-NOV-2009
Order number	: ----		
Quote number	: BN/580/09	No. of samples received	: 4
		No. of samples analysed	: 4

This report supersedes any previous report(s) with this reference. Results apply to the sample(s) as submitted. All pages of this report have been checked and approved for release.

This Interpretive Quality Control Report contains the following information:

- Analysis Holding Time Compliance
- Quality Control Parameter Frequency Compliance
- Brief Method Summaries
- Summary of Outliers

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Analysis Holding Time Compliance

The following report summarises extraction / preparation and analysis times and compares with recommended holding times. Dates reported represent first date of extraction or analysis and precludes subsequent dilutions and reruns. Information is also provided re the sample container (preservative) from which the analysis aliquot was taken. Elapsed period to analysis represents number of days from sampling where no extraction / digestion is involved or period from extraction / digestion where this is present. For composite samples, sampling date is assumed to be that of the oldest sample contributing to the composite. Sample date for laboratory produced leachates is assumed as the completion date of the leaching process. Outliers for holding time are based on USEPA SW 846, APHA, AS and NEPM (1999). A listing of breaches is provided in the Summary of Outliers.

Holding times for leachate methods (excluding elutriates) vary according to the analytes being determined on the resulting solution. For non-volatile analytes, the holding time compliance assessment compares the leach date with the shortest analyte holding time for the equivalent soil method. These soil holding times are: Organics (14 days); Mercury (28 days) & other metals (180 days). A recorded breach therefore does not guarantee a breach for all non-volatile parameters.

Matrix: **WATER** Evaluation: * = Holding time breach ; ✓ = Within holding time.

Method	Sample Date	Extraction / Preparation			Analysis			
		Container / Client Sample ID(s)	Date extracted	Due for extraction	Evaluation	Date analysed	Due for analysis	Evaluation
EA025: Suspended Solids								
Clear Plastic Bottle - Natural								
8,	6	14-OCT-2009	----	----	----	22-OCT-2009	21-OCT-2009	*
Clear Plastic Bottle - Natural								
1,	4	15-OCT-2009	----	----	----	22-OCT-2009	22-OCT-2009	✓
ED040F: Dissolved Major Anions								
Clear Plastic Bottle - Natural								
8,	6	14-OCT-2009	---	---	----	16-OCT-2009	11-NOV-2009	✓
Clear Plastic Bottle - Natural								
1,	4	15-OCT-2009	---	---	----	16-OCT-2009	12-NOV-2009	✓
ED045G: Chloride Discrete analyser								
Clear Plastic Bottle - Natural								
8,	6	14-OCT-2009	---	---	----	16-OCT-2009	11-NOV-2009	✓
Clear Plastic Bottle - Natural								
1,	4	15-OCT-2009	---	---	----	16-OCT-2009	12-NOV-2009	✓
ED093F: Dissolved Major Cations								
Clear Plastic Bottle - Natural								
8,	6	14-OCT-2009	---	---	----	16-OCT-2009	11-NOV-2009	✓
Clear Plastic Bottle - Natural								
1,	4	15-OCT-2009	---	---	----	16-OCT-2009	12-NOV-2009	✓
EG035F: Dissolved Mercury by FIMS								
Clear HDPE (U-T ORC) - Filtered; Lab-acidified								
8,	6	14-OCT-2009	---	---	----	22-OCT-2009	11-NOV-2009	✓
Clear HDPE (U-T ORC) - Filtered; Lab-acidified								
1,	4	15-OCT-2009	---	---	----	22-OCT-2009	12-NOV-2009	✓
EG035T: Total Recoverable Mercury by FIMS								
Clear HDPE (U-T ORC) - Unfiltered; Lab-acidified								
8,	6	14-OCT-2009	----	----	----	23-OCT-2009	28-OCT-2009	✓
Clear HDPE (U-T ORC) - Unfiltered; Lab-acidified								
1,	4	15-OCT-2009	----	----	----	23-OCT-2009	29-OCT-2009	✓



Matrix: WATER

Evaluation: * = Holding time breach ; ✓ = Within holding time.

Method Container / Client Sample ID(s)	Sample Date	Extraction / Preparation			Analysis			
		Date extracted	Due for extraction	Evaluation	Date analysed	Due for analysis	Evaluation	
EG094F: Dissolved Metals in Fresh Water by ORC-ICPMS								
Clear HDPE (U-T ORC) - Filtered; Lab-acidified 8,	6	14-OCT-2009	---	---	----	21-OCT-2009	12-APR-2010	✓
Clear HDPE (U-T ORC) - Filtered; Lab-acidified 1,	4	15-OCT-2009	---	---	----	21-OCT-2009	13-APR-2010	✓
EG094T: Total metals in Fresh water by ORC-ICPMS								
Clear HDPE (U-T ORC) - Unfiltered; Lab-acidified 8,	6	14-OCT-2009	21-OCT-2009	12-APR-2010	✓	21-OCT-2009	12-APR-2010	✓
Clear HDPE (U-T ORC) - Unfiltered; Lab-acidified 1,	4	15-OCT-2009	21-OCT-2009	13-APR-2010	✓	21-OCT-2009	13-APR-2010	✓
EK025G: Free cyanide by Discrete Analyser								
White Plastic Bottle - NaOH/Cadmium Nitrate 8,	6	14-OCT-2009	21-OCT-2009	28-OCT-2009	✓	22-OCT-2009	28-OCT-2009	✓
White Plastic Bottle - NaOH/Cadmium Nitrate 1,	4	15-OCT-2009	21-OCT-2009	29-OCT-2009	✓	22-OCT-2009	29-OCT-2009	✓
EK040P: Fluoride by PC Titrator								
Clear Plastic Bottle - Natural 8,	6	14-OCT-2009	---	---	----	22-OCT-2009	11-NOV-2009	✓
Clear Plastic Bottle - Natural 1,	4	15-OCT-2009	---	---	----	22-OCT-2009	12-NOV-2009	✓
EK055G: Ammonia as N by Discrete Analyser								
Clear Plastic Bottle - Sulphuric Acid 8,	6	14-OCT-2009	---	---	----	26-OCT-2009	11-NOV-2009	✓
Clear Plastic Bottle - Sulphuric Acid 1,	4	15-OCT-2009	---	---	----	26-OCT-2009	12-NOV-2009	✓
EK057G: Nitrite as N by Discrete Analyser								
Clear Plastic Bottle - Natural 8,	6	14-OCT-2009	---	---	----	16-OCT-2009	16-OCT-2009	✓
Clear Plastic Bottle - Natural 1,	4	15-OCT-2009	---	---	----	16-OCT-2009	17-OCT-2009	✓
EK059G: NOX as N by Discrete Analyser								
Clear Plastic Bottle - Sulphuric Acid 8,	6	14-OCT-2009	---	---	----	26-OCT-2009	11-NOV-2009	✓
Clear Plastic Bottle - Sulphuric Acid 1,	4	15-OCT-2009	---	---	----	26-OCT-2009	12-NOV-2009	✓
EP074A: Monocyclic Aromatic Hydrocarbons								
Amber VOC Vial - HCl 8,	6	14-OCT-2009	---	---	----	21-OCT-2009	28-OCT-2009	✓
Amber VOC Vial - HCl 1,	4	15-OCT-2009	---	---	----	21-OCT-2009	29-OCT-2009	✓



Matrix: **WATER**

Evaluation: * = Holding time breach ; ✓ = Within holding time.

Method Container / Client Sample ID(s)	Sample Date	Extraction / Preparation			Analysis			
		Date extracted	Due for extraction	Evaluation	Date analysed	Due for analysis	Evaluation	
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons								
Amber Glass Bottle - Unpreserved 8,	6	14-OCT-2009	21-OCT-2009	21-OCT-2009	✓	23-OCT-2009	01-DEC-2009	✓
Amber Glass Bottle - Unpreserved 1,	4	15-OCT-2009	21-OCT-2009	22-OCT-2009	✓	23-OCT-2009	01-DEC-2009	✓
EP080/071: Total Petroleum Hydrocarbons								
Amber Glass Bottle - Unpreserved 8,	6	14-OCT-2009	20-OCT-2009	21-OCT-2009	✓	21-OCT-2009	29-NOV-2009	✓
Amber Glass Bottle - Unpreserved 1,	4	15-OCT-2009	20-OCT-2009	22-OCT-2009	✓	21-OCT-2009	29-NOV-2009	✓
Amber VOC Vial - HCl 8,	6	14-OCT-2009	---	---	----	21-OCT-2009	28-OCT-2009	✓
Amber VOC Vial - HCl 1,	4	15-OCT-2009	---	---	----	21-OCT-2009	29-OCT-2009	✓
EP130A: Organophosphorus Pesticides (Ultra-trace)								
Amber Glass Bottle - Unpreserved 8,	6	14-OCT-2009	20-OCT-2009	21-OCT-2009	✓	24-OCT-2009	01-DEC-2009	✓
Amber Glass Bottle - Unpreserved 1,	4	15-OCT-2009	20-OCT-2009	22-OCT-2009	✓	24-OCT-2009	01-DEC-2009	✓
EP131A: Organochlorine Pesticides								
Amber Glass Bottle - Unpreserved 8,	6	14-OCT-2009	20-OCT-2009	21-OCT-2009	✓	24-OCT-2009	01-DEC-2009	✓
Amber Glass Bottle - Unpreserved 1,	4	15-OCT-2009	20-OCT-2009	22-OCT-2009	✓	24-OCT-2009	01-DEC-2009	✓
EP131B: Polychlorinated Biphenyls (as Aroclors)								
Amber Glass Bottle - Unpreserved 8,	6	14-OCT-2009	20-OCT-2009	21-OCT-2009	✓	24-OCT-2009	01-DEC-2009	✓
Amber Glass Bottle - Unpreserved 1,	4	15-OCT-2009	20-OCT-2009	22-OCT-2009	✓	24-OCT-2009	01-DEC-2009	✓
Ultra-Trace Nutrients								
Clear Plastic Bottle - Frozen (AS) 8,	6	14-OCT-2009	20-OCT-2009	11-NOV-2009	✓	20-OCT-2009	11-NOV-2009	✓
Clear Plastic Bottle - Frozen (AS) 1,	4	15-OCT-2009	20-OCT-2009	12-NOV-2009	✓	20-OCT-2009	12-NOV-2009	✓



Quality Control Parameter Frequency Compliance

The following report summarises the frequency of laboratory QC samples analysed within the analytical lot(s) in which the submitted sample(s) was(where) processed. Actual rate should be greater than or equal to the expected rate. A listing of breaches is provided in the Summary of Outliers.

Matrix: **WATER** Evaluation: * = Quality Control frequency not within specification ; ✓ = Quality Control frequency within specification.

Quality Control Sample Type	Method	Count		Rate (%)			Quality Control Specification
		QC	Reular	Actual	Expected	Evaluation	
Laboratory Duplicates (DUP)							
Ammonia as N by Discrete analyser	EK055G	2	18	11.1	10.0	✓	NEPM 1999 Schedule B(3) and ALS QCS3 requirement
Chloride by Discrete Analyser	ED045G	1	10	10.0	10.0	✓	NEPM 1999 Schedule B(3) and ALS QCS3 requirement
Dissolved Mercury by FIMS	EG035F	2	20	10.0	10.0	✓	NEPM 1999 Schedule B(3) and ALS QCS3 requirement
Dissolved Metals in Fresh Water -Suite A by ORC-ICPMS	EG094A-F	2	19	10.5	10.0	✓	NEPM 1999 Schedule B(3) and ALS QCS3 requirement
Dissolved Metals in Fresh Water -Suite B by ORC-ICPMS	EG094B-F	2	19	10.5	10.0	✓	NEPM 1999 Schedule B(3) and ALS QCS3 requirement
Fluoride by PC Titrator	EK040P	2	20	10.0	10.0	✓	NEPM 1999 Schedule B(3) and ALS QCS3 requirement
Free CN by Discrete Analyser	EK025G	2	14	14.3	10.0	✓	NEPM 1999 Schedule B(3) and ALS QCS3 requirement
Major Anions - Dissolved	ED040F	2	12	16.7	10.0	✓	NEPM 1999 Schedule B(3) and ALS QCS3 requirement
Major Cations - Dissolved	ED093F	2	11	18.2	10.0	✓	NEPM 1999 Schedule B(3) and ALS QCS3 requirement
Nitrite and Nitrate as N (NOx) by Discrete Analyser	EK059G	2	18	11.1	10.0	✓	NEPM 1999 Schedule B(3) and ALS QCS3 requirement
Nitrite as N by Discrete Analyser	EK057G	2	12	16.7	10.0	✓	NEPM 1999 Schedule B(3) and ALS QCS3 requirement
Suspended Solids (High Level)	EA025H	2	20	10.0	10.0	✓	NEPM 1999 Schedule B(3) and ALS QCS3 requirement
Total Mercury by FIMS	EG035T	2	20	10.0	10.0	✓	NEPM 1999 Schedule B(3) and ALS QCS3 requirement
Total Metals in Fresh Water -Suite A by ORC-ICPMS	EG094A-T	2	13	15.4	10.0	✓	NEPM 1999 Schedule B(3) and ALS QCS3 requirement
Total Metals in Fresh Water -Suite B by ORC-ICPMS	EG094B-T	2	13	15.4	10.0	✓	NEPM 1999 Schedule B(3) and ALS QCS3 requirement
Total Nitrogen as N (Persulfate digestion)-Ultra-Trace - CM	EK262PA-CM	2	20	10.0	10.0	✓	NEPM 1999 Schedule B(3) and ALS QCS3 requirement
Total Phosphorus(Persulfate Digestion) - Ultra-Trace for CM	EK267PA-CM	2	20	10.0	10.0	✓	NEPM 1999 Schedule B(3) and ALS QCS3 requirement
TPH Volatiles/BTEX	EP080	2	12	16.7	10.0	✓	NEPM 1999 Schedule B(3) and ALS QCS3 requirement
Volatile Organic Compounds	EP074	1	8	12.5	10.0	✓	NEPM 1999 Schedule B(3) and ALS QCS3 requirement
Laboratory Control Samples (LCS)							
Ammonia as N by Discrete analyser	EK055G	1	18	5.6	5.0	✓	NEPM 1999 Schedule B(3) and ALS QCS3 requirement
Chloride by Discrete Analyser	ED045G	2	10	20.0	10.0	✓	NEPM 1999 Schedule B(3) and ALS QCS3 requirement
Dissolved Mercury by FIMS	EG035F	1	20	5.0	5.0	✓	NEPM 1999 Schedule B(3) and ALS QCS3 requirement
Dissolved Metals in Fresh Water -Suite A by ORC-ICPMS	EG094A-F	1	19	5.3	5.0	✓	NEPM 1999 Schedule B(3) and ALS QCS3 requirement
Dissolved Metals in Fresh Water -Suite B by ORC-ICPMS	EG094B-F	1	19	5.3	5.0	✓	NEPM 1999 Schedule B(3) and ALS QCS3 requirement
Fluoride by PC Titrator	EK040P	1	20	5.0	5.0	✓	NEPM 1999 Schedule B(3) and ALS QCS3 requirement
Free CN by Discrete Analyser	EK025G	1	14	7.1	5.0	✓	NEPM 1999 Schedule B(3) and ALS QCS3 requirement
Nitrite and Nitrate as N (NOx) by Discrete Analyser	EK059G	1	18	5.6	5.0	✓	NEPM 1999 Schedule B(3) and ALS QCS3 requirement
Nitrite as N by Discrete Analyser	EK057G	1	12	8.3	5.0	✓	NEPM 1999 Schedule B(3) and ALS QCS3 requirement
Organochlorine Pesticides (Super Ultra-trace) for CM	EP131A-CM	1	13	7.7	5.0	✓	NEPM 1999 Schedule B(3) and ALS QCS3 requirement
Organophosphorus Pesticides (Ultra-trace) for Catchment M	EP130-CM	1	13	7.7	5.0	✓	NEPM 1999 Schedule B(3) and ALS QCS3 requirement
PAH Compounds in Water	EP132-LL	1	18	5.6	5.0	✓	NEPM 1999 Schedule B(3) and ALS QCS3 requirement
PCB's (Ultra-trace) for Catchment Monitoring	EP131B-CM	1	13	7.7	5.0	✓	NEPM 1999 Schedule B(3) and ALS QCS3 requirement



Matrix: **WATER** Evaluation: ✘ = Quality Control frequency not within specification ; ✔ = Quality Control frequency within specification.

Quality Control Sample Type	Method	Count		Rate (%)			Quality Control Specification
		QC	Regular	Actual	Expected	Evaluation	
Analytical Methods							
Laboratory Control Samples (LCS) - Continued							
Suspended Solids (High Level)	EA025H	1	20	5.0	5.0	✔	NEPM 1999 Schedule B(3) and ALS QCS3 requirement
Total Mercury by FIMS	EG035T	1	20	5.0	5.0	✔	NEPM 1999 Schedule B(3) and ALS QCS3 requirement
Total Metals in Fresh Water -Suite A by ORC-ICPMS	EG094A-T	1	13	7.7	5.0	✔	NEPM 1999 Schedule B(3) and ALS QCS3 requirement
Total Metals in Fresh Water -Suite B by ORC-ICPMS	EG094B-T	1	13	7.7	5.0	✔	NEPM 1999 Schedule B(3) and ALS QCS3 requirement
Total Nitrogen as N (Persulfate digestion)-Ultra-Trace - CM	EK262PA-CM	1	20	5.0	10.0	✘	NEPM 1999 Schedule B(3) and ALS QCS3 requirement
Total Phosphorus(Persulfate Digestion) - Ultra-Trace for CM	EK267PA-CM	1	20	5.0	10.0	✘	NEPM 1999 Schedule B(3) and ALS QCS3 requirement
TPH - Semivolatile Fraction	EP071	1	18	5.6	5.0	✔	NEPM 1999 Schedule B(3) and ALS QCS3 requirement
TPH Volatiles/BTEX	EP080	1	12	8.3	5.0	✔	NEPM 1999 Schedule B(3) and ALS QCS3 requirement
Volatile Organic Compounds	EP074	1	8	12.5	5.0	✔	NEPM 1999 Schedule B(3) and ALS QCS3 requirement
Method Blanks (MB)							
Ammonia as N by Discrete analyser	EK055G	1	18	5.6	5.0	✔	NEPM 1999 Schedule B(3) and ALS QCS3 requirement
Chloride by Discrete Analyser	ED045G	1	10	10.0	5.0	✔	NEPM 1999 Schedule B(3) and ALS QCS3 requirement
Dissolved Mercury by FIMS	EG035F	1	20	5.0	5.0	✔	NEPM 1999 Schedule B(3) and ALS QCS3 requirement
Dissolved Metals in Fresh Water -Suite A by ORC-ICPMS	EG094A-F	1	19	5.3	5.0	✔	NEPM 1999 Schedule B(3) and ALS QCS3 requirement
Dissolved Metals in Fresh Water -Suite B by ORC-ICPMS	EG094B-F	1	19	5.3	5.0	✔	NEPM 1999 Schedule B(3) and ALS QCS3 requirement
Fluoride by PC Titrator	EK040P	1	20	5.0	5.0	✔	NEPM 1999 Schedule B(3) and ALS QCS3 requirement
Free CN by Discrete Analyser	EK025G	1	14	7.1	5.0	✔	NEPM 1999 Schedule B(3) and ALS QCS3 requirement
Major Anions - Dissolved	ED040F	1	12	8.3	5.0	✔	NEPM 1999 Schedule B(3) and ALS QCS3 requirement
Major Cations - Dissolved	ED093F	1	11	9.1	5.0	✔	NEPM 1999 Schedule B(3) and ALS QCS3 requirement
Nitrite and Nitrate as N (NOx) by Discrete Analyser	EK059G	1	18	5.6	5.0	✔	NEPM 1999 Schedule B(3) and ALS QCS3 requirement
Nitrite as N by Discrete Analyser	EK057G	1	12	8.3	5.0	✔	NEPM 1999 Schedule B(3) and ALS QCS3 requirement
Organochlorine Pesticides (Super Ultra-trace) for CM	EP131A-CM	1	13	7.7	5.0	✔	NEPM 1999 Schedule B(3) and ALS QCS3 requirement
Organophosphorus Pesticides (Ultra-trace) for Catchment M	EP130-CM	1	13	7.7	5.0	✔	NEPM 1999 Schedule B(3) and ALS QCS3 requirement
PAH Compounds in Water	EP132-LL	1	18	5.6	5.0	✔	NEPM 1999 Schedule B(3) and ALS QCS3 requirement
PCB's (Ultra-trace) for Catchment Monitoring	EP131B-CM	1	13	7.7	5.0	✔	NEPM 1999 Schedule B(3) and ALS QCS3 requirement
Suspended Solids (High Level)	EA025H	1	20	5.0	5.0	✔	NEPM 1999 Schedule B(3) and ALS QCS3 requirement
Total Mercury by FIMS	EG035T	1	20	5.0	5.0	✔	NEPM 1999 Schedule B(3) and ALS QCS3 requirement
Total Metals in Fresh Water -Suite A by ORC-ICPMS	EG094A-T	1	13	7.7	5.0	✔	NEPM 1999 Schedule B(3) and ALS QCS3 requirement
Total Metals in Fresh Water -Suite B by ORC-ICPMS	EG094B-T	1	13	7.7	5.0	✔	NEPM 1999 Schedule B(3) and ALS QCS3 requirement
Total Nitrogen as N (Persulfate digestion)-Ultra-Trace - CM	EK262PA-CM	1	20	5.0	5.0	✔	NEPM 1999 Schedule B(3) and ALS QCS3 requirement
Total Phosphorus(Persulfate Digestion) - Ultra-Trace for CM	EK267PA-CM	1	20	5.0	5.0	✔	NEPM 1999 Schedule B(3) and ALS QCS3 requirement
TPH - Semivolatile Fraction	EP071	1	18	5.6	5.0	✔	NEPM 1999 Schedule B(3) and ALS QCS3 requirement
TPH Volatiles/BTEX	EP080	1	12	8.3	5.0	✔	NEPM 1999 Schedule B(3) and ALS QCS3 requirement
Volatile Organic Compounds	EP074	1	8	12.5	5.0	✔	NEPM 1999 Schedule B(3) and ALS QCS3 requirement
Matrix Spikes (MS)							
Ammonia as N by Discrete analyser	EK055G	1	18	5.6	5.0	✔	ALS QCS3 requirement



Matrix: **WATER** Evaluation: ✖ = Quality Control frequency not within specification ; ✔ = Quality Control frequency within specification.

Quality Control Sample Type	Method	Count		Rate (%)			Quality Control Specification
		QC	Regular	Actual	Expected	Evaluation	
Matrix Spikes (MS) - Continued							
Chloride by Discrete Analyser	ED045G	1	10	10.0	5.0	✔	ALS QCS3 requirement
Dissolved Mercury by FIMS	EG035F	1	20	5.0	5.0	✔	ALS QCS3 requirement
Dissolved Metals in Fresh Water -Suite A by ORC-ICPMS	EG094A-F	1	19	5.3	5.0	✔	ALS QCS3 requirement
Fluoride by PC Titrator	EK040P	1	20	5.0	5.0	✔	ALS QCS3 requirement
Free CN by Discrete Analyser	EK025G	1	14	7.1	5.0	✔	ALS QCS3 requirement
Nitrite and Nitrate as N (NOx) by Discrete Analyser	EK059G	1	18	5.6	5.0	✔	ALS QCS3 requirement
Nitrite as N by Discrete Analyser	EK057G	1	12	8.3	5.0	✔	ALS QCS3 requirement
Total Mercury by FIMS	EG035T	1	20	5.0	5.0	✔	ALS QCS3 requirement
Total Metals in Fresh Water -Suite A by ORC-ICPMS	EG094A-T	1	13	7.7	5.0	✔	ALS QCS3 requirement
Total Nitrogen as N (Persulfate digestion)-Ultra-Trace - CM	EK262PA-CM	1	20	5.0	5.0	✔	ALS QCS3 requirement
Total Phosphorus(Persulfate Digestion) - Ultra-Trace for CM	EK267PA-CM	1	20	5.0	5.0	✔	ALS QCS3 requirement
TPH Volatiles/BTEX	EP080	1	12	8.3	5.0	✔	ALS QCS3 requirement
Volatile Organic Compounds	EP074	1	8	12.5	5.0	✔	ALS QCS3 requirement



Brief Method Summaries

The analytical procedures used by the Environmental Division have been developed from established internationally recognized procedures such as those published by the US EPA, APHA, AS and NEPM. In house developed procedures are employed in the absence of documented standards or by client request. The following report provides brief descriptions of the analytical procedures employed for results reported in the Certificate of Analysis. Sources from which ALS methods have been developed are provided within the Method Descriptions.

Analytical Methods	Method	Matrix	Method Descriptions
Sodium Adsorption Ratio	EA006	WATER	APHA 21st ed., 3120 Ca, Mg, Na. This method is compliant with NEPM (1999) Schedule B(3) (Appdx. 2)
Suspended Solids (High Level)	EA025H	WATER	APHA 21st ed., 2540D A gravimetric procedure employed to determine the amount of 'non-filterable' residue in a aqueous sample. The prescribed GFC (1.2um) filter is rinsed with deionised water, oven dried and weighed prior to analysis. A well-mixed sample is filtered through a glass fibre filter (1.2um). The residue on the filter paper is dried at 104+/-2C . This method is compliant with NEPM (1999) Schedule B(3) (Appdx. 2)
Hardness as CaCO3	EA065	WATER	APHA 21st ed., 2340 B. This method is compliant with NEPM (1999) Schedule B(3) (Appdx. 2)
Major Anions - Dissolved	ED040F	WATER	APHA 21st ed., 3120. The 0.45um filtered samples are determined by ICP/AES for Sulfur and/or Silicon content and reported as Sulfate and/or Silica after conversion by gravimetric factor.
Chloride by Discrete Analyser	ED045G	WATER	APHA 21st ed., 4500 Cl - G.The thiocyanate ion is liberated from mercuric thiocyanate through sequestration of mercury by the chloride ion to form non-ionised mercuric chloride.in the presence of ferric ions the liberated thiocyanate forms highly-coloured ferric thiocyanate which is measured at 480 nm APHA 21st edition seal method 2 017-1-L april 2003
Major Cations - Dissolved	ED093F	WATER	APHA 21st ed., 3120; USEPA SW 846 - 6010 The ICPAES technique ionises the 0.45um filtered sample atoms emitting a characteristic spectrum. This spectrum is then compared against matrix matched standards for quantification. This method is compliant with NEPM (1999) Schedule B(3) (Appdx. 2)
Dissolved Mercury by FIMS	EG035F	WATER	AS 3550, APHA 21st ed. 3112 Hg - B (Flow-injection (SnCl ₂)(Cold Vapour generation) AAS) Samples are 0.45 um filtered prior to analysis. FIM-AAS is an automated flameless atomic absorption technique. A bromate/bromide reagent is used to oxidise any organic mercury compounds in the filtered sample. The ionic mercury is reduced online to atomic mercury vapour by SnCl ₂ which is then purged into a heated quartz cell. Quantification is by comparing absorbance against a calibration curve. This method is compliant with NEPM (1999) Schedule B(3) (Appdx. 2)
Total Mercury by FIMS	EG035T	WATER	AS 3550, APHA 21st ed. 3112 Hg - B (Flow-injection (SnCl ₂)(Cold Vapour generation) AAS) FIM-AAS is an automated flameless atomic absorption technique. A bromate/bromide reagent is used to oxidise any organic mercury compounds in the unfiltered sample. The ionic mercury is reduced online to atomic mercury vapour by SnCl ₂ which is then purged into a heated quartz cell. Quantification is by comparing absorbance against a calibration curve. This method is compliant with NEPM (1999) Schedule B(3) (Appdx. 2)
Dissolved Metals in Fresh Water -Suite A by ORC-ICPMS	EG094A-F	WATER	APHA 21st ed., 3125; USEPA SW846 - 6020 Samples are 0.45 um filtered prior to analysis. The ORC-ICPMS technique removes interfering species through a series of chemical reactions prior to ion detection. Ions are passed into a high vacuum mass spectrometer, which separates the analytes based on their distinct mass to charge ratios prior to measurement by a discrete dynode ion detector. This method is compliant with NEPM (1999) Schedule B(3) (Appdx. 2)
Total Metals in Fresh Water -Suite A by ORC-ICPMS	EG094A-T	WATER	APHA 21st ed., 3125; USEPA SW846 - 6020 Samples are 0.45 um filtered prior to analysis. The ORC-ICPMS technique removes interfering species through a series of chemical reactions prior to ion detection. Ions are passed into a high vacuum mass spectrometer, which separates the analytes based on their distinct mass to charge ratios prior to measurement by a discrete dynode ion detector. This method is compliant with NEPM (1999) Schedule B(3) (Appdx. 2)



Analytical Methods	Method	Matrix	Method Descriptions
Dissolved Metals in Fresh Water -Suite B by ORC-ICPMS	EG094B-F	WATER	APHA 21st ed., 3125; USEPA SW846 - 6020 Samples are 0.45 um filtered prior to analysis. The ORC-ICPMS technique removes interfering species through a series of chemical reactions prior to ion detection. Ions are passed into a high vacuum mass spectrometer, which separates the analytes based on their distinct mass to charge ratios prior to measurement by a discrete dynode ion detector. This method is compliant with NEPM (1999) Schedule B(3) (Appdx. 2)
Total Metals in Fresh Water -Suite B by ORC-ICPMS	EG094B-T	WATER	APHA 21st ed., 3125; USEPA SW846 - 6020 Samples are 0.45 um filtered prior to analysis. The ORC-ICPMS technique removes interfering species through a series of chemical reactions prior to ion detection. Ions are passed into a high vacuum mass spectrometer, which separates the analytes based on their distinct mass to charge ratios prior to measurement by a discrete dynode ion detector. This method is compliant with NEPM (1999) Schedule B(3) (Appdx. 2)
Free CN by Discrete Analyser	EK025G	WATER	APHA 21st ed., 4500-CN-C&N Free Cyanide is determined on samples after distillation using a pyridine-barbituric acid colouring reagent followed with an Discrete Analyser finish. This method is compliant with NEPM (1999) Schedule B(3) (Appdx. 2)
Fluoride by PC Titrator	EK040P	WATER	APHA 21st ed., 4500 F--C CDTA is added to the sample to provide a uniform ionic strength background, adjust pH, and break up complexes. Fluoride concentration is determined by either manual or automatic ISE measurement. This method is compliant with NEPM (1999) Schedule B(3) (Appdx. 2)
Ammonia as N by Discrete analyser	EK055G	WATER	APHA 21st ed., 4500-NH3 G Ammonia is determined by direct colorimetry by Discrete Analyser. This method is compliant with NEPM (1999) Schedule B(3) (Appdx. 2)
Nitrite as N by Discrete Analyser	EK057G	WATER	APHA 21st ed., 4500-NO2- B. Nitrite is determined by direct colourimetry by Discrete Analyser. This method is compliant with NEPM (1999) Schedule B(3) (Appdx. 2)
Nitrate as N by Discrete Analyser	EK058G	WATER	APHA 21st ed., 4500-NO3- F. Nitrate is reduced to nitrite by way of a cadmium reduction column followed by quantification by Discrete Analyser. Nitrite is determined seperately by direct colourimetry and result for Nitrate calculated as the difference between the two results. This method is compliant with NEPM (1999) Schedule B(3) (Appdx. 2)
Nitrite and Nitrate as N (NOx) by Discrete Analyser	EK059G	WATER	APHA 21st ed., 4500-NO3- F. Combined oxidised Nitrogen (NO2+NO3) is determined by Cadmium Reduction and direct colourimetry by Discrete Analyser. This method is compliant with NEPM (1999) Schedule B(3) (Appdx. 2)
Total Nitrogen as N (Persulfate digestion)-Ultra-Trace - CM	EK262PA-CM	WATER	APHA 21st ed., 4500-P J. Persulfate Method for Simultaneous Determination of Total Nitrogen and Total Phosphorus. As sample is digested with persulfate under alkaline conditions yielding orthophosphate and nitrate. Following digestion, analytes are determined by flow injection analysis. This method is compliant with NEPM (1999) Schedule B(3) (Appdx. 2)
Total Phosphorus(Persulfate Digestion) - Ultra-Trace for CM	EK267PA-CM	WATER	APHA 21st ed., 4500-P J. Persulfate Method for Simultaneous Determination of Total Nitrogen and Total Phosphorus. As sample is digested with persulfate under alkaline conditions yielding orthophosphate and nitrate. Following digestion, analytes are determined by flow injection analysis. This method is compliant with NEPM (1999) Schedule B(3) (Appdx. 2)
TPH - Semivolatile Fraction	EP071	WATER	USEPA SW 846 - 8015A The sample extract is analysed by Capillary GC/FID and quantification is by comparison against an established 5 point calibration curve of n-Alkane standards. This method is compliant with NEPM (1999) Schedule B(3) (Appdx. 2)
Volatile Organic Compounds	EP074	WATER	USEPA SW 846 - 8260B Water samples are directly purged prior to analysis by Capillary GC/MS and quantification is by comparison against an established 5 point calibration curve. This method is compliant with NEPM (1999) Schedule B(3) (Appdx. 2)



Analytical Methods	Method	Matrix	Method Descriptions
TPH Volatiles/BTEX	EP080	WATER	USEPA SW 846 - 8260B Water samples are directly purged prior to analysis by Capillary GC/MS and quantification is by comparison against an established 5 point calibration curve. This method is compliant with NEPM (1999) Schedule B(3) (Appdx. 2)
Organophosphorus Pesticides (Ultra-trace) for Catchment M	EP130-CM	WATER	USEPA Method 3640 (GPC cleanup), 8141 (GC/FPD - Capillary Column) This method is compliant with NEPM (1999) Schedule B(3) (Appdx. 2)
Organochlorine Pesticides (Super Ultra-trace) for CM	EP131A-CM	WATER	USEPA Method 3640 (GPC cleanup),3620 (Florisil), 8081/8082 (GC/uECD/uECD). This method is compliant with NEPM (1999) Schedule B(3) (Appdx. 2)
PCB's (Ultra-trace) for Catchment Monitoring	EP131B-CM	WATER	USEPA Method 3640 (GPC cleanup),3620 (Florisil), 8081/8082 (GC/uECD/uECD). This method is compliant with NEPM (1999) Schedule B(3) (Appdx. 2)
PAH Compounds in Water	EP132-LL	WATER	8270 GCMS, LVI, Capillary column, SIM mode. This method is compliant with NEPM (1999) Schedule B(3) (Appdx. 2)
Preparation Methods	Method	Matrix	Method Descriptions
Free Cyanide	EK025-PR	WATER	APHA 21st ed., 4500 CN- C&N. The sample is distilled at natural pH. The CN is trapped in a caustic solution, and quantified by colourimetry on FIA. This method is compliant with NEPM (1999) Schedule B(3) (Appdx. 2)
Persulfate Digestion for UT TN and TP for FIA finish.	EK262/267-PA	WATER	APHA 21st ed., 4500 P - J. This method is compliant with NEPM (1999) Schedule B(3) (Appdx. 2)
Digestion for Total Recoverable Metals - ORC	EN25-ORC	WATER	Modified USEPA SW846-3005. This is an Ultrapure Nitric acid digestion procedure used to prepare surface and ground water samples for analysis by ORC- ICPMS. This method is compliant with NEPM (1999) Schedule B(3) (Appdx. 2)
Separatory Funnel Extraction of Liquids	ORG14	WATER	USEPA SW 846 - 3510B 500 mL to 1L of sample is transferred to a separatory funnel and serially extracted three times using 60mL DCM for each extract. The resultant extracts are combined, dehydrated and concentrated for analysis. This method is compliant with NEPM (1999) Schedule B(3) (Appdx. 2). ALS default excludes sediment which may be resident in the container.
Sep. Funnel Extraction /Acetylation of Phenolic Compounds	ORG14-AC	WATER	USEPA 3510 (Extraction)/ In-house (Acetylation): A 1L sample is extracted into dichloromethane and concentrated to 1 mL with exchange into cyclohexane. Phenolic compounds are reacted with acetic anhydride to yield phenyl acetates suitable for ultra-trace analysis. This method is compliant with NEPM (1999) Schedule B(3) (Appdx. 2). ALS default excludes sediment which may be resident in the container.
Sep. Funnel Extraction of Liquids (Ultra-trace pesticides.)	ORG14-UTP	WATER	USEPA 3510 Samples are extracted into dichloromethane, concentrated and exchanged into an appropriate solvent for GPC and florisil cleanup as required. This method is compliant with NEPM (1999) Schedule B(3) (Appdx. 2). ALS default excludes sediment which may be resident in the container.



Summary of Outliers

Outliers : Quality Control Samples

The following report highlights outliers flagged in the Quality Control (QC) Report. Surrogate recovery limits are static and based on USEPA SW846 or ALS-QWI/EN/38 (in the absence of specific USEPA limits). This report displays QC Outliers (breaches) only.

Duplicates, Method Blanks, Laboratory Control Samples and Matrix Spikes

Matrix: **WATER**

Compound Group Name	Laboratory Sample ID	Client Sample ID	Analyte	CAS Number	Data	Limits	Comment
Laboratory Control Spike (LCS) Recoveries							
ED045G: Chloride Discrete analyser	1307452-010	----	Chloride	16887-00-6	81.3 %	90-110%	Recovery less than lower control limit
EP074A: Monocyclic Aromatic Hydrocarbons	1308115-008	----	p-Isopropyltoluene	99-87-6	146 %	68.3-130%	Recovery greater than upper control limit
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons	1311023-002	----	Anthracene	120-12-7	115 %	73.4-113%	Recovery greater than upper control limit

- For all matrices, no Method Blank value outliers occur.
- For all matrices, no Duplicate outliers occur.
- For all matrices, no Matrix Spike outliers occur.

Regular Sample Surrogates

Sub-Matrix: **WATER**

Compound Group Name	Laboratory Sample ID	Client Sample ID	Analyte	CAS Number	Data	Limits	Comment
Samples Submitted							
EP132T: Base/Neutral Extractable Surrogates	EB0916401-004	4	2-Fluorobiphenyl	321-60-8	114 %	57.6-113 %	Recovery greater than upper data quality objective

Outliers : Analysis Holding Time Compliance

This report displays Holding Time breaches only. Only the respective Extraction / Preparation and/or Analysis component is/are displayed.

Matrix: **WATER**

Method	Extraction / Preparation			Analysis				
	Container / Client Sample ID(s)	Date extracted	Due for extraction	Days overdue	Date analysed	Due for analysis	Days overdue	
EA025: Suspended Solids								
Clear Plastic Bottle - Natural	8,	6	----	----	----	22-OCT-2009	21-OCT-2009	1

Outliers : Frequency of Quality Control Samples

The following report highlights breaches in the Frequency of Quality Control Samples.

Matrix: **WATER**

Quality Control Sample Type	Count		Rate (%)		Quality Control Specification
	QC	Regular	Actual	Expected	
Method					

Page : 12 of 12
 Work Order : EB0916401 Amendment 2
 Client : ALLUVIUM CONSULTING
 Project : Alluvium Dalby



Matrix: **WATER**

Quality Control Sample Type Method	Count		Rate (%)		Quality Control Specification
	QC	Regular	Actual	Expected	
Laboratory Control Samples (LCS)					
Total Nitrogen as N (Persulfate digestion)-Ultra-Trace - CM	1	20	5.0	10.0	NEPM 1999 Schedule B(3) and ALS QCS3 requirement
Total Phosphorus(Persulfate Digestion) - Ultra-Trace for CM	1	20	5.0	10.0	NEPM 1999 Schedule B(3) and ALS QCS3 requirement



Environmental Division

CERTIFICATE OF ANALYSIS

Work Order	: EB0916401	Page	: 1 of 9
Amendment	: 2		
Client	: ALLUVIUM CONSULTING	Laboratory	: Environmental Division Brisbane
Contact	: MS ANNE MARIE CALVI	Contact	: Tim Kilmister
Address	: PO BOX 1581 TOWNSVILLE QLD, AUSTRALIA 4810	Address	: 32 Shand Street Stafford QLD Australia 4053
E-mail	: anne-marie@natres.com.au	E-mail	: Services.Brisbane@alsenviro.com
Telephone	: +61 07 47242170	Telephone	: +61-7-3243 7222
Facsimile	: ----	Facsimile	: +61-7-3243 7218
Project	: Alluvium Dalby	QC Level	: NEPM 1999 Schedule B(3) and ALS QCS3 requirement
Order number	: ----		
C-O-C number	: ----	Date Samples Received	: 16-OCT-2009
Sampler	: A.C, M.A	Issue Date	: 10-NOV-2009
Site	: ----		
Quote number	: BN/580/09	No. of samples received	: 4
		No. of samples analysed	: 4

This report supersedes any previous report(s) with this reference. Results apply to the sample(s) as submitted. All pages of this report have been checked and approved for release.

This Certificate of Analysis contains the following information:

- General Comments
- Analytical Results
- Surrogate Control Limits



NATA Accredited Laboratory 825

This document is issued in accordance with NATA accreditation requirements.

Accredited for compliance with ISO/IEC 17025.

Signatories

This document has been electronically signed by the authorized signatories indicated below. Electronic signing has been carried out in compliance with procedures specified in 21 CFR Part 11.

<i>Signatories</i>	<i>Position</i>	<i>Accreditation Category</i>
Alex Rossi	Organic Chemist	Organics
Celine Conceicao	Spectroscopist	Inorganics
Edwandy Fadjar	Senior Organic Chemist	Organics
Hoa Nguyen	Inorganic Chemist	Inorganics
Kim McCabe	Senior Inorganic Chemist	Inorganics
Matt Frost	Organic Instrument Chemist	Organics
Sarah Ashworth	Organic Chemist	Organics
Stephen Hislop	Senior Inorganic Chemist	Inorganics
Wisam Abou-Maraseh	Spectroscopist	Inorganics

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General Comments

The analytical procedures used by the Environmental Division have been developed from established internationally recognized procedures such as those published by the USEPA, APHA, AS and NEPM. In house developed procedures are employed in the absence of documented standards or by client request.

Where moisture determination has been performed, results are reported on a dry weight basis.

Where a reported less than (<) result is higher than the LOR, this may be due to primary sample extract/digestate dilution and/or insufficient sample for analysis.

Where the LOR of a reported result differs from standard LOR, this may be due to high moisture content, insufficient sample (reduced weight employed) or matrix interference.

When date(s) and/or time(s) are shown bracketed, these have been assumed by the laboratory for processing purposes. If the sampling time is displayed as 0:00 the information was not provided by client.

Key : CAS Number = CAS registry number from database maintained by Chemical Abstracts Services. The Chemical Abstracts Service is a division of the American Chemical Society.

LOR = Limit of reporting

^ = This result is computed from individual analyte detections at or above the level of reporting

- **EK045G (Chloride): LCS recovery falls outside Dynamic Control Limits. It is however within ALS Static Control Limits and hence deemed acceptable.**
- **This report has been amended and re-released to allow the reporting of additional analytical data (Vanadium)**
- **This report has been amended following the identification of an error in the LIMS reporting setup for this test. The incorrect holding time was reported within the QCI in the original report for method EP130 and EP131.**



Analytical Results

Sub-Matrix: WATER

				Client sample ID				
				8	6	1	4	----
				Client sampling date / time				
				14-OCT-2009 16:40	14-OCT-2009 17:40	15-OCT-2009 07:30	15-OCT-2009 10:40	----
Compound	CAS Number	LOR	Unit	EB0916401-001	EB0916401-002	EB0916401-003	EB0916401-004	----
EA006: Sodium Adsorption Ratio (SAR)								
^ Sodium Adsorption Ratio	----	0.01	-	5.70	3.85	1.10	0.97	----
EA025: Suspended Solids								
^ Suspended Solids (SS)	----	5	mg/L	34	378	183	26	----
EA065: Total Hardness as CaCO3								
^ Total Hardness as CaCO3	----	1	mg/L	134	229	120	115	----
ED040F: Dissolved Major Anions								
Sulfate as SO4 2-	14808-79-8	1	mg/L	45	86	4	3	----
ED045G: Chloride Discrete analyser								
Chloride	16887-00-6	1	mg/L	152	148	25	24	----
ED093F: Dissolved Major Cations								
Calcium	7440-70-2	1	mg/L	26	45	24	25	----
Magnesium	7439-95-4	1	mg/L	17	28	14	13	----
Sodium	7440-23-5	1	mg/L	151	134	28	24	----
EG035F: Dissolved Mercury by FIMS								
Mercury	7439-97-6	0.0001	mg/L	<0.0001	<0.0001	<0.0001	<0.0001	----
EG035T: Total Recoverable Mercury by FIMS								
Mercury	7439-97-6	0.0001	mg/L	<0.0001	<0.0001	<0.0001	<0.0001	----
EG094F: Dissolved Metals in Fresh Water by ORC-ICPMS								
Selenium	7782-49-2	0.2	µg/L	0.4	<0.2	<0.2	<0.2	----
Arsenic	7440-38-2	0.2	µg/L	0.9	1.4	0.7	0.6	----
Boron	7440-42-8	5	µg/L	80	163	30	22	----
Cadmium	7440-43-9	0.05	µg/L	<0.05	<0.05	<0.05	<0.05	----
Cobalt	7440-48-4	0.1	µg/L	1.2	2.0	1.4	0.2	----
Copper	7440-50-8	0.5	µg/L	2.0	0.7	1.8	1.0	----
Lead	7439-92-1	0.1	µg/L	0.2	<0.1	<0.1	<0.1	----
Nickel	7440-02-0	0.5	µg/L	2.7	12.3	6.9	3.4	----
Vanadium	7440-62-2	0.2	µg/L	4.0	6.9	8.3	5.1	----
Zinc	7440-66-6	1	µg/L	26	9	<1	3	----
EG094T: Total metals in Fresh water by ORC-ICPMS								
Selenium	7782-49-2	0.2	µg/L	0.4	0.3	0.2	<0.2	----
Arsenic	7440-38-2	0.2	µg/L	2.6	2.1	1.2	0.7	----
Boron	7440-42-8	5	µg/L	119	180	29	22	----
Cadmium	7440-43-9	0.05	µg/L	<0.05	<0.05	<0.05	<0.05	----
Cobalt	7440-48-4	0.1	µg/L	1.7	10.4	7.4	1.6	----
Copper	7440-50-8	0.5	µg/L	5.1	12.5	7.4	1.6	----
Lead	7439-92-1	0.1	µg/L	1.4	2.7	2.1	0.3	----
Nickel	7440-02-0	0.5	µg/L	3.5	40.4	21.4	4.6	----



Analytical Results

Sub-Matrix: WATER

				Client sample ID				
				8	6	1	4	----
				Client sampling date / time				
				14-OCT-2009 16:40	14-OCT-2009 17:40	15-OCT-2009 07:30	15-OCT-2009 10:40	----
Compound	CAS Number	LOR	Unit	EB0916401-001	EB0916401-002	EB0916401-003	EB0916401-004	----
EG094T: Total metals in Fresh water by ORC-ICPMS - Continued								
Zinc	7440-66-6	1	µg/L	65	32	23	3	----
EK025G: Free cyanide by Discrete Analyser								
Free Cyanide	----	0.004	mg/L	<0.004	<0.004	<0.004	<0.004	----
EK040P: Fluoride by PC Titrator								
Fluoride	16984-48-8	0.1	mg/L	0.4	0.3	0.2	0.2	----
EK055G: Ammonia as N by Discrete Analyser								
Ammonia as N	7664-41-7	0.01	mg/L	0.12	0.81	0.13	0.03	----
EK057G: Nitrite as N by Discrete Analyser								
Nitrite as N	----	0.01	mg/L	<0.01	<0.01	<0.01	<0.01	----
EK058G: Nitrate as N by Discrete Analyser								
^ Nitrate as N	14797-55-8	0.01	mg/L	0.04	0.04	0.08	0.02	----
EK059G: NOX as N by Discrete Analyser								
Nitrite + Nitrate as N	----	0.01	mg/L	0.04	0.04	0.08	0.02	----
EP074A: Monocyclic Aromatic Hydrocarbons								
Benzene	71-43-2	1	µg/L	<1	<1	<1	<1	----
Toluene	108-88-3	2	µg/L	<2	<2	<2	<2	----
Ethylbenzene	100-41-4	2	µg/L	<2	<2	<2	<2	----
meta- & para-Xylene	108-38-3 106-42-3	2	µg/L	<2	<2	<2	<2	----
Styrene	100-42-5	5	µg/L	<5	<5	<5	<5	----
ortho-Xylene	95-47-6	2	µg/L	<2	<2	<2	<2	----
Isopropylbenzene	98-82-8	5	µg/L	<5	<5	<5	<5	----
n-Propylbenzene	103-65-1	5	µg/L	<5	<5	<5	<5	----
1,3,5-Trimethylbenzene	108-67-8	5	µg/L	<5	<5	<5	<5	----
sec-Butylbenzene	135-98-8	5	µg/L	<5	<5	<5	<5	----
1,2,4-Trimethylbenzene	95-63-6	5	µg/L	<5	<5	<5	<5	----
tert-Butylbenzene	98-06-6	5	µg/L	<5	<5	<5	<5	----
p-Isopropyltoluene	99-87-6	5	µg/L	<5	<5	<5	<5	----
n-Butylbenzene	104-51-8	5	µg/L	<5	<5	<5	<5	----
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons								
Naphthalene	91-20-3	0.02	µg/L	<0.02	<0.02	<0.02	<0.02	----
Acenaphthylene	208-96-8	0.02	µg/L	<0.02	<0.02	<0.02	<0.02	----
Acenaphthene	83-32-9	0.02	µg/L	<0.02	<0.02	<0.02	<0.02	----
Fluorene	86-73-7	0.02	µg/L	<0.02	<0.02	<0.02	<0.02	----
Phenanthrene	85-01-8	0.02	µg/L	<0.02	<0.02	<0.02	<0.02	----
Anthracene	120-12-7	0.02	µg/L	<0.02	<0.02	<0.02	<0.02	----
Fluoranthene	206-44-0	0.02	µg/L	<0.02	<0.02	<0.02	<0.02	----
Pyrene	129-00-0	0.02	µg/L	<0.02	<0.02	<0.02	<0.02	----



Analytical Results

Sub-Matrix: WATER

				Client sample ID				
				8	6	1	4	----
				14-OCT-2009 16:40	14-OCT-2009 17:40	15-OCT-2009 07:30	15-OCT-2009 10:40	----
				Client sampling date / time				
Compound	CAS Number	LOR	Unit	EB0916401-001	EB0916401-002	EB0916401-003	EB0916401-004	----
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons - Continued								
Benz(a)anthracene	56-55-3	0.02	µg/L	<0.02	<0.02	<0.02	<0.02	----
Chrysene	218-01-9	0.02	µg/L	<0.02	<0.02	<0.02	<0.02	----
Benzo(b)fluoranthene	205-99-2	0.02	µg/L	<0.02	<0.02	<0.02	<0.02	----
Benzo(k)fluoranthene	207-08-9	0.02	µg/L	<0.02	<0.02	<0.02	<0.02	----
Benzo(a)pyrene	50-32-8	0.005	µg/L	<0.005	<0.005	<0.005	<0.005	----
Indeno(1.2.3.cd)pyrene	193-39-5	0.02	µg/L	<0.02	<0.02	<0.02	<0.02	----
Dibenz(a.h)anthracene	53-70-3	0.02	µg/L	<0.02	<0.02	<0.02	<0.02	----
Benzo(g,h,i)perylene	191-24-2	0.02	µg/L	<0.02	<0.02	<0.02	<0.02	----
^ Total PAH	----	0.005	µg/L	<0.005	<0.005	<0.005	<0.005	----
EP080/071: Total Petroleum Hydrocarbons								
C6 - C9 Fraction	----	20	µg/L	<20	<20	<20	<20	----
C10 - C14 Fraction	----	50	µg/L	<50	<50	<50	<50	----
C15 - C28 Fraction	----	100	µg/L	120	150	<100	<100	----
C29 - C36 Fraction	----	50	µg/L	60	120	<50	<50	----
^ C10 - C36 Fraction (sum)	----	50	µg/L	180	270	----	----	----
C10 - C36 Fraction (sum)	----	50	µg/L	----	----	<50	<50	----
EP130A: Organophosphorus Pesticides (Ultra-trace)								
Bromophos-ethyl	4824-78-6	0.10	µg/L	<0.10	<0.10	<0.10	<0.10	----
Carbophenothion	786-19-6	0.10	µg/L	<0.10	<0.10	<0.10	<0.10	----
Chlorfenvinphos (E)	470-90-6	0.10	µg/L	<0.10	<0.10	<0.10	<0.10	----
Chlorfenvinphos (Z)	470-90-8	0.10	µg/L	<0.10	<0.10	<0.10	<0.10	----
Chlorpyrifos	2921-88-2	0.050	µg/L	<0.050	<0.050	<0.050	<0.050	----
Chlorpyrifos-methyl	5598-13-0	0.10	µg/L	<0.10	<0.10	<0.10	<0.10	----
Demeton-S-methyl	919-86-8	0.10	µg/L	<0.10	<0.10	<0.10	<0.10	----
Diazinon	333-41-5	0.10	µg/L	<0.10	<0.10	<0.10	<0.10	----
Dichlorvos	62-73-7	0.10	µg/L	<0.10	<0.10	<0.10	<0.10	----
Dimethoate	60-51-5	0.10	µg/L	<0.10	<0.10	<0.10	<0.10	----
Ethion	563-12-2	0.10	µg/L	<0.10	<0.10	<0.10	<0.10	----
Fenamiphos	22224-92-6	0.10	µg/L	<0.10	<0.10	<0.10	<0.10	----
Fenthion	55-38-9	0.10	µg/L	<0.10	<0.10	<0.10	<0.10	----
Malathion	121-75-5	0.10	µg/L	<0.10	<0.10	<0.10	<0.10	----
Azinphos Methyl	----	0.10	µg/L	<0.10	<0.10	<0.10	<0.10	----
Monocrotophos	6923-22-4	0.10	µg/L	<0.10	<0.10	<0.10	<0.10	----
Parathion	56-38-2	0.10	µg/L	<0.10	<0.10	<0.10	<0.10	----
Parathion-methyl	298-00-0	0.10	µg/L	<0.10	<0.10	<0.10	<0.10	----
Pirimphos-ethyl	23505-41-1	0.10	µg/L	<0.10	<0.10	<0.10	<0.10	----
Prothiofos	34643-46-4	0.10	µg/L	<0.10	<0.10	<0.10	<0.10	----
EP131A: Organochlorine Pesticides								



Analytical Results

Sub-Matrix: WATER

				Client sample ID				
				8	6	1	4	----
				14-OCT-2009 16:40	14-OCT-2009 17:40	15-OCT-2009 07:30	15-OCT-2009 10:40	----
				Client sampling date / time				
Compound	CAS Number	LOR	Unit	EB0916401-001	EB0916401-002	EB0916401-003	EB0916401-004	----
EP131A: Organochlorine Pesticides - Continued								
Aldrin	309-00-2	0.002	µg/L	<0.002	<0.002	<0.002	<0.002	----
alpha-BHC	319-84-6	0.002	µg/L	<0.002	<0.002	<0.002	<0.002	----
beta-BHC	319-85-7	0.002	µg/L	<0.002	<0.002	<0.002	<0.002	----
delta-BHC	319-86-8	0.002	µg/L	<0.002	<0.002	<0.002	<0.002	----
4,4'-DDD	72-54-8	0.002	µg/L	<0.002	<0.002	<0.002	<0.002	----
4,4'-DDE	72-55-9	0.002	µg/L	<0.002	<0.002	<0.002	<0.002	----
4,4'-DDT	50-29-3	0.002	µg/L	<0.002	<0.002	<0.002	<0.002	----
DDT (total)	----	0.002	µg/L	<0.002	<0.002	<0.002	<0.002	----
Dieldrin	60-57-1	0.002	µg/L	<0.002	<0.002	<0.002	<0.002	----
alpha-Endosulfan	959-98-8	0.002	µg/L	<0.002	<0.002	<0.002	<0.002	----
beta-Endosulfan	33213-65-9	0.002	µg/L	<0.002	<0.002	<0.002	<0.002	----
Endosulfan sulfate	1031-07-8	0.002	µg/L	<0.002	<0.002	<0.002	<0.002	----
^ Endosulfan (sum)	115-29-7	0.002	µg/L	<0.002	<0.002	<0.002	<0.002	----
Endrin	72-20-8	0.002	µg/L	<0.002	<0.002	<0.002	<0.002	----
Endrin aldehyde	7421-93-4	0.002	µg/L	<0.002	<0.002	<0.002	<0.002	----
Endrin ketone	53494-70-5	0.002	µg/L	<0.002	<0.002	<0.002	<0.002	----
Heptachlor	76-44-8	0.001	µg/L	<0.001	<0.001	<0.001	<0.001	----
Heptachlor epoxide	1024-57-3	0.002	µg/L	<0.002	<0.002	<0.002	<0.002	----
Hexachlorobenzene (HCB)	118-74-1	0.002	µg/L	<0.002	<0.002	<0.002	<0.002	----
gamma-BHC	58-89-9	0.002	µg/L	<0.002	<0.002	<0.002	<0.002	----
Methoxychlor	72-43-5	0.002	µg/L	<0.002	<0.002	<0.002	<0.002	----
cis-Chlordane	5103-71-9	0.002	µg/L	<0.002	<0.002	<0.002	<0.002	----
trans-Chlordane	5103-74-2	0.002	µg/L	<0.002	<0.002	<0.002	<0.002	----
Total Chlordane (sum)	----	0.002	µg/L	<0.002	<0.002	<0.002	<0.002	----
Oxychlordane	27304-13-8	0.002	µg/L	<0.002	<0.002	<0.002	<0.002	----
EP131B: Polychlorinated Biphenyls (as Aroclors)								
Total Polychlorinated biphenyls	----	0.05	µg/L	<0.05	<0.05	<0.05	<0.05	----
Aroclor 1016	12974-11-2	0.05	µg/L	<0.05	<0.05	<0.05	<0.05	----
Aroclor 1221	11104-28-2	0.05	µg/L	<0.05	<0.05	<0.05	<0.05	----
Aroclor 1232	11141-16-5	0.05	µg/L	<0.05	<0.05	<0.05	<0.05	----
Aroclor 1242	53469-21-9	0.05	µg/L	<0.05	<0.05	<0.05	<0.05	----
Aroclor 1248	12672-29-6	0.05	µg/L	<0.05	<0.05	<0.05	<0.05	----
Aroclor 1254	11097-69-1	0.05	µg/L	<0.05	<0.05	<0.05	<0.05	----
Aroclor 1260	11096-82-5	0.05	µg/L	<0.05	<0.05	<0.05	<0.05	----
Ultra-Trace Nutrients								
Total Nitrogen as N	----	0.05	mg/L	1.41	2.29	0.64	0.34	----
Total Phosphorus as P	----	0.005	mg/L	0.387	0.262	0.122	0.030	----
EP074S: VOC Surrogates								



Analytical Results

Sub-Matrix: **WATER**

				Client sample ID				
				8	6	1	4	----
				Client sampling date / time				
				14-OCT-2009 16:40	14-OCT-2009 17:40	15-OCT-2009 07:30	15-OCT-2009 10:40	----
Compound	CAS Number	LOR	Unit	EB0916401-001	EB0916401-002	EB0916401-003	EB0916401-004	----
EP074S: VOC Surrogates - Continued								
1,2-Dichloroethane-D4	17060-07-0	0.1	%	113	113	113	114	----
Toluene-D8	2037-26-5	0.1	%	94.8	92.9	94.6	94.7	----
4-Bromofluorobenzene	460-00-4	0.1	%	93.8	93.3	94.0	93.4	----
EP080S: TPH(V)/BTEX Surrogates								
1,2-Dichloroethane-D4	17060-07-0	0.1	%	107	109	109	109	----
Toluene-D8	2037-26-5	0.1	%	95.2	93.2	95.0	95.2	----
4-Bromofluorobenzene	460-00-4	0.1	%	89.4	88.9	89.6	89.0	----
EP130S: Organophosphorus Pesticide Surrogate								
DEF	78-48-8	0.1	%	88.2	67.0	57.6	65.4	----
EP131S: OC Pesticide Surrogate								
Dibromo-DDE	21655-73-2	0.1	%	91.2	97.5	72.5	70.0	----
EP131T: PCB Surrogate								
Decachlorobiphenyl	2051-24-3	0.1	%	98.8	90.0	80.0	80.0	----
EP132T: Base/Neutral Extractable Surrogates								
2-Fluorobiphenyl	321-60-8	0.1	%	105	99.9	96.3	114	----
Anthracene-d10	1719-06-8	0.1	%	115	108	92.2	94.9	----
4-Terphenyl-d14	1718-51-0	0.1	%	85.8	82.7	94.8	80.2	----



Surrogate Control Limits

Sub-Matrix: WATER		Recovery Limits (%)	
Compound	CAS Number	Low	High
EP074S: VOC Surrogates			
1,2-Dichloroethane-D4	17060-07-0	80	120
Toluene-D8	2037-26-5	88	110
4-Bromofluorobenzene	460-00-4	86	115
EP080S: TPH(V)/BTEX Surrogates			
1,2-Dichloroethane-D4	17060-07-0	80	120
Toluene-D8	2037-26-5	88	110
4-Bromofluorobenzene	460-00-4	86	115
EP130S: Organophosphorus Pesticide Surrogate			
DEF	78-48-8	----	----
EP131S: OC Pesticide Surrogate			
Dibromo-DDE	21655-73-2	----	----
EP131T: PCB Surrogate			
Decachlorobiphenyl	2051-24-3	----	----
EP132T: Base/Neutral Extractable Surrogates			
2-Fluorobiphenyl	321-60-8	57.6	113
Anthracene-d10	1719-06-8	60.4	125
4-Terphenyl-d14	1718-51-0	58.2	128



Environmental Division

SAMPLE RECEIPT NOTIFICATION (SRN)
Comprehensive Report

Work Order : EB0916488

Client	: ALLUVIUM CONSULTING	Laboratory	: Environmental Division Brisbane
Contact	: MS ANNE MARIE CALVI	Contact	: Tim Kilmister
Address	: PO BOX 1581 TOWNSVILLE QLD, AUSTRALIA 4810	Address	: 32 Shand Street Stafford QLD Australia 4053
E-mail	: anne-marie@natres.com.au	E-mail	: Services.Brisbane@alsenviro.com
Telephone	: +61 07 47242170	Telephone	: +61-7-3243 7222
Facsimile	: ----	Facsimile	: +61-7-3243 7218
Project	: Alluvium Dalby	Page	: 1 of 3
Order number	: ----		
C-O-C number	: ----	Quote number	: EB2009ALLUVI0050 (BN/580/09)
Site	: Dalby		
Sampler	: A.Calvi, M.Adriansen	QC Level	: NEPM 1999 Schedule B(3) and ALS QCS3 requirement

Dates

Date Samples Received	: 16-OCT-2009	Issue Date	: 20-OCT-2009 14:15
Client Requested Due Date	: 28-OCT-2009	Scheduled Reporting Date	: 28-OCT-2009

Delivery Details

Mode of Delivery	: Client Drop off	Temperature	: 4.9, 6.8, 9.4,10.1°C - Ice present
No. of coolers/boxes	: 2 Large, 2 Medium	No. of samples received	: 11
Security Seal	: Intact.	No. of samples analysed	: 11

General Comments

- This report contains the following information:
 - Sample Container(s)/Preservation Non-Compliances
 - Summary of Sample(s) and Requested Analysis
 - Requested Deliverables
- Samples received in appropriately pretreated and preserved containers.
- Samples submitted for dissolved metals analysis should be acidified with nitric acid, following field filtration. Additional charges of up to \$5.00 will apply to each sample requiring filtration and preservation upon receipt by the laboratory.
- **Samples received in appropriately pretreated and preserved containers.**
- **Sample(s) requiring volatile organic compound analysis received in airtight containers (ZHE).**
- **Breaches in recommended extraction / analysis holding times may occur.**
- **As per conversation and confirmation with Anne-Marie both sample ID's of "B" are to be logged in as one sample.**
- **Turbidity analysis has been added to samples A4, A5, 15, 17 as per email request received 20/10/09.**
- **The recommended holding time for turbidity analysis is 48 hours from the time of sampling. Holding times breached as analysis only requested on 20/10/09.**
- Please direct any turn around / technical queries to the laboratory contact designated above.
- Please direct any queries related to sample condition / numbering / breakages to Maggie Kahi.
- Analytical work for this work order will be conducted at ALS Brisbane.
- Sample Disposal - Aqueous (14 days), Solid (90 days) from date of completion of work order.



Sample Container(s)/Preservation Non-Compliances

All comparisons are made against pretreatment/preservation AS, APHA, USEPA standards.

- No sample container / preservation non-compliance exist.

Summary of Sample(s) and Requested Analysis

Some items described below may be part of a laboratory process necessary for the execution of client requested tasks. Packages may contain additional analyses, such as the determination of moisture content and preparation tasks, that are included in the package.

When date(s) and/or time(s) are shown bracketed, these have been assumed by the laboratory for processing purposes. If the sampling time is displayed as 0:00 the information was not provided by client.

Matrix: **WATER**

Laboratory sample ID	Client sampling date / time	Client sample ID	WATER - EA006 Sodium Adsorption Ratio	WATER - EA025H Suspended Solids (High Level)	WATER - EA045 Turbidity	WATER - EA065 Total Hardness as CaCO3	WATER - ED040F Dissolved Major Anions	WATER - ED045G Chloride by Discrete Analyser	WATER - ED093F Dissolved Major Cations	WATER - EG035F Dissolved Mercury by FIMS
EB0916488-001	15-OCT-2009 15:30	A5	✓	✓	✓	✓	✓	✓	✓	✓
EB0916488-002	15-OCT-2009 17:10	A4	✓	✓	✓	✓	✓	✓	✓	✓
EB0916488-003	16-OCT-2009 07:15	15	✓	✓	✓	✓	✓	✓	✓	✓
EB0916488-004	16-OCT-2009 08:30	16	✓	✓		✓	✓	✓	✓	✓
EB0916488-005	16-OCT-2009 09:45	17	✓	✓	✓	✓	✓	✓	✓	✓
EB0916488-006	16-OCT-2009 11:00	14	✓	✓		✓	✓	✓	✓	✓
EB0916488-007	16-OCT-2009 12:45	A7	✓	✓		✓	✓	✓	✓	✓
EB0916488-008	16-OCT-2009 12:45	QA	✓	✓		✓	✓	✓	✓	
EB0916488-009	16-OCT-2009 13:30	QA1								✓
EB0916488-010	16-OCT-2009 13:30	QA2								✓
EB0916488-011	16-OCT-2009 15:35	B	✓	✓		✓	✓	✓	✓	✓

Matrix: **WATER**

Laboratory sample ID	Client sampling date / time	Client sample ID	WATER - EG035T Total Mercury by FIMS	WATER - EG094A-F Dissolved Metals in Fresh Water Suite A by ORC-ICPMS	WATER - EG094A-T Total Metals in Fresh water Suite A by ORC-ICPMS	WATER - EG094B-F Dissolved Metals in fresh water Suite B by ORC-ICPMS	WATER - EG094B-T Total Metals in Fresh Water Suite B by ORC-ICPMS	WATER - EK025G Free CN By Discrete Analyser	WATER - EK040-P Fluoride(PC)	WATER - EK055G Ammonia as N By Discrete Analyser
EB0916488-001	15-OCT-2009 15:30	A5	✓	✓	✓	✓	✓	✓	✓	✓
EB0916488-002	15-OCT-2009 17:10	A4	✓	✓	✓	✓	✓	✓	✓	✓
EB0916488-003	16-OCT-2009 07:15	15	✓	✓	✓	✓	✓	✓	✓	✓
EB0916488-004	16-OCT-2009 08:30	16	✓	✓	✓	✓	✓	✓	✓	✓
EB0916488-005	16-OCT-2009 09:45	17	✓	✓	✓	✓	✓	✓	✓	✓
EB0916488-006	16-OCT-2009 11:00	14	✓	✓	✓	✓	✓	✓	✓	✓
EB0916488-007	16-OCT-2009 12:45	A7	✓	✓	✓	✓	✓	✓	✓	✓
EB0916488-008	16-OCT-2009 12:45	QA	✓		✓		✓	✓	✓	✓
EB0916488-009	16-OCT-2009 13:30	QA1		✓		✓				
EB0916488-010	16-OCT-2009 13:30	QA2		✓		✓				
EB0916488-011	16-OCT-2009 15:35	B	✓	✓	✓	✓	✓	✓	✓	✓



Matrix: WATER

Laboratory sample ID	Client sampling date / time	Client sample ID	WATER - EP074A VOC - MAH's	WATER - EP130-CM Organophosphorus Super Ultra-trace for Catchment Monitoring	WATER - EP131A-CM Super Ultra Trace Organochlorine Pesticides	WATER - EP131B-CM Ultra Trace PCB's for Catchment Monitoring	WATER - EP132-LL Super Ultra Trace PAH	WATER - NT-04 Nitrite and Nitrate	WATER - TPH TPH (fractions)	WATER - UTN-1 Ultratrace Nitrogen (Total) and Phosphorus (Total)
EB0916488-001	15-OCT-2009 15:30	A5	✓	✓	✓	✓	✓	✓	✓	✓
EB0916488-002	15-OCT-2009 17:10	A4	✓	✓	✓	✓	✓	✓	✓	✓
EB0916488-003	16-OCT-2009 07:15	15	✓	✓	✓	✓	✓	✓	✓	✓
EB0916488-004	16-OCT-2009 08:30	16	✓	✓	✓	✓	✓	✓	✓	✓
EB0916488-005	16-OCT-2009 09:45	17	✓	✓	✓	✓	✓	✓	✓	✓
EB0916488-006	16-OCT-2009 11:00	14	✓	✓	✓	✓	✓	✓	✓	✓
EB0916488-007	16-OCT-2009 12:45	A7	✓	✓	✓	✓	✓	✓	✓	✓
EB0916488-008	16-OCT-2009 12:45	QA	✓	✓	✓	✓	✓	✓	✓	✓
EB0916488-011	16-OCT-2009 15:35	B	✓	✓	✓	✓	✓	✓	✓	✓

Requested Deliverables

MR JASON CARTER

- *AU Certificate of Analysis - NATA (COA) Email jason.carter@alluvium.com.au
- *AU Interpretive QC Report - DEFAULT (Anon QCI Rep) (QCI) Email jason.carter@alluvium.com.au
- *AU QC Report - DEFAULT (Anon QC Rep) - NATA (QC) Email jason.carter@alluvium.com.au
- A4 - AU Sample Receipt Notification - Environmental (SRN) Email jason.carter@alluvium.com.au
- A4 - AU Tax Invoice (INV) Email jason.carter@alluvium.com.au
- Default - Chain of Custody (COC) Email jason.carter@alluvium.com.au
- EDI Format - ENMRG (ENMRG) Email jason.carter@alluvium.com.au
- EDI Format - XTab (XTAB) Email jason.carter@alluvium.com.au

MS ANNE MARIE CALVI

- *AU Certificate of Analysis - NATA (COA) Email anne-marie@natres.com.au
- *AU Interpretive QC Report - DEFAULT (Anon QCI Rep) (QCI) Email anne-marie@natres.com.au
- *AU QC Report - DEFAULT (Anon QC Rep) - NATA (QC) Email anne-marie@natres.com.au
- A4 - AU Sample Receipt Notification - Environmental (SRN) Email anne-marie@natres.com.au
- Default - Chain of Custody (COC) Email anne-marie@natres.com.au
- EDI Format - ENMRG (ENMRG) Email anne-marie@natres.com.au
- EDI Format - XTab (XTAB) Email anne-marie@natres.com.au



Environmental Division

QUALITY CONTROL REPORT

Work Order	: EB0916488	Page	: 1 of 14
Amendment	: 3		
Client	: ALLUVIUM CONSULTING	Laboratory	: Environmental Division Brisbane
Contact	: MR JASON CARTER	Contact	: Tim Kilmister
Address	: PO BOX 1581 TOWNSVILLE QLD, AUSTRALIA 4810	Address	: 32 Shand Street Stafford QLD Australia 4053
E-mail	: jason.carter@alluvium.com.au	E-mail	: Services.Brisbane@alsenviro.com
Telephone	: +61 07 47242170	Telephone	: +61-7-3243 7222
Facsimile	: ----	Facsimile	: +61-7-3243 7218
Project	: Alluvium Dalby	QC Level	: NEPM 1999 Schedule B(3) and ALS QCS3 requirement
Site	: Dalby		
C-O-C number	: ----	Date Samples Received	: 16-OCT-2009
Sampler	: A.Calvi, M.Adriansen	Issue Date	: 13-NOV-2009
Order number	: ----		
Quote number	: BN/580/09	No. of samples received	: 11
		No. of samples analysed	: 11

This report supersedes any previous report(s) with this reference. Results apply to the sample(s) as submitted. All pages of this report have been checked and approved for release.

This Quality Control Report contains the following information:

- Laboratory Duplicate (DUP) Report; Relative Percentage Difference (RPD) and Acceptance Limits
- Method Blank (MB) and Laboratory Control Spike (LCS) Report; Recovery and Acceptance Limits
- Matrix Spike (MS) Report; Recovery and Acceptance Limits



NATA Accredited Laboratory 825

This document is issued in accordance with NATA accreditation requirements.

Accredited for compliance with ISO/IEC 17025.

Signatories

This document has been electronically signed by the authorized signatories indicated below. Electronic signing has been carried out in compliance with procedures specified in 21 CFR Part 11.

<i>Signatories</i>	<i>Position</i>	<i>Accreditation Category</i>
Alex Rossi	Organic Chemist	Organics
Celine Conceicao	Spectroscopist	Inorganics
Edwandy Fadjar	Senior Organic Chemist	Organics
Hoa Nguyen	Inorganic Chemist	Inorganics
Kim McCabe	Senior Inorganic Chemist	Inorganics
Sarah Ashworth	Organic Chemist	Organics
Sarah Millington	Senior Inorganic Chemist	Inorganics
Stephen Hislop	Senior Inorganic Chemist	Inorganics
Wisam Abou-Maraseh	Spectroscopist	Inorganics



General Comments

The analytical procedures used by the Environmental Division have been developed from established internationally recognized procedures such as those published by the USEPA, APHA, AS and NEPM. In house developed procedures are employed in the absence of documented standards or by client request.

Where moisture determination has been performed, results are reported on a dry weight basis.

Where a reported less than (<) result is higher than the LOR, this may be due to primary sample extract/digestate dilution and/or insufficient sample for analysis.

Where the LOR of a reported result differs from standard LOR, this may be due to high moisture content, insufficient sample (reduced weight employed) or matrix interference.

Key : Anonymous = Refers to samples which are not specifically part of this work order but formed part of the QC process lot
 CAS Number = CAS registry number from database maintained by Chemical Abstracts Services. The Chemical Abstracts Service is a division of the American Chemical Society.
 LOR = Limit of reporting
 RPD = Relative Percentage Difference
 # = Indicates failed QC



Laboratory Duplicate (DUP) Report

The quality control term Laboratory Duplicate refers to a randomly selected intralaboratory split. Laboratory duplicates provide information regarding method precision and sample heterogeneity. The permitted ranges for the Relative Percent Deviation (RPD) of Laboratory Duplicates are specified in ALS Method QWI-EN/38 and are dependent on the magnitude of results in comparison to the level of reporting: Result < 10 times LOR:- No Limit; Result between 10 and 20 times LOR:- 0% - 50%; Result > 20 times LOR:- 0% - 20%.

Sub-Matrix: **WATER**

				Laboratory Duplicate (DUP) Report					
Laboratory sample ID	Client sample ID	Method: Compound	CAS Number	LOR	Unit	Original Result	Duplicate Result	RPD (%)	Recovery Limits (%)
EA025: Suspended Solids (QC Lot: 1140694)									
EB0916315-001	Anonymous	EA025H: Suspended Solids (SS)	----	5	mg/L	32	33	4.1	No Limit
EB0916488-001	A5	EA025H: Suspended Solids (SS)	----	5	mg/L	1260	1330	5.2	0% - 20%
EA045: Turbidity (QC Lot: 1137127)									
EB0916488-001	A5	EA045: Turbidity	----	0.1	NTU	1000	1000	0.0	0% - 20%
ED040F: Dissolved Major Anions (QC Lot: 1136858)									
EB0916488-001	A5	ED040F: Sulfate as SO4 2-	14808-79-8	1	mg/L	4	4	0.0	No Limit
EB0916499-001	Anonymous	ED040F: Sulfate as SO4 2-	14808-79-8	1	mg/L	817	832	1.8	0% - 20%
ED045G: Chloride Discrete analyser (QC Lot: 1136861)									
EB0916488-001	A5	ED045G: Chloride	16887-00-6	1	mg/L	33	35	5.9	0% - 20%
ED093F: Dissolved Major Cations (QC Lot: 1136859)									
EB0916488-001	A5	ED093F: Calcium	7440-70-2	1	mg/L	6	6	0.0	No Limit
		ED093F: Magnesium	7439-95-4	1	mg/L	3	3	0.0	No Limit
		ED093F: Sodium	7440-23-5	1	mg/L	30	30	0.0	0% - 20%
EG035F: Dissolved Mercury by FIMS (QC Lot: 1137767)									
EB0916401-001	Anonymous	EG035F: Mercury	7439-97-6	0.0001	mg/L	<0.0001	<0.0001	0.0	No Limit
EB0916488-007	A7	EG035F: Mercury	7439-97-6	0.0001	mg/L	<0.0001	<0.0001	0.0	No Limit
EG035T: Total Recoverable Mercury by FIMS (QC Lot: 1138093)									
EB0916401-001	Anonymous	EG035T: Mercury	7439-97-6	0.0001	mg/L	<0.0001	<0.0001	0.0	No Limit
EB0916488-007	A7	EG035T: Mercury	7439-97-6	0.0001	mg/L	<0.0001	<0.0001	0.0	No Limit
EG094F: Dissolved Metals in Fresh Water by ORC-ICPMS (QC Lot: 1137897)									
EB0916315-001	Anonymous	EG094A-F: Cadmium	7440-43-9	0.05	µg/L	0.05	0.06	0.0	No Limit
		EG094A-F: Cobalt	7440-48-4	0.1	µg/L	0.3	0.3	0.0	No Limit
		EG094A-F: Lead	7439-92-1	0.1	µg/L	0.2	0.1	0.0	No Limit
		EG094A-F: Arsenic	7440-38-2	0.2	µg/L	1.9	1.9	0.0	No Limit
		EG094A-F: Vanadium	7440-62-2	0.2	µg/L	1.4	1.3	0.0	No Limit
		EG094A-F: Copper	7440-50-8	0.5	µg/L	0.5	0.5	0.0	No Limit
		EG094A-F: Nickel	7440-02-0	0.5	µg/L	4.0	4.0	0.0	No Limit
		EG094A-F: Zinc	7440-66-6	1	µg/L	<1	2	88.8	No Limit
		EG094A-F: Boron	7440-42-8	5	µg/L	369	360	2.7	0% - 20%
EB0916373-004	Anonymous	EG094A-F: Cadmium	7440-43-9	0.05	µg/L	<0.05	<0.05	0.0	No Limit
		EG094A-F: Cobalt	7440-48-4	0.1	µg/L	0.3	0.3	0.0	No Limit
		EG094A-F: Lead	7439-92-1	0.1	µg/L	<0.1	<0.1	0.0	No Limit
		EG094A-F: Arsenic	7440-38-2	0.2	µg/L	1.4	1.4	0.0	No Limit
		EG094A-F: Vanadium	7440-62-2	0.2	µg/L	1.4	1.4	0.0	No Limit



Sub-Matrix: **WATER**

				Laboratory Duplicate (DUP) Report					
Laboratory sample ID	Client sample ID	Method: Compound	CAS Number	LOR	Unit	Original Result	Duplicate Result	RPD (%)	Recovery Limits (%)
EG094F: Dissolved Metals in Fresh Water by ORC-ICPMS (QC Lot: 1137897) - continued									
EB0916373-004	Anonymous	EG094A-F: Copper	7440-50-8	0.5	µg/L	0.6	0.5	0.0	No Limit
		EG094A-F: Nickel	7440-02-0	0.5	µg/L	3.9	4.0	0.0	No Limit
		EG094A-F: Zinc	7440-66-6	1	µg/L	<1	<1	0.0	No Limit
		EG094A-F: Boron	7440-42-8	5	µg/L	331	326	1.3	0% - 20%
EG094F: Dissolved Metals in Fresh Water by ORC-ICPMS (QC Lot: 1137898)									
EB0916315-001	Anonymous	EG094B-F: Selenium	7782-49-2	0.2	µg/L	7.8	7.9	0.0	0% - 20%
EB0916373-004	Anonymous	EG094B-F: Selenium	7782-49-2	0.2	µg/L	9.2	9.1	1.1	0% - 20%
EG094F: Dissolved Metals in Fresh Water by ORC-ICPMS (QC Lot: 1137899)									
EB0916488-011	B	EG094A-F: Cadmium	7440-43-9	0.05	µg/L	<0.05	<0.05	0.0	No Limit
		EG094A-F: Cobalt	7440-48-4	0.1	µg/L	<0.1	<0.1	0.0	No Limit
		EG094A-F: Lead	7439-92-1	0.1	µg/L	<0.1	<0.1	0.0	No Limit
		EG094A-F: Arsenic	7440-38-2	0.2	µg/L	<0.2	<0.2	0.0	No Limit
		EG094A-F: Vanadium	7440-62-2	0.2	µg/L	<0.2	<0.2	0.0	No Limit
		EG094A-F: Copper	7440-50-8	0.5	µg/L	<0.5	<0.5	0.0	No Limit
		EG094A-F: Nickel	7440-02-0	0.5	µg/L	<0.5	<0.5	0.0	No Limit
		EG094A-F: Zinc	7440-66-6	1	µg/L	<1	<1	0.0	No Limit
EG094A-F: Boron	7440-42-8	5	µg/L	<5	<5	0.0	No Limit		
EG094F: Dissolved Metals in Fresh Water by ORC-ICPMS (QC Lot: 1137900)									
EB0916488-011	B	EG094B-F: Selenium	7782-49-2	0.2	µg/L	<0.2	<0.2	0.0	No Limit
EG094F: Dissolved Metals in Fresh Water by ORC-ICPMS (QC Lot: 1140839)									
EB0916488-005	17	EG094A-F: Cadmium	7440-43-9	0.05	µg/L	<0.05	<0.05	0.0	No Limit
		EG094A-F: Cobalt	7440-48-4	0.1	µg/L	0.4	0.3	0.0	No Limit
		EG094A-F: Lead	7439-92-1	0.1	µg/L	<0.1	<0.1	0.0	No Limit
		EG094A-F: Arsenic	7440-38-2	0.2	µg/L	0.9	0.9	0.0	No Limit
		EG094A-F: Copper	7440-50-8	0.5	µg/L	5.3	5.2	0.0	0% - 50%
		EG094A-F: Nickel	7440-02-0	0.5	µg/L	9.7	9.6	1.0	0% - 50%
		EG094A-F: Zinc	7440-66-6	1	µg/L	<1	<1	0.0	No Limit
EG094A-F: Boron	7440-42-8	5	µg/L	74	73	0.0	0% - 50%		
EG094F: Dissolved Metals in Fresh Water by ORC-ICPMS (QC Lot: 1140840)									
EB0916488-005	17	EG094B-F: Selenium	7782-49-2	0.2	µg/L	0.3	0.3	0.0	No Limit
EG094T: Total metals in Fresh water by ORC-ICPMS (QC Lot: 1137901)									
EB0916401-001	Anonymous	EG094A-T: Cadmium	7440-43-9	0.05	µg/L	<0.05	<0.05	0.0	No Limit
		EG094A-T: Cobalt	7440-48-4	0.1	µg/L	1.7	1.7	0.0	0% - 50%
		EG094A-T: Lead	7439-92-1	0.1	µg/L	1.4	1.3	8.0	0% - 50%
		EG094A-T: Arsenic	7440-38-2	0.2	µg/L	2.6	2.7	0.0	0% - 50%
		EG094A-T: Copper	7440-50-8	0.5	µg/L	5.1	5.1	0.0	0% - 50%
		EG094A-T: Nickel	7440-02-0	0.5	µg/L	3.5	3.5	0.0	No Limit
		EG094A-T: Zinc	7440-66-6	1	µg/L	65	64	1.6	0% - 20%
EG094A-T: Boron	7440-42-8	5	µg/L	119	114	4.2	0% - 20%		



Sub-Matrix: **WATER**

				Laboratory Duplicate (DUP) Report						
Laboratory sample ID	Client sample ID	Method: Compound	CAS Number	LOR	Unit	Original Result	Duplicate Result	RPD (%)	Recovery Limits (%)	
EG094T: Total metals in Fresh water by ORC-ICPMS (QC Lot: 1137901) - continued										
EB0916488-007	A7	EG094A-T: Cadmium	7440-43-9	0.05	µg/L	<0.05	<0.05	0.0	No Limit	
		EG094A-T: Cobalt	7440-48-4	0.1	µg/L	9.4	9.6	2.4	0% - 20%	
		EG094A-T: Lead	7439-92-1	0.1	µg/L	7.1	7.1	0.0	0% - 20%	
		EG094A-T: Arsenic	7440-38-2	0.2	µg/L	2.9	3.0	0.0	0% - 50%	
		EG094A-T: Copper	7440-50-8	0.5	µg/L	4.4	4.6	4.7	No Limit	
		EG094A-T: Nickel	7440-02-0	0.5	µg/L	10.3	10.5	1.7	0% - 20%	
		EG094A-T: Zinc	7440-66-6	1	µg/L	19	16	18.4	0% - 50%	
		EG094A-T: Boron	7440-42-8	5	µg/L	44	44	0.0	No Limit	
EG094T: Total metals in Fresh water by ORC-ICPMS (QC Lot: 1137902)										
EB0916401-001	Anonymous	EG094B-T: Selenium	7782-49-2	0.2	µg/L	0.4	0.4	0.0	No Limit	
EB0916488-007	A7	EG094B-T: Selenium	7782-49-2	0.2	µg/L	0.4	0.4	0.0	No Limit	
EK025G: Free cyanide by Discrete Analyser (QC Lot: 1138461)										
EB0916401-001	Anonymous	EK025G: Free Cyanide	----	0.004	mg/L	<0.004	<0.004	0.0	No Limit	
EB0916488-006	14	EK025G: Free Cyanide	----	0.004	mg/L	<0.004	<0.004	0.0	No Limit	
EK040P: Fluoride by PC Titrator (QC Lot: 1139317)										
EB0916401-002	Anonymous	EK040P: Fluoride	16984-48-8	0.1	mg/L	0.3	0.3	0.0	No Limit	
EB0916488-007	A7	EK040P: Fluoride	16984-48-8	0.1	mg/L	0.1	0.1	0.0	No Limit	
EK055G: Ammonia as N by Discrete Analyser (QC Lot: 1141352)										
EB0916488-001	A5	EK055G: Ammonia as N	7664-41-7	0.01	mg/L	0.12	0.12	0.0	0% - 50%	
EB0916535-002	Anonymous	EK055G: Ammonia as N	7664-41-7	0.01	mg/L	0.08	0.09	0.0	No Limit	
EK057G: Nitrite as N by Discrete Analyser (QC Lot: 1136860)										
EB0916488-001	A5	EK057G: Nitrite as N	----	0.01	mg/L	0.04	0.04	0.0	No Limit	
EB0916499-001	Anonymous	EK057G: Nitrite as N	----	0.01	mg/L	<0.01	<0.01	0.0	No Limit	
EK059G: NOX as N by Discrete Analyser (QC Lot: 1141351)										
EB0916488-001	A5	EK059G: Nitrite + Nitrate as N	----	0.01	mg/L	0.62	0.70	12.6	0% - 20%	
EB0916535-002	Anonymous	EK059G: Nitrite + Nitrate as N	----	0.01	mg/L	0.67	0.67	0.0	0% - 20%	
EP074A: Monocyclic Aromatic Hydrocarbons (QC Lot: 1137747)										
EB0916488-001	A5	EP074: Benzene	71-43-2	1	µg/L	<1	<1	0.0	No Limit	
		EP074: Toluene	108-88-3	2	µg/L	<2	<2	0.0	No Limit	
		EP074: Ethylbenzene	100-41-4	2	µg/L	<2	<2	0.0	No Limit	
		EP074: meta- & para-Xylene	108-38-3	2	µg/L	<2	<2	0.0	No Limit	
			106-42-3							
		EP074: ortho-Xylene	95-47-6	2	µg/L	<2	<2	0.0	No Limit	
		EP074: Styrene	100-42-5	5	µg/L	<5	<5	0.0	No Limit	
		EP074: Isopropylbenzene	98-82-8	5	µg/L	<5	<5	0.0	No Limit	
		EP074: n-Propylbenzene	103-65-1	5	µg/L	<5	<5	0.0	No Limit	
		EP074: 1,3,5-Trimethylbenzene	108-67-8	5	µg/L	<5	<5	0.0	No Limit	
		EP074: sec-Butylbenzene	135-98-8	5	µg/L	<5	<5	0.0	No Limit	
		EP074: 1,2,4-Trimethylbenzene	95-63-6	5	µg/L	<5	<5	0.0	No Limit	



Sub-Matrix: WATER				Laboratory Duplicate (DUP) Report					
Laboratory sample ID	Client sample ID	Method: Compound	CAS Number	LOR	Unit	Original Result	Duplicate Result	RPD (%)	Recovery Limits (%)
EP074A: Monocyclic Aromatic Hydrocarbons (QC Lot: 1137747) - continued									
EB0916488-001	A5	EP074: tert-Butylbenzene	98-06-6	5	µg/L	<5	<5	0.0	No Limit
		EP074: p-Isopropyltoluene	99-87-6	5	µg/L	<5	<5	0.0	No Limit
		EP074: n-Butylbenzene	104-51-8	5	µg/L	<5	<5	0.0	No Limit
EP080/071: Total Petroleum Hydrocarbons (QC Lot: 1137748)									
EB0916488-001	A5	EP080: C6 - C9 Fraction	----	20	µg/L	<20	<20	0.0	No Limit
Ultra-Trace Nutrients (QC Lot: 1136891)									
EB0916401-001	Anonymous	EK267PA-CM: Total Phosphorus as P	----	0.005	mg/L	0.387	0.413	6.6	0% - 20%
EB0916488-006	14	EK267PA-CM: Total Phosphorus as P	----	0.005	mg/L	0.254	0.268	5.7	0% - 20%
Ultra-Trace Nutrients (QC Lot: 1136892)									
EB0916401-001	Anonymous	EK262PA-CM: Total Nitrogen as N	----	0.05	mg/L	1.41	1.43	1.6	0% - 20%
EB0916488-006	14	EK262PA-CM: Total Nitrogen as N	----	0.05	mg/L	1.11	1.02	8.3	0% - 20%



Method Blank (MB) and Laboratory Control Spike (LCS) Report

The quality control term Method / Laboratory Blank refers to an analyte free matrix to which all reagents are added in the same volumes or proportions as used in standard sample preparation. The purpose of this QC parameter is to monitor potential laboratory contamination. The quality control term Laboratory Control Sample (LCS) refers to a certified reference material, or a known interference free matrix spiked with target analytes. The purpose of this QC parameter is to monitor method precision and accuracy independent of sample matrix. Dynamic Recovery Limits are based on statistical evaluation of processed LCS.

Sub-Matrix: **WATER**

				Method Blank (MB) Report Result	Laboratory Control Spike (LCS) Report			
					Spike Concentration	Spike Recovery (%) LCS	Recovery Limits (%)	
Method: Compound	CAS Number	LOR	Unit	Low			High	
EA025: Suspended Solids (QCLot: 1140694)								
EA025H: Suspended Solids (SS)	----	5	mg/L	<5	150 mg/L	96.0	86	108
EA045: Turbidity (QCLot: 1137127)								
EA045: Turbidity	----	0.1	NTU	<0.1	40.0 NTU	100	96	104
ED040F: Dissolved Major Anions (QCLot: 1136858)								
ED040F: Sulfate as SO4 2-	14808-79-8	1	mg/L	<1	----	----	----	----
ED045G: Chloride Discrete analyser (QCLot: 1136861)								
ED045G: Chloride	16887-00-6	1	mg/L	<1	1000 mg/L	89.7	90	130
ED093F: Dissolved Major Cations (QCLot: 1136859)								
ED093F: Calcium	7440-70-2	1	mg/L	<1	----	----	----	----
ED093F: Magnesium	7439-95-4	1	mg/L	<1	----	----	----	----
ED093F: Sodium	7440-23-5	1	mg/L	<1	----	----	----	----
EG035F: Dissolved Mercury by FIMS (QCLot: 1137767)								
EG035F: Mercury	7439-97-6	0.0001	mg/L	<0.0001	0.010 mg/L	105	86	116
EG035T: Total Recoverable Mercury by FIMS (QCLot: 1138093)								
EG035T: Mercury	7439-97-6	0.0001	mg/L	<0.0001	0.010 mg/L	102	81	119
EG094F: Dissolved Metals in Fresh Water by ORC-ICPMS (QCLot: 1137897)								
EG094A-F: Arsenic	7440-38-2	0.2	µg/L	<0.2	10 µg/L	107	81	121
EG094A-F: Boron	7440-42-8	5	µg/L	<5	10 µg/L	112	70	130
EG094A-F: Cadmium	7440-43-9	0.05	µg/L	<0.05	10 µg/L	103	70	130
EG094A-F: Cobalt	7440-48-4	0.1	µg/L	<0.1	10 µg/L	109	70	130
EG094A-F: Copper	7440-50-8	0.5	µg/L	<0.5	10 µg/L	114	70	130
EG094A-F: Lead	7439-92-1	0.1	µg/L	<0.1	10 µg/L	109	70	130
EG094A-F: Nickel	7440-02-0	0.5	µg/L	<0.5	10 µg/L	110	70	130
EG094A-F: Vanadium	7440-62-2	0.2	µg/L	<0.2	10 µg/L	99.8	70	130
EG094A-F: Zinc	7440-66-6	1	µg/L	<1	10 µg/L	106	70	130
EG094B-F: Dissolved Metals in Fresh Water by ORC-ICPMS (QCLot: 1137898)								
EG094B-F: Selenium	7782-49-2	0.2	µg/L	<0.2	10 µg/L	98.2	74	122
EG094F: Dissolved Metals in Fresh Water by ORC-ICPMS (QCLot: 1137899)								
EG094A-F: Arsenic	7440-38-2	0.2	µg/L	<0.2	10 µg/L	106	81	121
EG094A-F: Boron	7440-42-8	5	µg/L	<5	10 µg/L	107	70	130
EG094A-F: Cadmium	7440-43-9	0.05	µg/L	<0.05	10 µg/L	104	70	130
EG094A-F: Cobalt	7440-48-4	0.1	µg/L	<0.1	10 µg/L	103	70	130
EG094A-F: Copper	7440-50-8	0.5	µg/L	<0.5	10 µg/L	110	70	130



Sub-Matrix: **WATER**

Method: Compound	CAS Number	LOR	Unit	Method Blank (MB) Report	Laboratory Control Spike (LCS) Report				
				Result	Spike Concentration	Spike Recovery (%)		Recovery Limits (%)	
						LCS	Low	High	
EG094F: Dissolved Metals in Fresh Water by ORC-ICPMS (QCLot: 1137899) - continued									
EG094A-F: Lead	7439-92-1	0.1	µg/L	<0.1	10 µg/L	105	70	130	
EG094A-F: Nickel	7440-02-0	0.5	µg/L	<0.5	10 µg/L	106	70	130	
EG094A-F: Vanadium	7440-62-2	0.2	µg/L	<0.2	10 µg/L	101	70	130	
EG094A-F: Zinc	7440-66-6	1	µg/L	<1	10 µg/L	108	70	130	
EG094F: Dissolved Metals in Fresh Water by ORC-ICPMS (QCLot: 1137900)									
EG094B-F: Selenium	7782-49-2	0.2	µg/L	<0.2	10 µg/L	106	74	122	
EG094F: Dissolved Metals in Fresh Water by ORC-ICPMS (QCLot: 1140839)									
EG094A-F: Arsenic	7440-38-2	0.2	µg/L	<0.2	10 µg/L	102	81	121	
EG094A-F: Boron	7440-42-8	5	µg/L	<5	10 µg/L	125	70	130	
EG094A-F: Cadmium	7440-43-9	0.05	µg/L	<0.05	10 µg/L	93.8	70	130	
EG094A-F: Cobalt	7440-48-4	0.1	µg/L	<0.1	10 µg/L	104	70	130	
EG094A-F: Copper	7440-50-8	0.5	µg/L	<0.5	10 µg/L	91.3	70	130	
EG094A-F: Lead	7439-92-1	0.1	µg/L	<0.1	10 µg/L	96.5	70	130	
EG094A-F: Nickel	7440-02-0	0.5	µg/L	<0.5	10 µg/L	95.7	70	130	
EG094A-F: Zinc	7440-66-6	1	µg/L	<1	10 µg/L	87.0	70	130	
EG094F: Dissolved Metals in Fresh Water by ORC-ICPMS (QCLot: 1140840)									
EG094B-F: Selenium	7782-49-2	0.2	µg/L	<0.2	10 µg/L	103	74	122	
EG094T: Total metals in Fresh water by ORC-ICPMS (QCLot: 1137901)									
EG094A-T: Arsenic	7440-38-2	0.2	µg/L	<0.2	10 µg/L	102	70	130	
EG094A-T: Boron	7440-42-8	5	µg/L	<5	10 µg/L	117	70	130	
EG094A-T: Cadmium	7440-43-9	0.05	µg/L	<0.05	10 µg/L	94.3	70	130	
EG094A-T: Cobalt	7440-48-4	0.1	µg/L	<0.1	10 µg/L	106	70	130	
EG094A-T: Copper	7440-50-8	0.5	µg/L	<0.5	10 µg/L	101	70	130	
EG094A-T: Lead	7439-92-1	0.1	µg/L	<0.1	10 µg/L	98.8	70	130	
EG094A-T: Nickel	7440-02-0	0.5	µg/L	<0.5	10 µg/L	104	70	130	
EG094A-T: Zinc	7440-66-6	1	µg/L	<1	10 µg/L	101	70	130	
EG094T: Total metals in Fresh water by ORC-ICPMS (QCLot: 1137902)									
EG094B-T: Selenium	7782-49-2	0.2	µg/L	<0.2	10 µg/L	95.3	70	130	
EK025G: Free cyanide by Discrete Analyser (QCLot: 1138461)									
EK025G: Free Cyanide	----	0.004	mg/L	<0.004	0.5 mg/L	88.6	70	124	
EK040P: Fluoride by PC Titrator (QCLot: 1139317)									
EK040P: Fluoride	16984-48-8	0.1	mg/L	<0.1	10 mg/L	110	75	123	
EK055G: Ammonia as N by Discrete Analyser (QCLot: 1141352)									
EK055G: Ammonia as N	7664-41-7	0.01	mg/L	<0.01	0.5 mg/L	75.3	70	129	
EK057G: Nitrite as N by Discrete Analyser (QCLot: 1136860)									
EK057G: Nitrite as N	----	0.01	mg/L	<0.01	0.5 mg/L	100	74	128	
EK059G: NOX as N by Discrete Analyser (QCLot: 1141351)									



Sub-Matrix: **WATER**

Method: Compound	CAS Number	LOR	Unit	Method Blank (MB) Report	Laboratory Control Spike (LCS) Report				
				Result	Spike Concentration	Spike Recovery (%)		Recovery Limits (%)	
						LCS	Low	High	
EK059G: NOX as N by Discrete Analyser (QCLot: 1141351) - continued									
EK059G: Nitrite + Nitrate as N	----	0.01	mg/L	<0.01	0.5 mg/L	118	70	130	
EP074A: Monocyclic Aromatic Hydrocarbons (QCLot: 1137747)									
EP074: Benzene	71-43-2	1	µg/L	<1	10 µg/L	103	75	122	
EP074: Toluene	108-88-3	2	µg/L	<2	10 µg/L	100	71.2	124	
EP074: Ethylbenzene	100-41-4	2	µg/L	<2	10 µg/L	99.7	76	120	
EP074: meta- & para-Xylene	108-38-3	2	µg/L	<2	20 µg/L	98.6	68	132	
	106-42-3								
EP074: Styrene	100-42-5	5	µg/L	<5	10 µg/L	103	68	127	
EP074: ortho-Xylene	95-47-6	2	µg/L	<2	10 µg/L	99.2	76	122	
EP074: Isopropylbenzene	98-82-8	5	µg/L	<5	10 µg/L	99.8	74	123	
EP074: n-Propylbenzene	103-65-1	5	µg/L	<5	10 µg/L	102	69	125	
EP074: 1,3,5-Trimethylbenzene	108-67-8	5	µg/L	<5	10 µg/L	97.4	74	121	
EP074: sec-Butylbenzene	135-98-8	5	µg/L	<5	10 µg/L	98.0	72	124	
EP074: 1,2,4-Trimethylbenzene	95-63-6	5	µg/L	<5	10 µg/L	99.1	73.5	124	
EP074: tert-Butylbenzene	98-06-6	5	µg/L	<5	10 µg/L	102	71.6	128	
EP074: p-Isopropyltoluene	99-87-6	5	µg/L	<5	10 µg/L	84.9	68.3	130	
EP074: n-Butylbenzene	104-51-8	5	µg/L	<5	10 µg/L	87.8	67	126	
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons (QCLot: 1137376)									
EP132-LL: Naphthalene	91-20-3	0.02	µg/L	<0.02	0.025 µg/L	92.3	68.3	116	
EP132-LL: Acenaphthylene	208-96-8	0.02	µg/L	<0.02	0.025 µg/L	82.7	72.4	112	
EP132-LL: Acenaphthene	83-32-9	0.02	µg/L	<0.02	0.025 µg/L	78.8	73.2	111	
EP132-LL: Fluorene	86-73-7	0.02	µg/L	<0.02	0.025 µg/L	100	72.9	114	
EP132-LL: Phenanthrene	85-01-8	0.02	µg/L	<0.02	0.025 µg/L	87.2	74.8	112	
EP132-LL: Anthracene	120-12-7	0.02	µg/L	<0.02	0.025 µg/L	# 115	73.4	113	
EP132-LL: Fluoranthene	206-44-0	0.02	µg/L	<0.02	0.025 µg/L	87.0	74.8	117	
EP132-LL: Pyrene	129-00-0	0.02	µg/L	<0.02	0.025 µg/L	95.8	74.1	117	
EP132-LL: Benz(a)anthracene	56-55-3	0.02	µg/L	<0.02	0.025 µg/L	90.4	73.6	114	
EP132-LL: Chrysene	218-01-9	0.02	µg/L	<0.02	0.025 µg/L	85.1	69.6	120	
EP132-LL: Benzo(b)fluoranthene	205-99-2	0.02	µg/L	<0.02	0.025 µg/L	99.6	71.4	119	
EP132-LL: Benzo(k)fluoranthene	207-08-9	0.02	µg/L	<0.02	0.025 µg/L	81.5	74.8	118	
EP132-LL: Benzo(a)pyrene	50-32-8	0.005	µg/L	<0.005	0.025 µg/L	76.8	75.2	117	
EP132-LL: Indeno(1,2,3-cd)pyrene	193-39-5	0.02	µg/L	<0.02	0.025 µg/L	79.0	67.8	119	
EP132-LL: Dibenz(a,h)anthracene	53-70-3	0.02	µg/L	<0.02	0.025 µg/L	92.3	71.5	117	
EP132-LL: Benzo(g,h,i)perylene	191-24-2	0.02	µg/L	<0.02	0.025 µg/L	80.9	66.6	121	
EP132-LL: Total PAH	----	0.005	µg/L	<0.005	----	----	----	----	
EP080/071: Total Petroleum Hydrocarbons (QCLot: 1137748)									
EP080: C6 - C9 Fraction	----	20	µg/L	<20	160 µg/L	94.4	73	135	
EP080/071: Total Petroleum Hydrocarbons (QCLot: 1138046)									
EP071: C10 - C14 Fraction	----	50	µg/L	<50	1200 µg/L	77.2	49	110	



Sub-Matrix: WATER

Method: Compound	CAS Number	LOR	Unit	Method Blank (MB) Report	Laboratory Control Spike (LCS) Report				
				Result	Spike	Spike Recovery (%)		Recovery Limits (%)	
					Concentration	LCS	Low	High	
EP080/071: Total Petroleum Hydrocarbons (QCLot: 1138046) - continued									
EP071: C15 - C28 Fraction	----	100	µg/L	<100	2040 µg/L	69.3	58	130	
EP071: C29 - C36 Fraction	----	50	µg/L	<50	----	----	----	----	
EP130A: Organophosphorus Pesticides (Ultra-trace) (QCLot: 1136897)									
EP130-CM: Bromophos-ethyl	4824-78-6	0.10	µg/L	<0.10	1.0 µg/L	76.1	----	----	
EP130-CM: Carbophenothion	786-19-6	0.10	µg/L	<0.10	1.0 µg/L	74.2	----	----	
EP130-CM: Chlorfenvinphos (E)	470-90-6	0.10	µg/L	<0.10	0.1 µg/L	88.0	----	----	
EP130-CM: Chlorfenvinphos (Z)	470-90-8	0.10	µg/L	<0.10	1.0 µg/L	80.2	----	----	
EP130-CM: Chlorpyrifos	2921-88-2	0.05	µg/L	<0.050	1.0 µg/L	73.6	----	----	
EP130-CM: Chlorpyrifos-methyl	5598-13-0	0.10	µg/L	<0.10	1.0 µg/L	79.7	----	----	
EP130-CM: Demeton-S-methyl	919-86-8	0.10	µg/L	<0.10	1.0 µg/L	81.3	----	----	
EP130-CM: Diazinon	333-41-5	0.10	µg/L	<0.10	1.0 µg/L	73.5	----	----	
EP130-CM: Dichlorvos	62-73-7	0.10	µg/L	<0.10	1.0 µg/L	106	----	----	
EP130-CM: Dimethoate	60-51-5	0.10	µg/L	<0.10	1.0 µg/L	89.1	----	----	
EP130-CM: Ethion	563-12-2	0.10	µg/L	<0.10	1.0 µg/L	83.5	----	----	
EP130-CM: Fenamiphos	22224-92-6	0.10	µg/L	<0.10	1.0 µg/L	83.6	----	----	
EP130-CM: Fenthion	55-38-9	0.10	µg/L	<0.10	1.0 µg/L	77.2	----	----	
EP130-CM: Malathion	121-75-5	0.10	µg/L	<0.10	1.0 µg/L	82.9	----	----	
EP130-CM: Azinphos Methyl	----	0.10	µg/L	<0.10	1.0 µg/L	132	----	----	
EP130-CM: Monocrotophos	6923-22-4	0.10	µg/L	<0.10	1.0 µg/L	22.4	----	----	
EP130-CM: Parathion	56-38-2	0.10	µg/L	<0.10	1.0 µg/L	90.4	----	----	
EP130-CM: Parathion-methyl	298-00-0	0.10	µg/L	<0.10	1.0 µg/L	100	----	----	
EP130-CM: Pirimphos-ethyl	23505-41-1	0.10	µg/L	<0.10	1.0 µg/L	75.1	----	----	
EP130-CM: Prothiofos	34643-46-4	0.10	µg/L	<0.10	1.0 µg/L	76.1	----	----	
EP131A: Organochlorine Pesticides (QCLot: 1136896)									
EP131A-CM: Aldrin	309-00-2	0.01	µg/L	<0.010	0.1 µg/L	37.7	----	----	
EP131A-CM: alpha-BHC	319-84-6	0.01	µg/L	<0.010	0.1 µg/L	34.9	----	----	
EP131A-CM: beta-BHC	319-85-7	0.01	µg/L	<0.010	0.1 µg/L	51.4	----	----	
EP131A-CM: delta-BHC	319-86-8	0.01	µg/L	<0.010	0.1 µg/L	50.9	----	----	
EP131A-CM: 4,4'-DDD	72-54-8	0.01	µg/L	<0.010	0.1 µg/L	68.5	----	----	
EP131A-CM: 4,4'-DDE	72-55-9	0.01	µg/L	<0.010	0.1 µg/L	58.4	----	----	
EP131A-CM: 4,4'-DDT	50-29-3	0.01	µg/L	<0.010	0.1 µg/L	84.2	----	----	
EP131A-CM: Dieldrin	60-57-1	0.01	µg/L	<0.010	0.1 µg/L	80.4	----	----	
EP131A-CM: alpha-Endosulfan	959-98-8	0.01	µg/L	<0.010	0.1 µg/L	69.3	----	----	
EP131A-CM: beta-Endosulfan	33213-65-9	0.01	µg/L	<0.010	0.1 µg/L	90.9	----	----	
EP131A-CM: Endosulfan sulfate	1031-07-8	0.01	µg/L	<0.010	0.1 µg/L	85.7	----	----	
EP131A-CM: Endrin	72-20-8	0.01	µg/L	<0.010	0.1 µg/L	84.8	----	----	
EP131A-CM: Endrin aldehyde	7421-93-4	0.01	µg/L	<0.010	0.1 µg/L	84.2	----	----	
EP131A-CM: Endrin ketone	53494-70-5	0.01	µg/L	<0.010	0.1 µg/L	77.6	----	----	
EP131A-CM: Heptachlor	76-44-8	0.005	µg/L	<0.005	0.1 µg/L	44.1	----	----	



Sub-Matrix: **WATER**

Method: Compound	CAS Number	LOR	Unit	Method Blank (MB) Report Result	Laboratory Control Spike (LCS) Report				
					Spike Concentration	Spike Recovery (%)		Recovery Limits (%)	
						LCS	Low	High	
EP131A: Organochlorine Pesticides (QCLot: 1136896) - continued									
EP131A-CM: Heptachlor epoxide	1024-57-3	0.01	µg/L	<0.010	0.1 µg/L	62.1	----	----	
EP131A-CM: Hexachlorobenzene (HCB)	118-74-1	0.01	µg/L	<0.010	0.1 µg/L	24.6	----	----	
EP131A-CM: gamma-BHC	58-89-9	0.01	µg/L	<0.010	0.1 µg/L	31.1	----	----	
EP131A-CM: Methoxychlor	72-43-5	0.01	µg/L	<0.010	0.1 µg/L	106	----	----	
EP131A-CM: cis-Chlordane	5103-71-9	0.01	µg/L	<0.010	0.1 µg/L	84.1	----	----	
EP131A-CM: trans-Chlordane	5103-74-2	0.01	µg/L	<0.010	0.1 µg/L	61.8	----	----	
EP131B: Polychlorinated Biphenyls (as Aroclors) (QCLot: 1136898)									
EP131B-CM: Aroclor 1254	11097-69-1	0.05	µg/L	<0.05	1 µg/L	75.6	----	----	
Ultra-Trace Nutrients (QCLot: 1136891)									
EK267PA-CM: Total Phosphorus as P	----	0.005	mg/L	<0.005	0.44 mg/L	79.8	72	114	
Ultra-Trace Nutrients (QCLot: 1136892)									
EK262PA-CM: Total Nitrogen as N	----	0.01	mg/L	<0.01	----	----	----	----	
		0.05	mg/L	----	1.0 mg/L	93.8	70	117	



Matrix Spike (MS) Report

The quality control term Matrix Spike (MS) refers to an intralaboratory split sample spiked with a representative set of target analytes. The purpose of this QC parameter is to monitor potential matrix effects on analyte recoveries. Static Recovery Limits as per laboratory Data Quality Objectives (DQOs). Ideal recovery ranges stated may be waived in the event of sample matrix interference.

Sub-Matrix: **WATER**

				Matrix Spike (MS) Report			
Laboratory sample ID	Client sample ID	Method: Compound	CAS Number	Spike	Recovery Limits (%)		
				Concentration	MS	Low	High
EG035F: Dissolved Mercury by FIMS (QCLot: 1137767)							
EB0916401-001	Anonymous	EG035F: Mercury	7439-97-6	0.0100 mg/L	109	70	130
EG035T: Total Recoverable Mercury by FIMS (QCLot: 1138093)							
ES0915833-018	Anonymous	EG035T: Mercury	7439-97-6	0.010 mg/L	112	70	130
EG094F: Dissolved Metals in Fresh Water by ORC-ICPMS (QCLot: 1137897)							
EB0916315-001	Anonymous	EG094A-F: Arsenic	7440-38-2	50 µg/L	106	70	130
		EG094A-F: Cadmium	7440-43-9	12.5 µg/L	103	70	130
		EG094A-F: Cobalt	7440-48-4	50 µg/L	118	70	130
		EG094A-F: Copper	7440-50-8	50 µg/L	117	70	130
		EG094A-F: Lead	7439-92-1	50 µg/L	106	70	130
		EG094A-F: Nickel	7440-02-0	50 µg/L	113	70	130
		EG094A-F: Vanadium	7440-62-2	50 µg/L	99.6	70	130
		EG094A-F: Zinc	7440-66-6	50 µg/L	117	70	130
EG094F: Dissolved Metals in Fresh Water by ORC-ICPMS (QCLot: 1137899)							
EB0916488-011	B	EG094A-F: Arsenic	7440-38-2	50 µg/L	111	70	130
		EG094A-F: Cadmium	7440-43-9	12.5 µg/L	105	70	130
		EG094A-F: Cobalt	7440-48-4	50 µg/L	110	70	130
		EG094A-F: Copper	7440-50-8	50 µg/L	119	70	130
		EG094A-F: Lead	7439-92-1	50 µg/L	108	70	130
		EG094A-F: Nickel	7440-02-0	50 µg/L	108	70	130
		EG094A-F: Vanadium	7440-62-2	50 µg/L	101	70	130
		EG094A-F: Zinc	7440-66-6	50 µg/L	122	70	130
EG094F: Dissolved Metals in Fresh Water by ORC-ICPMS (QCLot: 1140839)							
EB0916488-005	17	EG094A-F: Arsenic	7440-38-2	50 µg/L	112	70	130
		EG094A-F: Cadmium	7440-43-9	12.5 µg/L	99.5	70	130
		EG094A-F: Cobalt	7440-48-4	50 µg/L	108	70	130
		EG094A-F: Copper	7440-50-8	50 µg/L	106	70	130
		EG094A-F: Lead	7439-92-1	50 µg/L	104	70	130
		EG094A-F: Nickel	7440-02-0	50 µg/L	104	70	130
		EG094A-F: Zinc	7440-66-6	50 µg/L	110	70	130
		EG094T: Total metals in Fresh water by ORC-ICPMS (QCLot: 1137901)					
EB0916401-001	Anonymous	EG094A-T: Arsenic	7440-38-2	50 µg/L	112	70	130
		EG094A-T: Cadmium	7440-43-9	12.5 µg/L	105	70	130
		EG094A-T: Cobalt	7440-48-4	50 µg/L	110	70	130
		EG094A-T: Copper	7440-50-8	50 µg/L	107	70	130



Sub-Matrix: WATER

				Matrix Spike (MS) Report			
Laboratory sample ID	Client sample ID	Method: Compound	CAS Number	Spike	Spike Recovery (%)	Recovery Limits (%)	
				Concentration	MS	Low	High
EG094T: Total metals in Fresh water by ORC-ICPMS (QCLot: 1137901) - continued							
EB0916401-001	Anonymous	EG094A-T: Lead	7439-92-1	50 µg/L	105	70	130
		EG094A-T: Nickel	7440-02-0	50 µg/L	105	70	130
		EG094A-T: Zinc	7440-66-6	50 µg/L	121	70	130
EK025G: Free cyanide by Discrete Analyser (QCLot: 1138461)							
EB0916401-002	Anonymous	EK025G: Free Cyanide	----	0.2 mg/L	97.0	70	130
EK040P: Fluoride by PC Titrator (QCLot: 1139317)							
EB0916401-001	Anonymous	EK040P: Fluoride	16984-48-8	4.9 mg/L	96.7	70	130
EK055G: Ammonia as N by Discrete Analyser (QCLot: 1141352)							
EB0916488-002	A4	EK055G: Ammonia as N	7664-41-7	0.4 mg/L	92.0	70	130
EK057G: Nitrite as N by Discrete Analyser (QCLot: 1136860)							
EB0916499-002	Anonymous	EK057G: Nitrite as N	----	0.4 mg/L	90.4	70	130
EK059G: NOX as N by Discrete Analyser (QCLot: 1141351)							
EB0916488-002	A4	EK059G: Nitrite + Nitrate as N	----	0.4 mg/L	104	70	130
EP074A: Monocyclic Aromatic Hydrocarbons (QCLot: 1137747)							
EB0916488-002	A4	EP074: Benzene	71-43-2	10 µg/L	109	70	130
		EP074: Toluene	108-88-3	10 µg/L	110	70	130
EP080/071: Total Petroleum Hydrocarbons (QCLot: 1137748)							
EB0916488-002	A4	EP080: C6 - C9 Fraction	----	140 µg/L	94.8	70	130
Ultra-Trace Nutrients (QCLot: 1136891)							
EB0916401-001	Anonymous	EK267PA-CM: Total Phosphorus as P	----	0.5 mg/L	109	70	130
Ultra-Trace Nutrients (QCLot: 1136892)							
EB0916401-001	Anonymous	EK262PA-CM: Total Nitrogen as N	----	0.5 mg/L	84.5	70	130



Environmental Division

INTERPRETIVE QUALITY CONTROL REPORT

Work Order	: EB0916488	Page	: 1 of 14
Amendment	: 3		
Client	: ALLUVIUM CONSULTING	Laboratory	: Environmental Division Brisbane
Contact	: MR JASON CARTER	Contact	: Tim Kilmister
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Project	: Alluvium Dalby	QC Level	: NEPM 1999 Schedule B(3) and ALS QCS3 requirement
Site	: Dalby		
C-O-C number	: ----	Date Samples Received	: 16-OCT-2009
Sampler	: A.Calvi, M.Adriansen	Issue Date	: 13-NOV-2009
Order number	: ----		
Quote number	: BN/580/09	No. of samples received	: 11
		No. of samples analysed	: 11

This report supersedes any previous report(s) with this reference. Results apply to the sample(s) as submitted. All pages of this report have been checked and approved for release.

This Interpretive Quality Control Report contains the following information:

- Analysis Holding Time Compliance
- Quality Control Parameter Frequency Compliance
- Brief Method Summaries
- Summary of Outliers

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Analysis Holding Time Compliance

The following report summarises extraction / preparation and analysis times and compares with recommended holding times. Dates reported represent first date of extraction or analysis and precludes subsequent dilutions and reruns. Information is also provided re the sample container (preservative) from which the analysis aliquot was taken. Elapsed period to analysis represents number of days from sampling where no extraction / digestion is involved or period from extraction / digestion where this is present. For composite samples, sampling date is assumed to be that of the oldest sample contributing to the composite. Sample date for laboratory produced leachates is assumed as the completion date of the leaching process. Outliers for holding time are based on USEPA SW 846, APHA, AS and NEPM (1999). A listing of breaches is provided in the Summary of Outliers.

Holding times for leachate methods (excluding elutriates) vary according to the analytes being determined on the resulting solution. For non-volatile analytes, the holding time compliance assessment compares the leach date with the shortest analyte holding time for the equivalent soil method. These soil holding times are: Organics (14 days); Mercury (28 days) & other metals (180 days). A recorded breach therefore does not guarantee a breach for all non-volatile parameters.

Matrix: **WATER** Evaluation: * = Holding time breach ; ✓ = Within holding time.

Method Container / Client Sample ID(s)	Sample Date	Extraction / Preparation			Analysis		
		Date extracted	Due for extraction	Evaluation	Date analysed	Due for analysis	Evaluation
EA025: Suspended Solids							
Clear Plastic Bottle - Natural A5, A4	15-OCT-2009	----	----	----	23-OCT-2009	22-OCT-2009	*
Clear Plastic Bottle - Natural 15, 16, 17, 14, A7, QA, B	16-OCT-2009	----	----	----	23-OCT-2009	23-OCT-2009	✓
EA045: Turbidity							
Clear Plastic Bottle - Natural A5, A4	15-OCT-2009	----	----	----	20-OCT-2009	17-OCT-2009	*
Clear Plastic Bottle - Natural 15, 17	16-OCT-2009	----	----	----	20-OCT-2009	18-OCT-2009	*
ED040F: Dissolved Major Anions							
Clear Plastic Bottle - Natural A5, A4	15-OCT-2009	---	---	----	20-OCT-2009	12-NOV-2009	✓
Clear Plastic Bottle - Natural 15, 16, 17, 14, A7, QA, B	16-OCT-2009	---	---	----	20-OCT-2009	13-NOV-2009	✓
ED045G: Chloride Discrete analyser							
Clear Plastic Bottle - Natural A5, A4	15-OCT-2009	---	---	----	20-OCT-2009	12-NOV-2009	✓
Clear Plastic Bottle - Natural 15, 16, 17, 14, A7, QA, B	16-OCT-2009	---	---	----	20-OCT-2009	13-NOV-2009	✓



Matrix: WATER

Evaluation: * = Holding time breach ; ✓ = Within holding time.

Method Container / Client Sample ID(s)	Sample Date	Extraction / Preparation			Analysis			
		Date extracted	Due for extraction	Evaluation	Date analysed	Due for analysis	Evaluation	
ED093F: Dissolved Major Cations								
Clear Plastic Bottle - Natural A5, A4	15-OCT-2009	---	---	----	20-OCT-2009	12-NOV-2009	✓	
Clear Plastic Bottle - Natural 15, 17, A7, B, 16, 14, QA,	16-OCT-2009	---	---	----	20-OCT-2009	13-NOV-2009	✓	
EG035F: Dissolved Mercury by FIMS								
Clear HDPE (U-T ORC) - Filtered; Lab-acidified A5, A4	15-OCT-2009	---	---	----	22-OCT-2009	12-NOV-2009	✓	
Clear HDPE (U-T ORC) - Filtered; Lab-acidified 15, 17, A7, QA2, 16, 14, QA1, B	16-OCT-2009	---	---	----	22-OCT-2009	13-NOV-2009	✓	
EG035T: Total Recoverable Mercury by FIMS								
Clear HDPE (U-T ORC) - Unfiltered; Lab-acidified A5, A4	15-OCT-2009	----	----	----	23-OCT-2009	29-OCT-2009	✓	
Clear HDPE (U-T ORC) - Unfiltered; Lab-acidified 15, 17, A7, B, 16, 14, QA,	16-OCT-2009	----	----	----	23-OCT-2009	30-OCT-2009	✓	
EG094F: Dissolved Metals in Fresh Water by ORC-ICPMS								
Clear HDPE (U-T ORC) - Filtered; Lab-acidified A5, A4	15-OCT-2009	---	---	----	21-OCT-2009	13-APR-2010	✓	
Clear HDPE (U-T ORC) - Filtered; Lab-acidified 15, A7, QA2, 16, QA1, B	16-OCT-2009	---	---	----	21-OCT-2009	14-APR-2010	✓	
Clear HDPE (U-T ORC) - Filtered; Lab-acidified 17, 14	16-OCT-2009	23-OCT-2009	14-APR-2010	✓	23-OCT-2009	14-APR-2010	✓	
EG094T: Total metals in Fresh water by ORC-ICPMS								
Clear HDPE (U-T ORC) - Unfiltered; Lab-acidified A5, A4	15-OCT-2009	21-OCT-2009	13-APR-2010	✓	21-OCT-2009	13-APR-2010	✓	
Clear HDPE (U-T ORC) - Unfiltered; Lab-acidified 15, 17, A7, B, 16, 14, QA,	16-OCT-2009	21-OCT-2009	14-APR-2010	✓	21-OCT-2009	14-APR-2010	✓	



Matrix: **WATER**

Evaluation: * = Holding time breach ; ✓ = Within holding time.

Method Container / Client Sample ID(s)	Sample Date	Extraction / Preparation			Analysis		
		Date extracted	Due for extraction	Evaluation	Date analysed	Due for analysis	Evaluation
EK025G: Free cyanide by Discrete Analyser							
White Plastic Bottle - NaOH/Cadmium Nitrate A5, A4	15-OCT-2009	21-OCT-2009	29-OCT-2009	✓	22-OCT-2009	29-OCT-2009	✓
White Plastic Bottle - NaOH/Cadmium Nitrate 15, 17, A7, B, 16, 14, QA,	16-OCT-2009	21-OCT-2009	30-OCT-2009	✓	22-OCT-2009	30-OCT-2009	✓
EK040P: Fluoride by PC Titrator							
Clear Plastic Bottle - Natural A5, A4	15-OCT-2009	---	---	----	22-OCT-2009	12-NOV-2009	✓
Clear Plastic Bottle - Natural 15, 17, A7, B, 16, 14, QA,	16-OCT-2009	---	---	----	22-OCT-2009	13-NOV-2009	✓
EK055G: Ammonia as N by Discrete Analyser							
Clear Plastic Bottle - Sulphuric Acid A5, A4	15-OCT-2009	---	---	----	23-OCT-2009	12-NOV-2009	✓
Clear Plastic Bottle - Sulphuric Acid 15, 17, A7, B, 16, 14, QA,	16-OCT-2009	---	---	----	23-OCT-2009	13-NOV-2009	✓
EK057G: Nitrite as N by Discrete Analyser							
Clear Plastic Bottle - Natural A5, A4	15-OCT-2009	---	---	----	20-OCT-2009	17-OCT-2009	*✗
Clear Plastic Bottle - Natural 15, 17, A7, B, 16, 14, QA,	16-OCT-2009	---	---	----	20-OCT-2009	18-OCT-2009	*✗
EK059G: NOX as N by Discrete Analyser							
Clear Plastic Bottle - Sulphuric Acid A5, A4	15-OCT-2009	---	---	----	23-OCT-2009	12-NOV-2009	✓
Clear Plastic Bottle - Sulphuric Acid 15, 17, A7, B, 16, 14, QA,	16-OCT-2009	---	---	----	23-OCT-2009	13-NOV-2009	✓



Matrix: **WATER**

Evaluation: * = Holding time breach ; ✓ = Within holding time.

Method Container / Client Sample ID(s)	Sample Date	Extraction / Preparation			Analysis			
		Date extracted	Due for extraction	Evaluation	Date analysed	Due for analysis	Evaluation	
EP074A: Monocyclic Aromatic Hydrocarbons								
Amber VOC Vial - HCl A5, A4	15-OCT-2009	---	---	----	23-OCT-2009	29-OCT-2009	✓	
Amber VOC Vial - HCl 15, 16, 17, 14, A7, QA, B	16-OCT-2009	---	---	----	23-OCT-2009	30-OCT-2009	✓	
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons								
Amber Glass Bottle - Unpreserved A5, A4	15-OCT-2009	21-OCT-2009	22-OCT-2009	✓	23-OCT-2009	01-DEC-2009	✓	
Amber Glass Bottle - Unpreserved 15, 16, 17, 14, A7, QA, B	16-OCT-2009	21-OCT-2009	23-OCT-2009	✓	23-OCT-2009	01-DEC-2009	✓	
EP080/071: Total Petroleum Hydrocarbons								
Amber Glass Bottle - Unpreserved A5, A4	15-OCT-2009	21-OCT-2009	22-OCT-2009	✓	23-OCT-2009	30-NOV-2009	✓	
Amber Glass Bottle - Unpreserved 15, 16, 17, 14, A7, QA, B	16-OCT-2009	21-OCT-2009	23-OCT-2009	✓	23-OCT-2009	30-NOV-2009	✓	
Amber VOC Vial - HCl A5, A4	15-OCT-2009	---	---	----	23-OCT-2009	29-OCT-2009	✓	
Amber VOC Vial - HCl 15, 16, 17, 14, A7, QA, B	16-OCT-2009	---	---	----	23-OCT-2009	30-OCT-2009	✓	
EP130A: Organophosphorus Pesticides (Ultra-trace)								
Amber Glass Bottle - Unpreserved A5, A4	15-OCT-2009	20-OCT-2009	22-OCT-2009	✓	24-OCT-2009	01-DEC-2009	✓	
Amber Glass Bottle - Unpreserved 15, 16, 17, 14, A7, QA, B	16-OCT-2009	20-OCT-2009	23-OCT-2009	✓	24-OCT-2009	01-DEC-2009	✓	



Matrix: **WATER**

Evaluation: * = Holding time breach ; ✓ = Within holding time.

Method Container / Client Sample ID(s)	Sample Date	Extraction / Preparation			Analysis		
		Date extracted	Due for extraction	Evaluation	Date analysed	Due for analysis	Evaluation
EP131A: Organochlorine Pesticides							
Amber Glass Bottle - Unpreserved A5, A4	15-OCT-2009	20-OCT-2009	22-OCT-2009	✓	24-OCT-2009	01-DEC-2009	✓
Amber Glass Bottle - Unpreserved 15, 17, A7, B, 16, 14, QA,	16-OCT-2009	20-OCT-2009	23-OCT-2009	✓	24-OCT-2009	01-DEC-2009	✓
EP131B: Polychlorinated Biphenyls (as Aroclors)							
Amber Glass Bottle - Unpreserved A5, A4	15-OCT-2009	20-OCT-2009	22-OCT-2009	✓	24-OCT-2009	01-DEC-2009	✓
Amber Glass Bottle - Unpreserved 15, 17, A7, B, 16, 14, QA,	16-OCT-2009	20-OCT-2009	23-OCT-2009	✓	24-OCT-2009	01-DEC-2009	✓
Ultra-Trace Nutrients							
Clear Plastic Bottle - Frozen (AS) A5, A4	15-OCT-2009	20-OCT-2009	12-NOV-2009	✓	20-OCT-2009	12-NOV-2009	✓
Clear Plastic Bottle - Frozen (AS) 15, 17, A7, B, 16, 14, QA,	16-OCT-2009	20-OCT-2009	13-NOV-2009	✓	20-OCT-2009	13-NOV-2009	✓



Quality Control Parameter Frequency Compliance

The following report summarises the frequency of laboratory QC samples analysed within the analytical lot(s) in which the submitted sample(s) was(where) processed. Actual rate should be greater than or equal to the expected rate. A listing of breaches is provided in the Summary of Outliers.

Matrix: **WATER** Evaluation: * = Quality Control frequency not within specification ; ✓ = Quality Control frequency within specification.

Quality Control Sample Type	Method	Count		Rate (%)			Quality Control Specification
		QC	Reular	Actual	Expected	Evaluation	
Laboratory Duplicates (DUP)							
Ammonia as N by Discrete analyser	EK055G	2	16	12.5	10.0	✓	NEPM 1999 Schedule B(3) and ALS QCS3 requirement
Chloride by Discrete Analyser	ED045G	1	9	11.1	10.0	✓	NEPM 1999 Schedule B(3) and ALS QCS3 requirement
Dissolved Mercury by FIMS	EG035F	2	20	10.0	10.0	✓	NEPM 1999 Schedule B(3) and ALS QCS3 requirement
Dissolved Metals in Fresh Water -Suite A by ORC-ICPMS	EG094A-F	4	26	15.4	10.0	✓	NEPM 1999 Schedule B(3) and ALS QCS3 requirement
Dissolved Metals in Fresh Water -Suite B by ORC-ICPMS	EG094B-F	4	26	15.4	10.0	✓	NEPM 1999 Schedule B(3) and ALS QCS3 requirement
Fluoride by PC Titrator	EK040P	2	20	10.0	10.0	✓	NEPM 1999 Schedule B(3) and ALS QCS3 requirement
Free CN by Discrete Analyser	EK025G	2	14	14.3	10.0	✓	NEPM 1999 Schedule B(3) and ALS QCS3 requirement
Major Anions - Dissolved	ED040F	2	16	12.5	10.0	✓	NEPM 1999 Schedule B(3) and ALS QCS3 requirement
Major Cations - Dissolved	ED093F	1	9	11.1	10.0	✓	NEPM 1999 Schedule B(3) and ALS QCS3 requirement
Nitrite and Nitrate as N (NOx) by Discrete Analyser	EK059G	2	16	12.5	10.0	✓	NEPM 1999 Schedule B(3) and ALS QCS3 requirement
Nitrite as N by Discrete Analyser	EK057G	2	16	12.5	10.0	✓	NEPM 1999 Schedule B(3) and ALS QCS3 requirement
Suspended Solids (High Level)	EA025H	2	20	10.0	10.0	✓	NEPM 1999 Schedule B(3) and ALS QCS3 requirement
Total Mercury by FIMS	EG035T	2	20	10.0	10.0	✓	NEPM 1999 Schedule B(3) and ALS QCS3 requirement
Total Metals in Fresh Water -Suite A by ORC-ICPMS	EG094A-T	2	13	15.4	10.0	✓	NEPM 1999 Schedule B(3) and ALS QCS3 requirement
Total Metals in Fresh Water -Suite B by ORC-ICPMS	EG094B-T	2	13	15.4	10.0	✓	NEPM 1999 Schedule B(3) and ALS QCS3 requirement
Total Nitrogen as N (Persulfate digestion)-Ultra-Trace - CM	EK262PA-CM	2	20	10.0	10.0	✓	NEPM 1999 Schedule B(3) and ALS QCS3 requirement
Total Phosphorus(Persulfate Digestion) - Ultra-Trace for CM	EK267PA-CM	2	20	10.0	10.0	✓	NEPM 1999 Schedule B(3) and ALS QCS3 requirement
TPH Volatiles/BTEX	EP080	1	10	10.0	10.0	✓	NEPM 1999 Schedule B(3) and ALS QCS3 requirement
Turbidity	EA045	1	6	16.7	10.0	✓	NEPM 1999 Schedule B(3) and ALS QCS3 requirement
Volatile Organic Compounds	EP074	1	9	11.1	10.0	✓	NEPM 1999 Schedule B(3) and ALS QCS3 requirement
Laboratory Control Samples (LCS)							
Ammonia as N by Discrete analyser	EK055G	1	16	6.3	5.0	✓	NEPM 1999 Schedule B(3) and ALS QCS3 requirement
Chloride by Discrete Analyser	ED045G	2	9	22.2	10.0	✓	NEPM 1999 Schedule B(3) and ALS QCS3 requirement
Dissolved Mercury by FIMS	EG035F	1	20	5.0	5.0	✓	NEPM 1999 Schedule B(3) and ALS QCS3 requirement
Dissolved Metals in Fresh Water -Suite A by ORC-ICPMS	EG094A-F	3	26	11.5	5.0	✓	NEPM 1999 Schedule B(3) and ALS QCS3 requirement
Dissolved Metals in Fresh Water -Suite B by ORC-ICPMS	EG094B-F	3	26	11.5	5.0	✓	NEPM 1999 Schedule B(3) and ALS QCS3 requirement
Fluoride by PC Titrator	EK040P	1	20	5.0	5.0	✓	NEPM 1999 Schedule B(3) and ALS QCS3 requirement
Free CN by Discrete Analyser	EK025G	1	14	7.1	5.0	✓	NEPM 1999 Schedule B(3) and ALS QCS3 requirement
Nitrite and Nitrate as N (NOx) by Discrete Analyser	EK059G	1	16	6.3	5.0	✓	NEPM 1999 Schedule B(3) and ALS QCS3 requirement
Nitrite as N by Discrete Analyser	EK057G	1	16	6.3	5.0	✓	NEPM 1999 Schedule B(3) and ALS QCS3 requirement
Organochlorine Pesticides (Super Ultra-trace) for CM	EP131A-CM	1	13	7.7	5.0	✓	NEPM 1999 Schedule B(3) and ALS QCS3 requirement
Organophosphorus Pesticides (Ultra-trace) for Catchment M	EP130-CM	1	13	7.7	5.0	✓	NEPM 1999 Schedule B(3) and ALS QCS3 requirement
PAH Compounds in Water	EP132-LL	1	18	5.6	5.0	✓	NEPM 1999 Schedule B(3) and ALS QCS3 requirement



Matrix: **WATER** Evaluation: ✘ = Quality Control frequency not within specification ; ✔ = Quality Control frequency within specification.

Quality Control Sample Type	Method	Count		Rate (%)			Quality Control Specification
		QC	Regular	Actual	Expected	Evaluation	
Analytical Methods							
Laboratory Control Samples (LCS) - Continued							
PCB's (Ultra-trace) for Catchment Monitoring	EP131B-CM	1	13	7.7	5.0	✔	NEPM 1999 Schedule B(3) and ALS QCS3 requirement
Suspended Solids (High Level)	EA025H	1	20	5.0	5.0	✔	NEPM 1999 Schedule B(3) and ALS QCS3 requirement
Total Mercury by FIMS	EG035T	1	20	5.0	5.0	✔	NEPM 1999 Schedule B(3) and ALS QCS3 requirement
Total Metals in Fresh Water -Suite A by ORC-ICPMS	EG094A-T	1	13	7.7	5.0	✔	NEPM 1999 Schedule B(3) and ALS QCS3 requirement
Total Metals in Fresh Water -Suite B by ORC-ICPMS	EG094B-T	1	13	7.7	5.0	✔	NEPM 1999 Schedule B(3) and ALS QCS3 requirement
Total Nitrogen as N (Persulfate digestion)-Ultra-Trace - CM	EK262PA-CM	1	20	5.0	10.0	✘	NEPM 1999 Schedule B(3) and ALS QCS3 requirement
Total Phosphorus(Persulfate Digestion) - Ultra-Trace for CM	EK267PA-CM	1	20	5.0	10.0	✘	NEPM 1999 Schedule B(3) and ALS QCS3 requirement
TPH - Semivolatile Fraction	EP071	1	20	5.0	5.0	✔	NEPM 1999 Schedule B(3) and ALS QCS3 requirement
TPH Volatiles/BTEX	EP080	1	10	10.0	5.0	✔	NEPM 1999 Schedule B(3) and ALS QCS3 requirement
Turbidity	EA045	1	6	16.7	5.0	✔	NEPM 1999 Schedule B(3) and ALS QCS3 requirement
Volatile Organic Compounds	EP074	1	9	11.1	5.0	✔	NEPM 1999 Schedule B(3) and ALS QCS3 requirement
Method Blanks (MB)							
Ammonia as N by Discrete analyser	EK055G	1	16	6.3	5.0	✔	NEPM 1999 Schedule B(3) and ALS QCS3 requirement
Chloride by Discrete Analyser	ED045G	1	9	11.1	5.0	✔	NEPM 1999 Schedule B(3) and ALS QCS3 requirement
Dissolved Mercury by FIMS	EG035F	1	20	5.0	5.0	✔	NEPM 1999 Schedule B(3) and ALS QCS3 requirement
Dissolved Metals in Fresh Water -Suite A by ORC-ICPMS	EG094A-F	3	26	11.5	5.0	✔	NEPM 1999 Schedule B(3) and ALS QCS3 requirement
Dissolved Metals in Fresh Water -Suite B by ORC-ICPMS	EG094B-F	3	26	11.5	5.0	✔	NEPM 1999 Schedule B(3) and ALS QCS3 requirement
Fluoride by PC Titrator	EK040P	1	20	5.0	5.0	✔	NEPM 1999 Schedule B(3) and ALS QCS3 requirement
Free CN by Discrete Analyser	EK025G	1	14	7.1	5.0	✔	NEPM 1999 Schedule B(3) and ALS QCS3 requirement
Major Anions - Dissolved	ED040F	1	16	6.3	5.0	✔	NEPM 1999 Schedule B(3) and ALS QCS3 requirement
Major Cations - Dissolved	ED093F	1	9	11.1	5.0	✔	NEPM 1999 Schedule B(3) and ALS QCS3 requirement
Nitrite and Nitrate as N (NOx) by Discrete Analyser	EK059G	1	16	6.3	5.0	✔	NEPM 1999 Schedule B(3) and ALS QCS3 requirement
Nitrite as N by Discrete Analyser	EK057G	1	16	6.3	5.0	✔	NEPM 1999 Schedule B(3) and ALS QCS3 requirement
Organochlorine Pesticides (Super Ultra-trace) for CM	EP131A-CM	1	13	7.7	5.0	✔	NEPM 1999 Schedule B(3) and ALS QCS3 requirement
Organophosphorus Pesticides (Ultra-trace) for Catchment M	EP130-CM	1	13	7.7	5.0	✔	NEPM 1999 Schedule B(3) and ALS QCS3 requirement
PAH Compounds in Water	EP132-LL	1	18	5.6	5.0	✔	NEPM 1999 Schedule B(3) and ALS QCS3 requirement
PCB's (Ultra-trace) for Catchment Monitoring	EP131B-CM	1	13	7.7	5.0	✔	NEPM 1999 Schedule B(3) and ALS QCS3 requirement
Suspended Solids (High Level)	EA025H	1	20	5.0	5.0	✔	NEPM 1999 Schedule B(3) and ALS QCS3 requirement
Total Mercury by FIMS	EG035T	1	20	5.0	5.0	✔	NEPM 1999 Schedule B(3) and ALS QCS3 requirement
Total Metals in Fresh Water -Suite A by ORC-ICPMS	EG094A-T	1	13	7.7	5.0	✔	NEPM 1999 Schedule B(3) and ALS QCS3 requirement
Total Metals in Fresh Water -Suite B by ORC-ICPMS	EG094B-T	1	13	7.7	5.0	✔	NEPM 1999 Schedule B(3) and ALS QCS3 requirement
Total Nitrogen as N (Persulfate digestion)-Ultra-Trace - CM	EK262PA-CM	1	20	5.0	5.0	✔	NEPM 1999 Schedule B(3) and ALS QCS3 requirement
Total Phosphorus(Persulfate Digestion) - Ultra-Trace for CM	EK267PA-CM	1	20	5.0	5.0	✔	NEPM 1999 Schedule B(3) and ALS QCS3 requirement
TPH - Semivolatile Fraction	EP071	1	20	5.0	5.0	✔	NEPM 1999 Schedule B(3) and ALS QCS3 requirement
TPH Volatiles/BTEX	EP080	1	10	10.0	5.0	✔	NEPM 1999 Schedule B(3) and ALS QCS3 requirement
Turbidity	EA045	1	6	16.7	5.0	✔	NEPM 1999 Schedule B(3) and ALS QCS3 requirement



Matrix: **WATER** Evaluation: * = Quality Control frequency not within specification ; ✓ = Quality Control frequency within specification.

Quality Control Sample Type	Method	Count		Rate (%)			Quality Control Specification
		QC	Regular	Actual	Expected	Evaluation	
Analytical Methods							
Method Blanks (MB) - Continued							
Volatile Organic Compounds	EP074	1	9	11.1	5.0	✓	NEPM 1999 Schedule B(3) and ALS QCS3 requirement
Matrix Spikes (MS)							
Ammonia as N by Discrete analyser	EK055G	1	16	6.3	5.0	✓	ALS QCS3 requirement
Dissolved Mercury by FIMS	EG035F	1	20	5.0	5.0	✓	ALS QCS3 requirement
Dissolved Metals in Fresh Water -Suite A by ORC-ICPMS	EG094A-F	3	26	11.5	5.0	✓	ALS QCS3 requirement
Fluoride by PC Titrator	EK040P	1	20	5.0	5.0	✓	ALS QCS3 requirement
Free CN by Discrete Analyser	EK025G	1	14	7.1	5.0	✓	ALS QCS3 requirement
Nitrite and Nitrate as N (NO _x) by Discrete Analyser	EK059G	1	16	6.3	5.0	✓	ALS QCS3 requirement
Nitrite as N by Discrete Analyser	EK057G	1	16	6.3	5.0	✓	ALS QCS3 requirement
Total Mercury by FIMS	EG035T	1	20	5.0	5.0	✓	ALS QCS3 requirement
Total Metals in Fresh Water -Suite A by ORC-ICPMS	EG094A-T	1	13	7.7	5.0	✓	ALS QCS3 requirement
Total Nitrogen as N (Persulfate digestion)-Ultra-Trace - CM	EK262PA-CM	1	20	5.0	5.0	✓	ALS QCS3 requirement
Total Phosphorus(Persulfate Digestion) - Ultra-Trace for CM	EK267PA-CM	1	20	5.0	5.0	✓	ALS QCS3 requirement
TPH Volatiles/BTEX	EP080	1	10	10.0	5.0	✓	ALS QCS3 requirement
Volatile Organic Compounds	EP074	1	9	11.1	5.0	✓	ALS QCS3 requirement



Brief Method Summaries

The analytical procedures used by the Environmental Division have been developed from established internationally recognized procedures such as those published by the US EPA, APHA, AS and NEPM. In house developed procedures are employed in the absence of documented standards or by client request. The following report provides brief descriptions of the analytical procedures employed for results reported in the Certificate of Analysis. Sources from which ALS methods have been developed are provided within the Method Descriptions.

Analytical Methods	Method	Matrix	Method Descriptions
Sodium Adsorption Ratio	EA006	WATER	APHA 21st ed., 3120 Ca, Mg, Na. This method is compliant with NEPM (1999) Schedule B(3) (Appdx. 2)
Suspended Solids (High Level)	EA025H	WATER	APHA 21st ed., 2540D A gravimetric procedure employed to determine the amount of 'non-filterable' residue in a aqueous sample. The prescribed GFC (1.2um) filter is rinsed with deionised water, oven dried and weighed prior to analysis. A well-mixed sample is filtered through a glass fibre filter (1.2um). The residue on the filter paper is dried at 104+/-2C . This method is compliant with NEPM (1999) Schedule B(3) (Appdx. 2)
Turbidity	EA045	WATER	APHA 21st ed., 2130 B. This method is compliant with NEPM (1999) Schedule B(3) (Appdx. 2)
Hardness as CaCO3	EA065	WATER	APHA 21st ed., 2340 B. This method is compliant with NEPM (1999) Schedule B(3) (Appdx. 2)
Major Anions - Dissolved	ED040F	WATER	APHA 21st ed., 3120. The 0.45um filtered samples are determined by ICP/AES for Sulfur and/or Silcon content and reported as Sulfate and/or Silica after conversion by gravimetric factor.
Chloride by Discrete Analyser	ED045G	WATER	APHA 21st ed., 4500 Cl - G.The thiocyanate ion is liberated from mercuric thiocyanate through sequestration of mercury by the chloride ion to form non-ionised mercuric chloride.in the presence of ferric ions the librated thiocynate forms highly-coloured ferric thiocynate which is measured at 480 nm APHA 21st edition seal method 2 017-1-L april 2003
Major Cations - Dissolved	ED093F	WATER	APHA 21st ed., 3120; USEPA SW 846 - 6010 The ICPAES technique ionises the 0.45um filtered sample atoms emitting a characteristic spectrum. This spectrum is then compared against matrix matched standards for quantification. This method is compliant with NEPM (1999) Schedule B(3) (Appdx. 2)
Dissolved Mercury by FIMS	EG035F	WATER	AS 3550, APHA 21st ed. 3112 Hg - B (Flow-injection (SnCl2)(Cold Vapour generation) AAS) Samples are 0.45 um filtered prior to analysis. FIM-AAS is an automated flameless atomic absorption technique. A bromate/bromide reagent is used to oxidise any organic mercury compounds in the filtered sample. The ionic mercury is reduced online to atomic mercury vapour by SnCl2 which is then purged into a heated quartz cell. Quantification is by comparing absorbance against a calibration curve. This method is compliant with NEPM (1999) Schedule B(3) (Appdx. 2)
Total Mercury by FIMS	EG035T	WATER	AS 3550, APHA 21st ed. 3112 Hg - B (Flow-injection (SnCl2)(Cold Vapour generation) AAS) FIM-AAS is an automated flameless atomic absorption technique. A bromate/bromide reagent is used to oxidise any organic mercury compounds in the unfiltered sample. The ionic mercury is reduced online to atomic mercury vapour by SnCl2 which is then purged into a heated quartz cell. Quantification is by comparing absorbance against a calibration curve. This method is compliant with NEPM (1999) Schedule B(3) (Appdx. 2)
Dissolved Metals in Fresh Water -Suite A by ORC-ICPMS	EG094A-F	WATER	APHA 21st ed., 3125; USEPA SW846 - 6020 Samples are 0.45 um filtered prior to analysis. The ORC-ICPMS technique removes interfering species through a series of chemical reactions prior to ion detection. Ions are passed into a high vacuum mass spectrometer, which separates the analytes based on their distinct mass to charge ratios prior to measurement by a discrete dynode ion detector. This method is compliant with NEPM (1999) Schedule B(3) (Appdx. 2)
Total Metals in Fresh Water -Suite A by ORC-ICPMS	EG094A-T	WATER	APHA 21st ed., 3125; USEPA SW846 - 6020 Samples are 0.45 um filtered prior to analysis. The ORC-ICPMS technique removes interfering species through a series of chemical reactions prior to ion detection. Ions are passed into a high vacuum mass spectrometer, which separates the analytes based on their distinct mass to charge ratios prior to measurement by a discrete dynode ion detector. This method is compliant with NEPM (1999) Schedule B(3) (Appdx. 2)



Analytical Methods	Method	Matrix	Method Descriptions
Dissolved Metals in Fresh Water -Suite B by ORC-ICPMS	EG094B-F	WATER	APHA 21st ed., 3125; USEPA SW846 - 6020 Samples are 0.45 um filtered prior to analysis. The ORC-ICPMS technique removes interfering species through a series of chemical reactions prior to ion detection. Ions are passed into a high vacuum mass spectrometer, which separates the analytes based on their distinct mass to charge ratios prior to measurement by a discrete dynode ion detector. This method is compliant with NEPM (1999) Schedule B(3) (Appdx. 2)
Total Metals in Fresh Water -Suite B by ORC-ICPMS	EG094B-T	WATER	APHA 21st ed., 3125; USEPA SW846 - 6020 Samples are 0.45 um filtered prior to analysis. The ORC-ICPMS technique removes interfering species through a series of chemical reactions prior to ion detection. Ions are passed into a high vacuum mass spectrometer, which separates the analytes based on their distinct mass to charge ratios prior to measurement by a discrete dynode ion detector. This method is compliant with NEPM (1999) Schedule B(3) (Appdx. 2)
Free CN by Discrete Analyser	EK025G	WATER	APHA 21st ed., 4500-CN-C&N Free Cyanide is determined on samples after distillation using a pyridine-barbituric acid colouring reagent followed with an Discrete Analyser finish. This method is compliant with NEPM (1999) Schedule B(3) (Appdx. 2)
Fluoride by PC Titrator	EK040P	WATER	APHA 21st ed., 4500 F--C CDTA is added to the sample to provide a uniform ionic strength background, adjust pH, and break up complexes. Fluoride concentration is determined by either manual or automatic ISE measurement. This method is compliant with NEPM (1999) Schedule B(3) (Appdx. 2)
Ammonia as N by Discrete analyser	EK055G	WATER	APHA 21st ed., 4500-NH3 G Ammonia is determined by direct colorimetry by Discrete Analyser. This method is compliant with NEPM (1999) Schedule B(3) (Appdx. 2)
Nitrite as N by Discrete Analyser	EK057G	WATER	APHA 21st ed., 4500-NO2- B. Nitrite is determined by direct colourimetry by Discrete Analyser. This method is compliant with NEPM (1999) Schedule B(3) (Appdx. 2)
Nitrate as N by Discrete Analyser	EK058G	WATER	APHA 21st ed., 4500-NO3- F. Nitrate is reduced to nitrite by way of a cadmium reduction column followed by quantification by Discrete Analyser. Nitrite is determined seperately by direct colourimetry and result for Nitrate calculated as the difference between the two results. This method is compliant with NEPM (1999) Schedule B(3) (Appdx. 2)
Nitrite and Nitrate as N (NOx) by Discrete Analyser	EK059G	WATER	APHA 21st ed., 4500-NO3- F. Combined oxidised Nitrogen (NO2+NO3) is determined by Cadmium Reduction and direct colourimetry by Discrete Analyser. This method is compliant with NEPM (1999) Schedule B(3) (Appdx. 2)
Total Nitrogen as N (Persulfate digestion)-Ultra-Trace - CM	EK262PA-CM	WATER	APHA 21st ed., 4500-P J. Persulfate Method for Simultaneous Determination of Total Nitrogen and Total Phosphorus. As sample is digested with persulfate under alkaline conditions yielding orthophosphate and nitrate. Following digestion, analytes are determined by flow injection analysis. This method is compliant with NEPM (1999) Schedule B(3) (Appdx. 2)
Total Phosphorus(Persulfate Digestion) - Ultra-Trace for CM	EK267PA-CM	WATER	APHA 21st ed., 4500-P J. Persulfate Method for Simultaneous Determination of Total Nitrogen and Total Phosphorus. As sample is digested with persulfate under alkaline conditions yielding orthophosphate and nitrate. Following digestion, analytes are determined by flow injection analysis. This method is compliant with NEPM (1999) Schedule B(3) (Appdx. 2)
TPH - Semivolatile Fraction	EP071	WATER	USEPA SW 846 - 8015A The sample extract is analysed by Capillary GC/FID and quantification is by comparison against an established 5 point calibration curve of n-Alkane standards. This method is compliant with NEPM (1999) Schedule B(3) (Appdx. 2)
Volatile Organic Compounds	EP074	WATER	USEPA SW 846 - 8260B Water samples are directly purged prior to analysis by Capillary GC/MS and quantification is by comparison against an established 5 point calibration curve. This method is compliant with NEPM (1999) Schedule B(3) (Appdx. 2)



Analytical Methods	Method	Matrix	Method Descriptions
TPH Volatiles/BTEX	EP080	WATER	USEPA SW 846 - 8260B Water samples are directly purged prior to analysis by Capillary GC/MS and quantification is by comparison against an established 5 point calibration curve. This method is compliant with NEPM (1999) Schedule B(3) (Appdx. 2)
Organophosphorus Pesticides (Ultra-trace) for Catchment M	EP130-CM	WATER	USEPA Method 3640 (GPC cleanup), 8141 (GC/FPD - Capillary Column) This method is compliant with NEPM (1999) Schedule B(3) (Appdx. 2)
Organochlorine Pesticides (Super Ultra-trace) for CM	EP131A-CM	WATER	USEPA Method 3640 (GPC cleanup),3620 (Florisil), 8081/8082 (GC/uECD/uECD). This method is compliant with NEPM (1999) Schedule B(3) (Appdx. 2)
PCB's (Ultra-trace) for Catchment Monitoring	EP131B-CM	WATER	USEPA Method 3640 (GPC cleanup),3620 (Florisil), 8081/8082 (GC/uECD/uECD). This method is compliant with NEPM (1999) Schedule B(3) (Appdx. 2)
PAH Compounds in Water	EP132-LL	WATER	8270 GCMS, LVI, Capillary column, SIM mode. This method is compliant with NEPM (1999) Schedule B(3) (Appdx. 2)
Preparation Methods	Method	Matrix	Method Descriptions
Free Cyanide	EK025-PR	WATER	APHA 21st ed., 4500 CN- C&N. The sample is distilled at natural pH. The CN is trapped in a caustic solution, and quantified by colourimetry on FIA. This method is compliant with NEPM (1999) Schedule B(3) (Appdx. 2)
Persulfate Digestion for UT TN and TP for FIA finish.	EK262/267-PA	WATER	APHA 21st ed., 4500 P - J. This method is compliant with NEPM (1999) Schedule B(3) (Appdx. 2)
Digestion for Total Recoverable Metals - ORC	EN25-ORC	WATER	Modified USEPA SW846-3005. This is an Ultrapure Nitric acid digestion procedure used to prepare surface and ground water samples for analysis by ORC- ICPMS. This method is compliant with NEPM (1999) Schedule B(3) (Appdx. 2)
Separatory Funnel Extraction of Liquids	ORG14	WATER	USEPA SW 846 - 3510B 500 mL to 1L of sample is transferred to a separatory funnel and serially extracted three times using 60mL DCM for each extract. The resultant extracts are combined, dehydrated and concentrated for analysis. This method is compliant with NEPM (1999) Schedule B(3) (Appdx. 2). ALS default excludes sediment which may be resident in the container.
Sep. Funnel Extraction /Acetylation of Phenolic Compounds	ORG14-AC	WATER	USEPA 3510 (Extraction)/ In-house (Acetylation): A 1L sample is extracted into dichloromethane and concentrated to 1 mL with exchange into cyclohexane. Phenolic compounds are reacted with acetic anhydride to yield phenyl acetates suitable for ultra-trace analysis. This method is compliant with NEPM (1999) Schedule B(3) (Appdx. 2). ALS default excludes sediment which may be resident in the container.
Sep. Funnel Extraction of Liquids (Ultra-trace pesticides.)	ORG14-UTP	WATER	USEPA 3510 Samples are extracted into dichloromethane, concentrated and exchanged into an appropriate solvent for GPC and florisil cleanup as required. This method is compliant with NEPM (1999) Schedule B(3) (Appdx. 2). ALS default excludes sediment which may be resident in the container.



Summary of Outliers

Outliers : Quality Control Samples

The following report highlights outliers flagged in the Quality Control (QC) Report. Surrogate recovery limits are static and based on USEPA SW846 or ALS-QWI/EN/38 (in the absence of specific USEPA limits). This report displays QC Outliers (breaches) only.

Duplicates, Method Blanks, Laboratory Control Samples and Matrix Spikes

Matrix: **WATER**

Compound Group Name	Laboratory Sample ID	Client Sample ID	Analyte	CAS Number	Data	Limits	Comment
Laboratory Control Spike (LCS) Recoveries							
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons	1311023-002	----	Anthracene	120-12-7	115 %	73.4-113%	Recovery greater than upper control limit

- For all matrices, no Method Blank value outliers occur.
- For all matrices, no Duplicate outliers occur.
- For all matrices, no Matrix Spike outliers occur.

Regular Sample Surrogates

Sub-Matrix: **WATER**

Compound Group Name	Laboratory Sample ID	Client Sample ID	Analyte	CAS Number	Data	Limits	Comment
Samples Submitted							
EP080S: TPH(V)/BTEX Surrogates	EB0916488-007	A7	4-Bromofluorobenzene	460-00-4	118 %	86-115 %	Recovery greater than upper data quality objective

Outliers : Analysis Holding Time Compliance

This report displays Holding Time breaches only. Only the respective Extraction / Preparation and/or Analysis component is/are displayed.

Matrix: **WATER**

Method	Container / Client Sample ID(s)	Extraction / Preparation			Analysis			
		Date extracted	Due for extraction	Days overdue	Date analysed	Due for analysis	Days overdue	
EA025: Suspended Solids								
Clear Plastic Bottle - Natural	A5,	A4	----	----	----	23-OCT-2009	22-OCT-2009	1
EA045: Turbidity								
Clear Plastic Bottle - Natural	A5,	A4	----	----	----	20-OCT-2009	17-OCT-2009	3
Clear Plastic Bottle - Natural	15,	17	----	----	----	20-OCT-2009	18-OCT-2009	2
EK057G: Nitrite as N by Discrete Analyser								
Clear Plastic Bottle - Natural	A5,	A4	----	----	----	20-OCT-2009	17-OCT-2009	3



Matrix: **WATER**

Method	Extraction / Preparation			Analysis			
	Container / Client Sample ID(s)	Date extracted	Due for extraction	Days overdue	Date analysed	Due for analysis	Days overdue
EK057G: Nitrite as N by Discrete Analyser - Analysis Holding Time Compliance							
Clear Plastic Bottle - Natural							
15, 17, A7, B	16, 14, QA, B	----	----	----	20-OCT-2009	18-OCT-2009	2

Outliers : Frequency of Quality Control Samples

The following report highlights breaches in the Frequency of Quality Control Samples.

Matrix: **WATER**

Quality Control Sample Type	Count		Rate (%)		Quality Control Specification
	QC	Regular	Actual	Expected	
Laboratory Control Samples (LCS)					
Total Nitrogen as N (Persulfate digestion)-Ultra-Trace - CM	1	20	5.0	10.0	NEPM 1999 Schedule B(3) and ALS QCS3 requirement
Total Phosphorus(Persulfate Digestion) - Ultra-Trace for CM	1	20	5.0	10.0	NEPM 1999 Schedule B(3) and ALS QCS3 requirement



Environmental Division

CERTIFICATE OF ANALYSIS

Work Order	: EB0916488	Page	: 1 of 19
Amendment	: 3		
Client	: ALLUVIUM CONSULTING	Laboratory	: Environmental Division Brisbane
Contact	: MR JASON CARTER	Contact	: Tim Kilmister
Address	: PO BOX 1581 TOWNSVILLE QLD, AUSTRALIA 4810	Address	: 32 Shand Street Stafford QLD Australia 4053
E-mail	: jason.carter@alluvium.com.au	E-mail	: Services.Brisbane@alsenviro.com
Telephone	: +61 07 47242170	Telephone	: +61-7-3243 7222
Facsimile	: ----	Facsimile	: +61-7-3243 7218
Project	: Alluvium Dalby	QC Level	: NEPM 1999 Schedule B(3) and ALS QCS3 requirement
Order number	: ----		
C-O-C number	: ----	Date Samples Received	: 16-OCT-2009
Sampler	: A.Calvi, M.Adriansen	Issue Date	: 13-NOV-2009
Site	: Dalby		
Quote number	: BN/580/09	No. of samples received	: 11
		No. of samples analysed	: 11

This report supersedes any previous report(s) with this reference. Results apply to the sample(s) as submitted. All pages of this report have been checked and approved for release.

This Certificate of Analysis contains the following information:

- General Comments
- Analytical Results
- Surrogate Control Limits



NATA Accredited Laboratory 825

This document is issued in accordance with NATA accreditation requirements.

Accredited for compliance with ISO/IEC 17025.

Signatories

This document has been electronically signed by the authorized signatories indicated below. Electronic signing has been carried out in compliance with procedures specified in 21 CFR Part 11.

<i>Signatories</i>	<i>Position</i>	<i>Accreditation Category</i>
Alex Rossi	Organic Chemist	Organics
Celine Conceicao	Spectroscopist	Inorganics
Edwandy Fadjar	Senior Organic Chemist	Organics
Hoa Nguyen	Inorganic Chemist	Inorganics
Kim McCabe	Senior Inorganic Chemist	Inorganics
Sarah Ashworth	Organic Chemist	Organics
Sarah Millington	Senior Inorganic Chemist	Inorganics
Stephen Hislop	Senior Inorganic Chemist	Inorganics
Wisam Abou-Maraseh	Spectroscopist	Inorganics

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General Comments

The analytical procedures used by the Environmental Division have been developed from established internationally recognized procedures such as those published by the USEPA, APHA, AS and NEPM. In house developed procedures are employed in the absence of documented standards or by client request.

Where moisture determination has been performed, results are reported on a dry weight basis.

Where a reported less than (<) result is higher than the LOR, this may be due to primary sample extract/digestate dilution and/or insufficient sample for analysis.

Where the LOR of a reported result differs from standard LOR, this may be due to high moisture content, insufficient sample (reduced weight employed) or matrix interference.

When date(s) and/or time(s) are shown bracketed, these have been assumed by the laboratory for processing purposes. If the sampling time is displayed as 0:00 the information was not provided by client.

Key : CAS Number = CAS registry number from database maintained by Chemical Abstracts Services. The Chemical Abstracts Service is a division of the American Chemical Society.

LOR = Limit of reporting

^ = This result is computed from individual analyte detections at or above the level of reporting

- **This report has been amended and re-released to allow the reporting of additional analytical data (Vanadium)**
- **This report has been amended following the identification of an error in the LIMS reporting setup for this test. The holding time within the QCI were incorrect in the original report for methods EP130, EP131 and EP132.**



Analytical Results

Sub-Matrix: WATER

Client sample ID
 Client sampling date / time

Compound	CAS Number	LOR	Unit	A5	A4	15	16	17
				15-OCT-2009 15:30	15-OCT-2009 17:10	16-OCT-2009 07:15	16-OCT-2009 08:30	16-OCT-2009 09:45
				EB0916488-001	EB0916488-002	EB0916488-003	EB0916488-004	EB0916488-005
EA006: Sodium Adsorption Ratio (SAR)								
^ Sodium Adsorption Ratio	----	0.01	-	2.50	1.99	2.80	1.94	2.01
EA025: Suspended Solids								
^ Suspended Solids (SS)	----	5	mg/L	1260	39	690	76	1420
EA045: Turbidity								
Turbidity	----	0.1	NTU	1000	700	1600	----	2100
EA065: Total Hardness as CaCO3								
^ Total Hardness as CaCO3	----	1	mg/L	28	40	52	77	82
ED040F: Dissolved Major Anions								
Sulfate as SO4 2-	14808-79-8	1	mg/L	4	4	8	9	9
ED045G: Chloride Discrete analyser								
Chloride	16887-00-6	1	mg/L	33	26	24	19	25
ED093F: Dissolved Major Cations								
Calcium	7440-70-2	1	mg/L	6	4	10	17	19
Magnesium	7439-95-4	1	mg/L	3	7	7	8	8
Sodium	7440-23-5	1	mg/L	30	29	46	39	42
EG035F: Dissolved Mercury by FIMS								
Mercury	7439-97-6	0.0001	mg/L	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
EG035T: Total Recoverable Mercury by FIMS								
Mercury	7439-97-6	0.0001	mg/L	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
EG094F: Dissolved Metals in Fresh Water by ORC-ICPMS								
Selenium	7782-49-2	0.2	µg/L	0.3	0.4	0.4	0.2	0.3
Arsenic	7440-38-2	0.2	µg/L	0.6	0.8	0.6	0.9	0.9
Boron	7440-42-8	5	µg/L	55	24	61	43	74
Cadmium	7440-43-9	0.05	µg/L	<0.05	<0.05	<0.05	<0.05	<0.05
Cobalt	7440-48-4	0.1	µg/L	1.3	0.8	0.4	0.5	0.4
Copper	7440-50-8	0.5	µg/L	2.3	1.0	6.2	5.6	5.3
Lead	7439-92-1	0.1	µg/L	<0.1	0.2	<0.1	<0.1	<0.1
Nickel	7440-02-0	0.5	µg/L	2.9	1.4	12.7	8.6	9.7
Vanadium	7440-62-2	0.2	µg/L	2.1	3.0	6.0	11.7	----
Zinc	7440-66-6	1	µg/L	8	15	<1	<1	<1
EG094T: Total metals in Fresh water by ORC-ICPMS								
Selenium	7782-49-2	0.2	µg/L	1.2	1.1	0.8	0.4	0.9
Arsenic	7440-38-2	0.2	µg/L	4.8	7.6	2.9	1.6	3.5
Boron	7440-42-8	5	µg/L	61	31	71	48	78
Cadmium	7440-43-9	0.05	µg/L	<0.05	<0.05	<0.05	<0.05	0.05
Cobalt	7440-48-4	0.1	µg/L	31.4	18.5	55.1	10.6	38.5



Analytical Results

Sub-Matrix: WATER

				Client sample ID				
				A5	A4	15	16	17
				15-OCT-2009 15:30	15-OCT-2009 17:10	16-OCT-2009 07:15	16-OCT-2009 08:30	16-OCT-2009 09:45
				Client sampling date / time	Client sampling date / time	Client sampling date / time	Client sampling date / time	Client sampling date / time
Compound	CAS Number	LOR	Unit	EB0916488-001	EB0916488-002	EB0916488-003	EB0916488-004	EB0916488-005
EG094T: Total metals in Fresh water by ORC-ICPMS - Continued								
Copper	7440-50-8	0.5	µg/L	21.4	7.5	27.5	13.3	34.2
Lead	7439-92-1	0.1	µg/L	28.9	23.0	18.5	4.9	14.5
Nickel	7440-02-0	0.5	µg/L	34.1	13.6	71.7	26.0	79.8
Zinc	7440-66-6	1	µg/L	63	57	88	44	148
EK025G: Free cyanide by Discrete Analyser								
Free Cyanide	----	0.004	mg/L	<0.004	<0.004	<0.004	<0.004	<0.004
EK040P: Fluoride by PC Titrator								
Fluoride	16984-48-8	0.1	mg/L	<0.1	<0.1	0.3	0.2	0.3
EK055G: Ammonia as N by Discrete Analyser								
Ammonia as N	7664-41-7	0.01	mg/L	0.12	0.02	0.07	0.06	0.08
EK057G: Nitrite as N by Discrete Analyser								
Nitrite as N	----	0.01	mg/L	0.04	0.02	<0.01	<0.01	<0.01
EK058G: Nitrate as N by Discrete Analyser								
^ Nitrate as N	14797-55-8	0.01	mg/L	0.58	0.03	0.36	0.08	0.27
EK059G: NOX as N by Discrete Analyser								
Nitrite + Nitrate as N	----	0.01	mg/L	0.62	0.05	0.36	0.08	0.27
EP074A: Monocyclic Aromatic Hydrocarbons								
Benzene	71-43-2	1	µg/L	<1	<1	<1	<1	<1
Toluene	108-88-3	2	µg/L	<2	<2	<2	<2	<2
Ethylbenzene	100-41-4	2	µg/L	<2	<2	<2	<2	<2
meta- & para-Xylene	108-38-3 106-42-3	2	µg/L	<2	<2	<2	<2	<2
Styrene	100-42-5	5	µg/L	<5	<5	<5	<5	<5
ortho-Xylene	95-47-6	2	µg/L	<2	<2	<2	<2	<2
Isopropylbenzene	98-82-8	5	µg/L	<5	<5	<5	<5	<5
n-Propylbenzene	103-65-1	5	µg/L	<5	<5	<5	<5	<5
1,3,5-Trimethylbenzene	108-67-8	5	µg/L	<5	<5	<5	<5	<5
sec-Butylbenzene	135-98-8	5	µg/L	<5	<5	<5	<5	<5
1,2,4-Trimethylbenzene	95-63-6	5	µg/L	<5	<5	<5	<5	<5
tert-Butylbenzene	98-06-6	5	µg/L	<5	<5	<5	<5	<5
p-Isopropyltoluene	99-87-6	5	µg/L	<5	<5	<5	<5	<5
n-Butylbenzene	104-51-8	5	µg/L	<5	<5	<5	<5	<5
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons								
Naphthalene	91-20-3	0.02	µg/L	<0.02	<0.02	<0.02	<0.02	<0.02
Acenaphthylene	208-96-8	0.02	µg/L	<0.02	<0.02	<0.02	<0.02	<0.02
Acenaphthene	83-32-9	0.02	µg/L	<0.02	<0.02	<0.02	<0.02	<0.02
Fluorene	86-73-7	0.02	µg/L	<0.02	<0.02	<0.02	<0.02	<0.02
Phenanthrene	85-01-8	0.02	µg/L	<0.02	<0.02	<0.02	<0.02	<0.02



Analytical Results

Sub-Matrix: WATER

Client sample ID

Client sampling date / time

Compound	CAS Number	LOR	Unit	A5	A4	15	16	17
				15-OCT-2009 15:30	15-OCT-2009 17:10	16-OCT-2009 07:15	16-OCT-2009 08:30	16-OCT-2009 09:45
				EB0916488-001	EB0916488-002	EB0916488-003	EB0916488-004	EB0916488-005
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons - Continued								
Anthracene	120-12-7	0.02	µg/L	<0.02	<0.02	<0.02	<0.02	<0.02
Fluoranthene	206-44-0	0.02	µg/L	<0.02	<0.02	<0.02	<0.02	<0.02
Pyrene	129-00-0	0.02	µg/L	<0.02	<0.02	<0.02	<0.02	<0.02
Benz(a)anthracene	56-55-3	0.02	µg/L	<0.02	<0.02	<0.02	<0.02	<0.02
Chrysene	218-01-9	0.02	µg/L	<0.02	<0.02	<0.02	<0.02	<0.02
Benzo(b)fluoranthene	205-99-2	0.02	µg/L	<0.02	<0.02	<0.02	<0.02	<0.02
Benzo(k)fluoranthene	207-08-9	0.02	µg/L	<0.02	<0.02	<0.02	<0.02	<0.02
Benzo(a)pyrene	50-32-8	0.005	µg/L	<0.005	<0.005	<0.005	<0.005	<0.005
Indeno(1.2.3.cd)pyrene	193-39-5	0.02	µg/L	<0.02	<0.02	<0.02	<0.02	<0.02
Dibenz(a,h)anthracene	53-70-3	0.02	µg/L	<0.02	<0.02	<0.02	<0.02	<0.02
Benzo(g,h,i)perylene	191-24-2	0.02	µg/L	<0.02	<0.02	<0.02	<0.02	<0.02
^ Total PAH	----	0.005	µg/L	<0.005	<0.005	<0.005	<0.005	<0.005
EP080/071: Total Petroleum Hydrocarbons								
C6 - C9 Fraction	----	20	µg/L	<20	<20	<20	<20	<20
C10 - C14 Fraction	----	50	µg/L	<50	<50	<50	<50	<50
C15 - C28 Fraction	----	100	µg/L	160	290	<100	<100	100
C29 - C36 Fraction	----	50	µg/L	70	90	<50	<50	<50
^ C10 - C36 Fraction (sum)	----	50	µg/L	230	380	----	----	100
C10 - C36 Fraction (sum)	----	50	µg/L	----	----	<50	<50	----
EP130A: Organophosphorus Pesticides (Ultra-trace)								
Bromophos-ethyl	4824-78-6	0.10	µg/L	<0.10	<0.10	<0.10	<0.10	<0.10
Carbophenothion	786-19-6	0.10	µg/L	<0.10	<0.10	<0.10	<0.10	<0.10
Chlorfenvinphos (E)	470-90-6	0.10	µg/L	<0.10	<0.10	<0.10	<0.10	<0.10
Chlorfenvinphos (Z)	470-90-8	0.10	µg/L	<0.10	<0.10	<0.10	<0.10	<0.10
Chlorpyrifos	2921-88-2	0.050	µg/L	<0.050	<0.050	<0.050	<0.050	<0.050
Chlorpyrifos-methyl	5598-13-0	0.10	µg/L	<0.10	<0.10	<0.10	<0.10	<0.10
Demeton-S-methyl	919-86-8	0.10	µg/L	<0.10	<0.10	<0.10	<0.10	<0.10
Diazinon	333-41-5	0.10	µg/L	<0.10	<0.10	<0.10	<0.10	<0.10
Dichlorvos	62-73-7	0.10	µg/L	<0.10	<0.10	<0.10	<0.10	<0.10
Dimethoate	60-51-5	0.10	µg/L	<0.10	<0.10	<0.10	<0.10	<0.10
Ethion	563-12-2	0.10	µg/L	<0.10	<0.10	<0.10	<0.10	<0.10
Fenamiphos	22224-92-6	0.10	µg/L	<0.10	<0.10	<0.10	<0.10	<0.10
Fenthion	55-38-9	0.10	µg/L	<0.10	<0.10	<0.10	<0.10	<0.10
Malathion	121-75-5	0.10	µg/L	<0.10	<0.10	<0.10	<0.10	<0.10
Azinphos Methyl	----	0.10	µg/L	<0.10	<0.10	<0.10	<0.10	<0.10
Monocrotophos	6923-22-4	0.10	µg/L	<0.10	<0.10	<0.10	<0.10	<0.10
Parathion	56-38-2	0.10	µg/L	<0.10	<0.10	<0.10	<0.10	<0.10
Parathion-methyl	298-00-0	0.10	µg/L	<0.10	<0.10	<0.10	<0.10	<0.10



Analytical Results

Sub-Matrix: WATER

				Client sample ID				
				Client sampling date / time				
				A5	A4	15	16	17
				15-OCT-2009 15:30	15-OCT-2009 17:10	16-OCT-2009 07:15	16-OCT-2009 08:30	16-OCT-2009 09:45
Compound	CAS Number	LOR	Unit	EB0916488-001	EB0916488-002	EB0916488-003	EB0916488-004	EB0916488-005
EP130A: Organophosphorus Pesticides (Ultra-trace) - Continued								
Pirimphos-ethyl	23505-41-1	0.10	µg/L	<0.10	<0.10	<0.10	<0.10	<0.10
Prothiofos	34643-46-4	0.10	µg/L	<0.10	<0.10	<0.10	<0.10	<0.10
EP131A: Organochlorine Pesticides								
Aldrin	309-00-2	0.002	µg/L	<0.002	<0.002	<0.002	<0.002	<0.002
alpha-BHC	319-84-6	0.002	µg/L	<0.002	<0.002	<0.002	<0.002	<0.002
beta-BHC	319-85-7	0.002	µg/L	<0.002	<0.002	<0.002	<0.002	<0.002
delta-BHC	319-86-8	0.002	µg/L	<0.002	<0.002	<0.002	<0.002	<0.002
4,4'-DDD	72-54-8	0.002	µg/L	<0.002	<0.002	<0.002	<0.002	<0.002
4,4'-DDE	72-55-9	0.002	µg/L	<0.002	<0.002	<0.002	<0.002	<0.002
4,4'-DDT	50-29-3	0.002	µg/L	<0.002	<0.002	<0.002	<0.002	<0.002
DDT (total)	----	0.002	µg/L	<0.002	<0.002	<0.002	<0.002	<0.002
Dieldrin	60-57-1	0.002	µg/L	<0.002	<0.002	<0.002	<0.002	<0.002
alpha-Endosulfan	959-98-8	0.002	µg/L	<0.002	<0.002	<0.002	<0.002	<0.002
beta-Endosulfan	33213-65-9	0.002	µg/L	<0.002	<0.002	<0.002	<0.002	<0.002
Endosulfan sulfate	1031-07-8	0.002	µg/L	<0.002	<0.002	<0.002	<0.002	<0.002
^ Endosulfan (sum)	115-29-7	0.002	µg/L	<0.002	<0.002	<0.002	<0.002	<0.002
Endrin	72-20-8	0.002	µg/L	<0.002	<0.002	<0.002	<0.002	<0.002
Endrin aldehyde	7421-93-4	0.002	µg/L	<0.002	<0.002	<0.002	<0.002	<0.002
Endrin ketone	53494-70-5	0.002	µg/L	<0.002	<0.002	<0.002	<0.002	<0.002
Heptachlor	76-44-8	0.001	µg/L	<0.001	<0.001	<0.001	<0.001	<0.001
Heptachlor epoxide	1024-57-3	0.002	µg/L	<0.002	<0.002	<0.002	<0.002	<0.002
Hexachlorobenzene (HCB)	118-74-1	0.002	µg/L	<0.002	<0.002	<0.002	<0.002	<0.002
gamma-BHC	58-89-9	0.002	µg/L	<0.002	<0.002	<0.002	<0.002	<0.002
Methoxychlor	72-43-5	0.002	µg/L	<0.002	<0.002	<0.002	<0.002	<0.002
cis-Chlordane	5103-71-9	0.002	µg/L	<0.002	<0.002	<0.002	<0.002	<0.002
trans-Chlordane	5103-74-2	0.002	µg/L	<0.002	<0.002	<0.002	<0.002	<0.002
Total Chlordane (sum)	----	0.002	µg/L	<0.002	<0.002	<0.002	<0.002	<0.002
Oxychlordane	27304-13-8	0.002	µg/L	<0.002	<0.002	<0.002	<0.002	<0.002
EP131B: Polychlorinated Biphenyls (as Aroclors)								
Total Polychlorinated biphenyls	----	0.05	µg/L	<0.05	<0.05	<0.05	<0.05	<0.05
Aroclor 1016	12974-11-2	0.05	µg/L	<0.05	<0.05	<0.05	<0.05	<0.05
Aroclor 1221	11104-28-2	0.05	µg/L	<0.05	<0.05	<0.05	<0.05	<0.05
Aroclor 1232	11141-16-5	0.05	µg/L	<0.05	<0.05	<0.05	<0.05	<0.05
Aroclor 1242	53469-21-9	0.05	µg/L	<0.05	<0.05	<0.05	<0.05	<0.05
Aroclor 1248	12672-29-6	0.05	µg/L	<0.05	<0.05	<0.05	<0.05	<0.05
Aroclor 1254	11097-69-1	0.05	µg/L	<0.05	<0.05	<0.05	<0.05	<0.05
Aroclor 1260	11096-82-5	0.05	µg/L	<0.05	<0.05	<0.05	<0.05	<0.05

Ultra-Trace Nutrients



Analytical Results

Sub-Matrix: WATER

Client sample ID
 Client sampling date / time

				A5	A4	15	16	17
				15-OCT-2009 15:30	15-OCT-2009 17:10	16-OCT-2009 07:15	16-OCT-2009 08:30	16-OCT-2009 09:45
Compound	CAS Number	LOR	Unit	EB0916488-001	EB0916488-002	EB0916488-003	EB0916488-004	EB0916488-005
Ultra-Trace Nutrients - Continued								
Total Nitrogen as N	----	0.05	mg/L	2.63	2.45	1.97	0.99	2.89
Total Phosphorus as P	----	0.005	mg/L	0.944	0.728	0.554	0.429	1.47
EP074S: VOC Surrogates								
1,2-Dichloroethane-D4	17060-07-0	0.1	%	94.3	100	105	104	104
Toluene-D8	2037-26-5	0.1	%	92.4	95.8	98.4	96.9	95.2
4-Bromofluorobenzene	460-00-4	0.1	%	89.1	91.8	95.4	93.8	93.1
EP080S: TPH(V)/BTEX Surrogates								
1,2-Dichloroethane-D4	17060-07-0	0.1	%	93.6	99.4	104	103	103
Toluene-D8	2037-26-5	0.1	%	91.7	95.7	98.4	96.8	95.0
4-Bromofluorobenzene	460-00-4	0.1	%	92.3	95.1	98.9	97.2	96.4
EP130S: Organophosphorus Pesticide Surrogate								
DEF	78-48-8	0.1	%	57.8	65.4	49.4	64.1	44.4
EP131S: OC Pesticide Surrogate								
Dibromo-DDE	21655-73-2	0.1	%	53.8	57.5	58.7	72.5	52.5
EP131T: PCB Surrogate								
Decachlorobiphenyl	2051-24-3	0.1	%	81.2	71.2	67.5	86.2	63.8
EP132T: Base/Neutral Extractable Surrogates								
2-Fluorobiphenyl	321-60-8	0.1	%	87.1	70.8	75.8	64.7	94.8
Anthracene-d10	1719-06-8	0.1	%	102	92.2	92.6	114	85.1
4-Terphenyl-d14	1718-51-0	0.1	%	86.6	103	93.5	98.9	119



Analytical Results

Sub-Matrix: WATER

				Client sample ID				
				14	A7	QA	QA1	QA2
				16-OCT-2009 11:00	16-OCT-2009 12:45	16-OCT-2009 12:45	16-OCT-2009 13:30	16-OCT-2009 13:30
				Client sampling date / time				
Compound	CAS Number	LOR	Unit	EB0916488-006	EB0916488-007	EB0916488-008	EB0916488-009	EB0916488-010
EA006: Sodium Adsorption Ratio (SAR)								
^ Sodium Adsorption Ratio	----	0.01	-	2.64	2.04	2.77	----	----
EA025: Suspended Solids								
^ Suspended Solids (SS)	----	5	mg/L	36	210	29	----	----
EA065: Total Hardness as CaCO3								
^ Total Hardness as CaCO3	----	1	mg/L	11	32	10	----	----
ED040F: Dissolved Major Anions								
Sulfate as SO4 2-	14808-79-8	1	mg/L	2	2	2	----	----
ED045G: Chloride Discrete analyser								
Chloride	16887-00-6	1	mg/L	16	24	16	----	----
ED093F: Dissolved Major Cations								
Calcium	7440-70-2	1	mg/L	2	7	1	----	----
Magnesium	7439-95-4	1	mg/L	2	3	2	----	----
Sodium	7440-23-5	1	mg/L	20	26	20	----	----
EG035F: Dissolved Mercury by FIMS								
Mercury	7439-97-6	0.0001	mg/L	<0.0001	<0.0001	----	<0.0001	<0.0001
EG035T: Total Recoverable Mercury by FIMS								
Mercury	7439-97-6	0.0001	mg/L	<0.0001	<0.0001	<0.0001	----	----
EG094F: Dissolved Metals in Fresh Water by ORC-ICPMS								
Selenium	7782-49-2	0.2	µg/L	0.2	0.2	----	0.4	0.4
Arsenic	7440-38-2	0.2	µg/L	1.2	1.1	----	0.6	0.6
Boron	7440-42-8	5	µg/L	19	41	----	82	83
Cadmium	7440-43-9	0.05	µg/L	<0.05	<0.05	----	<0.05	<0.05
Cobalt	7440-48-4	0.1	µg/L	1.8	1.6	----	0.4	0.4
Copper	7440-50-8	0.5	µg/L	1.6	1.4	----	0.7	0.7
Lead	7439-92-1	0.1	µg/L	0.9	0.3	----	<0.1	<0.1
Nickel	7440-02-0	0.5	µg/L	2.3	3.4	----	1.7	1.6
Vanadium	7440-62-2	0.2	µg/L	----	3.2	----	4.7	4.9
Zinc	7440-66-6	1	µg/L	4	<1	----	6	5
EG094T: Total metals in Fresh water by ORC-ICPMS								
Selenium	7782-49-2	0.2	µg/L	0.7	0.4	0.6	----	----
Arsenic	7440-38-2	0.2	µg/L	6.0	2.9	6.1	----	----
Boron	7440-42-8	5	µg/L	20	44	19	----	----
Cadmium	7440-43-9	0.05	µg/L	<0.05	<0.05	<0.05	----	----
Cobalt	7440-48-4	0.1	µg/L	10.4	9.4	11.1	----	----
Copper	7440-50-8	0.5	µg/L	7.3	4.4	7.5	----	----
Lead	7439-92-1	0.1	µg/L	9.4	7.1	9.5	----	----
Nickel	7440-02-0	0.5	µg/L	8.0	10.3	8.5	----	----



Analytical Results

Sub-Matrix: WATER

				Client sample ID				
				14	A7	QA	QA1	QA2
				Client sampling date / time				
				16-OCT-2009 11:00	16-OCT-2009 12:45	16-OCT-2009 12:45	16-OCT-2009 13:30	16-OCT-2009 13:30
Compound	CAS Number	LOR	Unit	EB0916488-006	EB0916488-007	EB0916488-008	EB0916488-009	EB0916488-010
EG094T: Total metals in Fresh water by ORC-ICPMS - Continued								
Zinc	7440-66-6	1	µg/L	42	19	41	----	----
EK025G: Free cyanide by Discrete Analyser								
Free Cyanide	----	0.004	mg/L	<0.004	<0.004	<0.004	----	----
EK040P: Fluoride by PC Titrator								
Fluoride	16984-48-8	0.1	mg/L	<0.1	0.1	<0.1	----	----
EK055G: Ammonia as N by Discrete Analyser								
Ammonia as N	7664-41-7	0.01	mg/L	0.13	0.03	0.14	----	----
EK057G: Nitrite as N by Discrete Analyser								
Nitrite as N	----	0.01	mg/L	<0.01	<0.01	0.01	----	----
EK058G: Nitrate as N by Discrete Analyser								
^ Nitrate as N	14797-55-8	0.01	mg/L	0.09	0.03	0.07	----	----
EK059G: NOX as N by Discrete Analyser								
Nitrite + Nitrate as N	----	0.01	mg/L	0.09	0.03	0.08	----	----
EP074A: Monocyclic Aromatic Hydrocarbons								
Benzene	71-43-2	1	µg/L	<1	<1	<1	----	----
Toluene	108-88-3	2	µg/L	<2	<2	<2	----	----
Ethylbenzene	100-41-4	2	µg/L	<2	<2	<2	----	----
meta- & para-Xylene	108-38-3 106-42-3	2	µg/L	<2	<2	<2	----	----
Styrene	100-42-5	5	µg/L	<5	<5	<5	----	----
ortho-Xylene	95-47-6	2	µg/L	<2	<2	<2	----	----
Isopropylbenzene	98-82-8	5	µg/L	<5	<5	<5	----	----
n-Propylbenzene	103-65-1	5	µg/L	<5	<5	<5	----	----
1,3,5-Trimethylbenzene	108-67-8	5	µg/L	<5	<5	<5	----	----
sec-Butylbenzene	135-98-8	5	µg/L	<5	<5	<5	----	----
1,2,4-Trimethylbenzene	95-63-6	5	µg/L	<5	<5	<5	----	----
tert-Butylbenzene	98-06-6	5	µg/L	<5	<5	<5	----	----
p-Isopropyltoluene	99-87-6	5	µg/L	<5	<5	<5	----	----
n-Butylbenzene	104-51-8	5	µg/L	<5	<5	<5	----	----
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons								
Naphthalene	91-20-3	0.02	µg/L	<0.02	<0.02	<0.02	----	----
Acenaphthylene	208-96-8	0.02	µg/L	<0.02	<0.02	<0.02	----	----
Acenaphthene	83-32-9	0.02	µg/L	<0.02	<0.02	<0.02	----	----
Fluorene	86-73-7	0.02	µg/L	<0.02	<0.02	<0.02	----	----
Phenanthrene	85-01-8	0.02	µg/L	<0.02	<0.02	<0.02	----	----
Anthracene	120-12-7	0.02	µg/L	<0.02	<0.02	<0.02	----	----
Fluoranthene	206-44-0	0.02	µg/L	<0.02	<0.02	<0.02	----	----
Pyrene	129-00-0	0.02	µg/L	<0.02	<0.02	<0.02	----	----



Analytical Results

Sub-Matrix: WATER

Client sample ID
 Client sampling date / time

Compound	CAS Number	LOR	Unit	14	A7	QA	QA1	QA2
				16-OCT-2009 11:00	16-OCT-2009 12:45	16-OCT-2009 12:45	16-OCT-2009 13:30	16-OCT-2009 13:30
				EB0916488-006	EB0916488-007	EB0916488-008	EB0916488-009	EB0916488-010
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons - Continued								
Benz(a)anthracene	56-55-3	0.02	µg/L	<0.02	<0.02	<0.02	----	----
Chrysene	218-01-9	0.02	µg/L	<0.02	<0.02	<0.02	----	----
Benzo(b)fluoranthene	205-99-2	0.02	µg/L	<0.02	<0.02	<0.02	----	----
Benzo(k)fluoranthene	207-08-9	0.02	µg/L	<0.02	<0.02	<0.02	----	----
Benzo(a)pyrene	50-32-8	0.005	µg/L	<0.005	<0.005	<0.005	----	----
Indeno(1.2.3.cd)pyrene	193-39-5	0.02	µg/L	<0.02	<0.02	<0.02	----	----
Dibenz(a,h)anthracene	53-70-3	0.02	µg/L	<0.02	<0.02	<0.02	----	----
Benzo(g,h,i)perylene	191-24-2	0.02	µg/L	<0.02	<0.02	<0.02	----	----
^ Total PAH	----	0.005	µg/L	<0.005	<0.005	<0.005	----	----
EP080/071: Total Petroleum Hydrocarbons								
C6 - C9 Fraction	----	20	µg/L	<20	<20	<20	----	----
C10 - C14 Fraction	----	50	µg/L	<50	<50	<50	----	----
C15 - C28 Fraction	----	100	µg/L	<100	120	<100	----	----
C29 - C36 Fraction	----	50	µg/L	<50	<50	<50	----	----
^ C10 - C36 Fraction (sum)	----	50	µg/L	----	120	----	----	----
C10 - C36 Fraction (sum)	----	50	µg/L	<50	----	<50	----	----
EP130A: Organophosphorus Pesticides (Ultra-trace)								
Bromophos-ethyl	4824-78-6	0.10	µg/L	<0.10	<0.10	<0.10	----	----
Carbophenothion	786-19-6	0.10	µg/L	<0.10	<0.10	<0.10	----	----
Chlorfenvinphos (E)	470-90-6	0.10	µg/L	<0.10	<0.10	<0.10	----	----
Chlorfenvinphos (Z)	470-90-8	0.10	µg/L	<0.10	<0.10	<0.10	----	----
Chlorpyrifos	2921-88-2	0.050	µg/L	<0.050	<0.050	<0.050	----	----
Chlorpyrifos-methyl	5598-13-0	0.10	µg/L	<0.10	<0.10	<0.10	----	----
Demeton-S-methyl	919-86-8	0.10	µg/L	<0.10	<0.10	<0.10	----	----
Diazinon	333-41-5	0.10	µg/L	<0.10	<0.10	<0.10	----	----
Dichlorvos	62-73-7	0.10	µg/L	<0.10	<0.10	<0.10	----	----
Dimethoate	60-51-5	0.10	µg/L	<0.10	<0.10	<0.10	----	----
Ethion	563-12-2	0.10	µg/L	<0.10	<0.10	<0.10	----	----
Fenamiphos	22224-92-6	0.10	µg/L	<0.10	<0.10	<0.10	----	----
Fenthion	55-38-9	0.10	µg/L	<0.10	<0.10	<0.10	----	----
Malathion	121-75-5	0.10	µg/L	<0.10	<0.10	<0.10	----	----
Azinphos Methyl	----	0.10	µg/L	<0.10	<0.10	<0.10	----	----
Monocrotophos	6923-22-4	0.10	µg/L	<0.10	<0.10	<0.10	----	----
Parathion	56-38-2	0.10	µg/L	<0.10	<0.10	<0.10	----	----
Parathion-methyl	298-00-0	0.10	µg/L	<0.10	<0.10	<0.10	----	----
Pirimphos-ethyl	23505-41-1	0.10	µg/L	<0.10	<0.10	<0.10	----	----
Prothiofos	34643-46-4	0.10	µg/L	<0.10	<0.10	<0.10	----	----

EP131A: Organochlorine Pesticides



Analytical Results

Sub-Matrix: WATER

Client sample ID

Client sampling date / time

				14	A7	QA	QA1	QA2
				16-OCT-2009 11:00	16-OCT-2009 12:45	16-OCT-2009 12:45	16-OCT-2009 13:30	16-OCT-2009 13:30
Compound	CAS Number	LOR	Unit	EB0916488-006	EB0916488-007	EB0916488-008	EB0916488-009	EB0916488-010
EP131A: Organochlorine Pesticides - Continued								
Aldrin	309-00-2	0.002	µg/L	<0.002	<0.002	<0.002	----	----
alpha-BHC	319-84-6	0.002	µg/L	<0.002	<0.002	<0.002	----	----
beta-BHC	319-85-7	0.002	µg/L	<0.002	<0.002	<0.002	----	----
delta-BHC	319-86-8	0.002	µg/L	<0.002	<0.002	<0.002	----	----
4,4'-DDD	72-54-8	0.002	µg/L	<0.002	<0.002	<0.002	----	----
4,4'-DDE	72-55-9	0.002	µg/L	<0.002	<0.002	<0.002	----	----
4,4'-DDT	50-29-3	0.002	µg/L	<0.002	<0.002	<0.002	----	----
DDT (total)	----	0.002	µg/L	<0.002	<0.002	<0.002	----	----
Dieldrin	60-57-1	0.002	µg/L	<0.002	<0.002	<0.002	----	----
alpha-Endosulfan	959-98-8	0.002	µg/L	<0.002	<0.002	<0.002	----	----
beta-Endosulfan	33213-65-9	0.002	µg/L	<0.002	<0.002	<0.002	----	----
Endosulfan sulfate	1031-07-8	0.002	µg/L	<0.002	<0.002	<0.002	----	----
^ Endosulfan (sum)	115-29-7	0.002	µg/L	<0.002	<0.002	<0.002	----	----
Endrin	72-20-8	0.002	µg/L	<0.002	<0.002	<0.002	----	----
Endrin aldehyde	7421-93-4	0.002	µg/L	<0.002	<0.002	<0.002	----	----
Endrin ketone	53494-70-5	0.002	µg/L	<0.002	<0.002	<0.002	----	----
Heptachlor	76-44-8	0.001	µg/L	<0.001	<0.001	<0.001	----	----
Heptachlor epoxide	1024-57-3	0.002	µg/L	<0.002	<0.002	<0.002	----	----
Hexachlorobenzene (HCB)	118-74-1	0.002	µg/L	<0.002	<0.002	<0.002	----	----
gamma-BHC	58-89-9	0.002	µg/L	<0.002	<0.002	<0.002	----	----
Methoxychlor	72-43-5	0.002	µg/L	<0.002	<0.002	<0.002	----	----
cis-Chlordane	5103-71-9	0.002	µg/L	<0.002	<0.002	<0.002	----	----
trans-Chlordane	5103-74-2	0.002	µg/L	<0.002	<0.002	<0.002	----	----
Total Chlordane (sum)	----	0.002	µg/L	<0.002	<0.002	<0.002	----	----
Oxychlordane	27304-13-8	0.002	µg/L	<0.002	<0.002	<0.002	----	----
EP131B: Polychlorinated Biphenyls (as Aroclors)								
Total Polychlorinated biphenyls	----	0.05	µg/L	<0.05	<0.05	<0.05	----	----
Aroclor 1016	12974-11-2	0.05	µg/L	<0.05	<0.05	<0.05	----	----
Aroclor 1221	11104-28-2	0.05	µg/L	<0.05	<0.05	<0.05	----	----
Aroclor 1232	11141-16-5	0.05	µg/L	<0.05	<0.05	<0.05	----	----
Aroclor 1242	53469-21-9	0.05	µg/L	<0.05	<0.05	<0.05	----	----
Aroclor 1248	12672-29-6	0.05	µg/L	<0.05	<0.05	<0.05	----	----
Aroclor 1254	11097-69-1	0.05	µg/L	<0.05	<0.05	<0.05	----	----
Aroclor 1260	11096-82-5	0.05	µg/L	<0.05	<0.05	<0.05	----	----
Ultra-Trace Nutrients								
Total Nitrogen as N	----	0.05	mg/L	1.11	1.73	1.14	----	----
Total Phosphorus as P	----	0.005	mg/L	0.431	0.388	0.382	----	----
EP074S: VOC Surrogates								



Analytical Results

Sub-Matrix: WATER

Client sample ID
 Client sampling date / time

Compound	CAS Number	LOR	Unit	14	A7	QA	QA1	QA2
				16-OCT-2009 11:00	16-OCT-2009 12:45	16-OCT-2009 12:45	16-OCT-2009 13:30	16-OCT-2009 13:30
				EB0916488-006	EB0916488-007	EB0916488-008	EB0916488-009	EB0916488-010
EP074S: VOC Surrogates - Continued								
1,2-Dichloroethane-D4	17060-07-0	0.1	%	101	113	101	----	----
Toluene-D8	2037-26-5	0.1	%	93.2	91.8	94.5	----	----
4-Bromofluorobenzene	460-00-4	0.1	%	90.4	114	89.4	----	----
EP080S: TPH(V)/BTEX Surrogates								
1,2-Dichloroethane-D4	17060-07-0	0.1	%	99.9	114	99.4	----	----
Toluene-D8	2037-26-5	0.1	%	93.2	92.0	94.5	----	----
4-Bromofluorobenzene	460-00-4	0.1	%	93.7	118	92.7	----	----
EP130S: Organophosphorus Pesticide Surrogate								
DEF	78-48-8	0.1	%	53.4	65.0	60.5	----	----
EP131S: OC Pesticide Surrogate								
Dibromo-DDE	21655-73-2	0.1	%	66.2	73.7	65.0	----	----
EP131T: PCB Surrogate								
Decachlorobiphenyl	2051-24-3	0.1	%	82.5	93.8	67.5	----	----
EP132T: Base/Neutral Extractable Surrogates								
2-Fluorobiphenyl	321-60-8	0.1	%	78.0	77.9	82.8	----	----
Anthracene-d10	1719-06-8	0.1	%	117	101	96.7	----	----
4-Terphenyl-d14	1718-51-0	0.1	%	114	84.5	88.5	----	----



Analytical Results

Sub-Matrix: **WATER**

Client sample ID

B

Client sampling date / time

16-OCT-2009 15:35

Compound	CAS Number	LOR	Unit	EB0916488-011				
EA006: Sodium Adsorption Ratio (SAR)								
Sodium Adsorption Ratio	----	0.01	-	<0.01	----	----	----	----
EA025: Suspended Solids								
^ Suspended Solids (SS)	----	5	mg/L	<5	----	----	----	----
EA065: Total Hardness as CaCO3								
^ Total Hardness as CaCO3	----	1	mg/L	<1	----	----	----	----
ED040F: Dissolved Major Anions								
Sulfate as SO4 2-	14808-79-8	1	mg/L	<1	----	----	----	----
ED045G: Chloride Discrete analyser								
Chloride	16887-00-6	1	mg/L	<1	----	----	----	----
ED093F: Dissolved Major Cations								
Calcium	7440-70-2	1	mg/L	<1	----	----	----	----
Magnesium	7439-95-4	1	mg/L	<1	----	----	----	----
Sodium	7440-23-5	1	mg/L	<1	----	----	----	----
EG035F: Dissolved Mercury by FIMS								
Mercury	7439-97-6	0.0001	mg/L	<0.0001	----	----	----	----
EG035T: Total Recoverable Mercury by FIMS								
Mercury	7439-97-6	0.0001	mg/L	<0.0001	----	----	----	----
EG094F: Dissolved Metals in Fresh Water by ORC-ICPMS								
Selenium	7782-49-2	0.2	µg/L	<0.2	----	----	----	----
Arsenic	7440-38-2	0.2	µg/L	<0.2	----	----	----	----
Boron	7440-42-8	5	µg/L	<5	----	----	----	----
Cadmium	7440-43-9	0.05	µg/L	<0.05	----	----	----	----
Cobalt	7440-48-4	0.1	µg/L	<0.1	----	----	----	----
Copper	7440-50-8	0.5	µg/L	<0.5	----	----	----	----
Lead	7439-92-1	0.1	µg/L	<0.1	----	----	----	----
Nickel	7440-02-0	0.5	µg/L	<0.5	----	----	----	----
Vanadium	7440-62-2	0.2	µg/L	<0.2	----	----	----	----
Zinc	7440-66-6	1	µg/L	<1	----	----	----	----
EG094T: Total metals in Fresh water by ORC-ICPMS								
Selenium	7782-49-2	0.2	µg/L	<0.2	----	----	----	----
Arsenic	7440-38-2	0.2	µg/L	<0.2	----	----	----	----
Boron	7440-42-8	5	µg/L	<5	----	----	----	----
Cadmium	7440-43-9	0.05	µg/L	<0.05	----	----	----	----
Cobalt	7440-48-4	0.1	µg/L	<0.1	----	----	----	----
Copper	7440-50-8	0.5	µg/L	<0.5	----	----	----	----
Lead	7439-92-1	0.1	µg/L	<0.1	----	----	----	----
Nickel	7440-02-0	0.5	µg/L	<0.5	----	----	----	----



Analytical Results

Sub-Matrix: **WATER**

				Client sample ID				
				B	---	---	---	---
				Client sampling date / time	16-OCT-2009 15:35	---	---	---
Compound	CAS Number	LOR	Unit	EB0916488-011	---	---	---	---
EG094T: Total metals in Fresh water by ORC-ICPMS - Continued								
Zinc	7440-66-6	1	µg/L	<1	---	---	---	---
EK025G: Free cyanide by Discrete Analyser								
Free Cyanide	---	0.004	mg/L	<0.004	---	---	---	---
EK040P: Fluoride by PC Titrator								
Fluoride	16984-48-8	0.1	mg/L	<0.1	---	---	---	---
EK055G: Ammonia as N by Discrete Analyser								
Ammonia as N	7664-41-7	0.01	mg/L	0.03	---	---	---	---
EK057G: Nitrite as N by Discrete Analyser								
Nitrite as N	---	0.01	mg/L	<0.01	---	---	---	---
EK058G: Nitrate as N by Discrete Analyser								
^ Nitrate as N	14797-55-8	0.01	mg/L	0.01	---	---	---	---
EK059G: NOX as N by Discrete Analyser								
Nitrite + Nitrate as N	---	0.01	mg/L	0.01	---	---	---	---
EP074A: Monocyclic Aromatic Hydrocarbons								
Benzene	71-43-2	1	µg/L	<1	---	---	---	---
Toluene	108-88-3	2	µg/L	<2	---	---	---	---
Ethylbenzene	100-41-4	2	µg/L	<2	---	---	---	---
meta- & para-Xylene	108-38-3 106-42-3	2	µg/L	<2	---	---	---	---
Styrene	100-42-5	5	µg/L	<5	---	---	---	---
ortho-Xylene	95-47-6	2	µg/L	<2	---	---	---	---
Isopropylbenzene	98-82-8	5	µg/L	<5	---	---	---	---
n-Propylbenzene	103-65-1	5	µg/L	<5	---	---	---	---
1,3,5-Trimethylbenzene	108-67-8	5	µg/L	<5	---	---	---	---
sec-Butylbenzene	135-98-8	5	µg/L	<5	---	---	---	---
1,2,4-Trimethylbenzene	95-63-6	5	µg/L	<5	---	---	---	---
tert-Butylbenzene	98-06-6	5	µg/L	<5	---	---	---	---
p-Isopropyltoluene	99-87-6	5	µg/L	<5	---	---	---	---
n-Butylbenzene	104-51-8	5	µg/L	<5	---	---	---	---
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons								
Naphthalene	91-20-3	0.02	µg/L	<0.02	---	---	---	---
Acenaphthylene	208-96-8	0.02	µg/L	<0.02	---	---	---	---
Acenaphthene	83-32-9	0.02	µg/L	<0.02	---	---	---	---
Fluorene	86-73-7	0.02	µg/L	<0.02	---	---	---	---
Phenanthrene	85-01-8	0.02	µg/L	<0.02	---	---	---	---
Anthracene	120-12-7	0.02	µg/L	<0.02	---	---	---	---
Fluoranthene	206-44-0	0.02	µg/L	<0.02	---	---	---	---
Pyrene	129-00-0	0.02	µg/L	<0.02	---	---	---	---



Analytical Results

Sub-Matrix: WATER

Client sample ID

Client sampling date / time

				B	---	---	---	---
				16-OCT-2009 15:35	---	---	---	---
Compound	CAS Number	LOR	Unit	EB0916488-011	---	---	---	---
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons - Continued								
Benz(a)anthracene	56-55-3	0.02	µg/L	<0.02	---	---	---	---
Chrysene	218-01-9	0.02	µg/L	<0.02	---	---	---	---
Benzo(b)fluoranthene	205-99-2	0.02	µg/L	<0.02	---	---	---	---
Benzo(k)fluoranthene	207-08-9	0.02	µg/L	<0.02	---	---	---	---
Benzo(a)pyrene	50-32-8	0.005	µg/L	<0.005	---	---	---	---
Indeno(1.2.3.cd)pyrene	193-39-5	0.02	µg/L	<0.02	---	---	---	---
Dibenz(a.h)anthracene	53-70-3	0.02	µg/L	<0.02	---	---	---	---
Benzo(g.h.i)perylene	191-24-2	0.02	µg/L	<0.02	---	---	---	---
^ Total PAH	---	0.005	µg/L	<0.005	---	---	---	---
EP080/071: Total Petroleum Hydrocarbons								
C6 - C9 Fraction	---	20	µg/L	<20	---	---	---	---
C10 - C14 Fraction	---	50	µg/L	<50	---	---	---	---
C15 - C28 Fraction	---	100	µg/L	<100	---	---	---	---
C29 - C36 Fraction	---	50	µg/L	<50	---	---	---	---
C10 - C36 Fraction (sum)	---	50	µg/L	<50	---	---	---	---
EP130A: Organophosphorus Pesticides (Ultra-trace)								
Bromophos-ethyl	4824-78-6	0.10	µg/L	<0.10	---	---	---	---
Carbophenothion	786-19-6	0.10	µg/L	<0.10	---	---	---	---
Chlorfenvinphos (E)	470-90-6	0.10	µg/L	<0.10	---	---	---	---
Chlorfenvinphos (Z)	470-90-8	0.10	µg/L	<0.10	---	---	---	---
Chlorpyrifos	2921-88-2	0.050	µg/L	<0.050	---	---	---	---
Chlorpyrifos-methyl	5598-13-0	0.10	µg/L	<0.10	---	---	---	---
Demeton-S-methyl	919-86-8	0.10	µg/L	<0.10	---	---	---	---
Diazinon	333-41-5	0.10	µg/L	<0.10	---	---	---	---
Dichlorvos	62-73-7	0.10	µg/L	<0.10	---	---	---	---
Dimethoate	60-51-5	0.10	µg/L	<0.10	---	---	---	---
Ethion	563-12-2	0.10	µg/L	<0.10	---	---	---	---
Fenamiphos	22224-92-6	0.10	µg/L	<0.10	---	---	---	---
Fenthion	55-38-9	0.10	µg/L	<0.10	---	---	---	---
Malathion	121-75-5	0.10	µg/L	<0.10	---	---	---	---
Azinphos Methyl	---	0.10	µg/L	<0.10	---	---	---	---
Monocrotophos	6923-22-4	0.10	µg/L	<0.10	---	---	---	---
Parathion	56-38-2	0.10	µg/L	<0.10	---	---	---	---
Parathion-methyl	298-00-0	0.10	µg/L	<0.10	---	---	---	---
Pirimphos-ethyl	23505-41-1	0.10	µg/L	<0.10	---	---	---	---
Prothiofos	34643-46-4	0.10	µg/L	<0.10	---	---	---	---
EP131A: Organochlorine Pesticides								
Aldrin	309-00-2	0.002	µg/L	<0.002	---	---	---	---



Analytical Results

Sub-Matrix: WATER

				Client sample ID	B				
				Client sampling date / time	16-OCT-2009 15:35	----	----	----	----
Compound	CAS Number	LOR	Unit	EB0916488-011	----	----	----	----	----
EP131A: Organochlorine Pesticides - Continued									
alpha-BHC	319-84-6	0.002	µg/L	<0.002	----	----	----	----	----
beta-BHC	319-85-7	0.002	µg/L	<0.002	----	----	----	----	----
delta-BHC	319-86-8	0.002	µg/L	<0.002	----	----	----	----	----
4,4'-DDD	72-54-8	0.002	µg/L	<0.002	----	----	----	----	----
4,4'-DDE	72-55-9	0.002	µg/L	<0.002	----	----	----	----	----
4,4'-DDT	50-29-3	0.002	µg/L	<0.002	----	----	----	----	----
DDT (total)	----	0.002	µg/L	<0.002	----	----	----	----	----
Dieldrin	60-57-1	0.002	µg/L	<0.002	----	----	----	----	----
alpha-Endosulfan	959-98-8	0.002	µg/L	<0.002	----	----	----	----	----
beta-Endosulfan	33213-65-9	0.002	µg/L	<0.002	----	----	----	----	----
Endosulfan sulfate	1031-07-8	0.002	µg/L	<0.002	----	----	----	----	----
^ Endosulfan (sum)	115-29-7	0.002	µg/L	<0.002	----	----	----	----	----
Endrin	72-20-8	0.002	µg/L	<0.002	----	----	----	----	----
Endrin aldehyde	7421-93-4	0.002	µg/L	<0.002	----	----	----	----	----
Endrin ketone	53494-70-5	0.002	µg/L	<0.002	----	----	----	----	----
Heptachlor	76-44-8	0.001	µg/L	<0.001	----	----	----	----	----
Heptachlor epoxide	1024-57-3	0.002	µg/L	<0.002	----	----	----	----	----
Hexachlorobenzene (HCB)	118-74-1	0.002	µg/L	<0.002	----	----	----	----	----
gamma-BHC	58-89-9	0.002	µg/L	<0.002	----	----	----	----	----
Methoxychlor	72-43-5	0.002	µg/L	<0.002	----	----	----	----	----
cis-Chlordane	5103-71-9	0.002	µg/L	<0.002	----	----	----	----	----
trans-Chlordane	5103-74-2	0.002	µg/L	<0.002	----	----	----	----	----
Total Chlordane (sum)	----	0.002	µg/L	<0.002	----	----	----	----	----
Oxychlordane	27304-13-8	0.002	µg/L	<0.002	----	----	----	----	----
EP131B: Polychlorinated Biphenyls (as Aroclors)									
Total Polychlorinated biphenyls	----	0.05	µg/L	<0.05	----	----	----	----	----
Aroclor 1016	12974-11-2	0.05	µg/L	<0.05	----	----	----	----	----
Aroclor 1221	11104-28-2	0.05	µg/L	<0.05	----	----	----	----	----
Aroclor 1232	11141-16-5	0.05	µg/L	<0.05	----	----	----	----	----
Aroclor 1242	53469-21-9	0.05	µg/L	<0.05	----	----	----	----	----
Aroclor 1248	12672-29-6	0.05	µg/L	<0.05	----	----	----	----	----
Aroclor 1254	11097-69-1	0.05	µg/L	<0.05	----	----	----	----	----
Aroclor 1260	11096-82-5	0.05	µg/L	<0.05	----	----	----	----	----
Ultra-Trace Nutrients									
Total Nitrogen as N	----	0.05	mg/L	<0.05	----	----	----	----	----
Total Phosphorus as P	----	0.005	mg/L	<0.005	----	----	----	----	----
EP074S: VOC Surrogates									
1,2-Dichloroethane-D4	17060-07-0	0.1	%	98.0	----	----	----	----	----



Analytical Results

Sub-Matrix: **WATER**

Client sample ID

B

Client sampling date / time

16-OCT-2009 15:35

Compound	CAS Number	LOR	Unit	EB0916488-011	----	----	----	----
EP074S: VOC Surrogates - Continued								
Toluene-D8	2037-26-5	0.1	%	91.7	----	----	----	----
4-Bromofluorobenzene	460-00-4	0.1	%	87.0	----	----	----	----
EP080S: TPH(V)/BTEX Surrogates								
1,2-Dichloroethane-D4	17060-07-0	0.1	%	97.6	----	----	----	----
Toluene-D8	2037-26-5	0.1	%	91.5	----	----	----	----
4-Bromofluorobenzene	460-00-4	0.1	%	90.2	----	----	----	----
EP130S: Organophosphorus Pesticide Surrogate								
DEF	78-48-8	0.1	%	56.8	----	----	----	----
EP131S: OC Pesticide Surrogate								
Dibromo-DDE	21655-73-2	0.1	%	70.0	----	----	----	----
EP131T: PCB Surrogate								
Decachlorobiphenyl	2051-24-3	0.1	%	71.2	----	----	----	----
EP132T: Base/Neutral Extractable Surrogates								
2-Fluorobiphenyl	321-60-8	0.1	%	72.5	----	----	----	----
Anthracene-d10	1719-06-8	0.1	%	89.4	----	----	----	----
4-Terphenyl-d14	1718-51-0	0.1	%	83.5	----	----	----	----



Surrogate Control Limits

Sub-Matrix: WATER		Recovery Limits (%)	
Compound	CAS Number	Low	High
EP074S: VOC Surrogates			
1,2-Dichloroethane-D4	17060-07-0	80	120
Toluene-D8	2037-26-5	88	110
4-Bromofluorobenzene	460-00-4	86	115
EP080S: TPH(V)/BTEX Surrogates			
1,2-Dichloroethane-D4	17060-07-0	80	120
Toluene-D8	2037-26-5	88	110
4-Bromofluorobenzene	460-00-4	86	115
EP130S: Organophosphorus Pesticide Surrogate			
DEF	78-48-8	----	----
EP131S: OC Pesticide Surrogate			
Dibromo-DDE	21655-73-2	----	----
EP131T: PCB Surrogate			
Decachlorobiphenyl	2051-24-3	----	----
EP132T: Base/Neutral Extractable Surrogates			
2-Fluorobiphenyl	321-60-8	57.6	113
Anthracene-d10	1719-06-8	60.4	125
4-Terphenyl-d14	1718-51-0	58.2	128



Environmental Division

QUALITY CONTROL REPORT

Work Order	: EB0917296	Page	: 1 of 5
Client	: ALLUVIUM CONSULTING	Laboratory	: Environmental Division Brisbane
Contact	: MS ANNE MARIE CALVI	Contact	: Tim Kilmister
Address	: PO BOX 1581 TOWNSVILLE QLD, AUSTRALIA 4810	Address	: 32 Shand Street Stafford QLD Australia 4053
E-mail	: anne-marie@natres.com.au	E-mail	: Services.Brisbane@alsenviro.com
Telephone	: +61 07 47242170	Telephone	: +61-7-3243 7222
Facsimile	: ----	Facsimile	: +61-7-3243 7218
Project	: Alluvium Dalby	QC Level	: NEPM 1999 Schedule B(3) and ALS QCS3 requirement
Site	: ----	Date Samples Received	: 02-NOV-2009
C-O-C number	: ----	Issue Date	: 06-NOV-2009
Sampler	: ----	No. of samples received	: 13
Order number	: ----	No. of samples analysed	: 13
Quote number	: BN/580/09		

This report supersedes any previous report(s) with this reference. Results apply to the sample(s) as submitted. All pages of this report have been checked and approved for release.

This Quality Control Report contains the following information:

- Laboratory Duplicate (DUP) Report; Relative Percentage Difference (RPD) and Acceptance Limits
- Method Blank (MB) and Laboratory Control Spike (LCS) Report; Recovery and Acceptance Limits
- Matrix Spike (MS) Report; Recovery and Acceptance Limits



NATA Accredited Laboratory 825

This document is issued in accordance with NATA accreditation requirements.

Accredited for compliance with ISO/IEC 17025.

Signatories

This document has been electronically signed by the authorized signatories indicated below. Electronic signing has been carried out in compliance with procedures specified in 21 CFR Part 11.

<i>Signatories</i>	<i>Position</i>	<i>Accreditation Category</i>
Hoa Nguyen	Inorganic Chemist	Inorganics

Environmental Division Brisbane

Part of the **ALS Laboratory Group**

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General Comments

The analytical procedures used by the Environmental Division have been developed from established internationally recognized procedures such as those published by the USEPA, APHA, AS and NEPM. In house developed procedures are employed in the absence of documented standards or by client request.

Where moisture determination has been performed, results are reported on a dry weight basis.

Where a reported less than (<) result is higher than the LOR, this may be due to primary sample extract/digestate dilution and/or insufficient sample for analysis.

Where the LOR of a reported result differs from standard LOR, this may be due to high moisture content, insufficient sample (reduced weight employed) or matrix interference.

Key :
Anonymous = Refers to samples which are not specifically part of this work order but formed part of the QC process lot
CAS Number = CAS registry number from database maintained by Chemical Abstracts Services. The Chemical Abstracts Service is a division of the American Chemical Society.
LOR = Limit of reporting
RPD = Relative Percentage Difference
= Indicates failed QC



Laboratory Duplicate (DUP) Report

The quality control term Laboratory Duplicate refers to a randomly selected intralaboratory split. Laboratory duplicates provide information regarding method precision and sample heterogeneity. The permitted ranges for the Relative Percent Deviation (RPD) of Laboratory Duplicates are specified in ALS Method QWI-EN/38 and are dependent on the magnitude of results in comparison to the level of reporting: Result < 10 times LOR:- No Limit; Result between 10 and 20 times LOR:- 0% - 50%; Result > 20 times LOR:- 0% - 20%.

Sub-Matrix: **WATER**

				Laboratory Duplicate (DUP) Report					
Laboratory sample ID	Client sample ID	Method: Compound	CAS Number	LOR	Unit	Original Result	Duplicate Result	RPD (%)	Recovery Limits (%)
EP035G: Total Phenol by Discrete Analyser (QC Lot: 1151308)									
EB0917173-001	Anonymous	EP035G: Phenols (Total)	----	0.05	mg/L	0.20	0.08	88.7	No Limit
EB0917296-007	15	EP035G: Phenols (Total)	----	0.05	mg/L	0.14	0.19	32.5	No Limit



Method Blank (MB) and Laboratory Control Spike (LCS) Report

The quality control term Method / Laboratory Blank refers to an analyte free matrix to which all reagents are added in the same volumes or proportions as used in standard sample preparation. The purpose of this QC parameter is to monitor potential laboratory contamination. The quality control term Laboratory Control Sample (LCS) refers to a certified reference material, or a known interference free matrix spiked with target analytes. The purpose of this QC parameter is to monitor method precision and accuracy independent of sample matrix. Dynamic Recovery Limits are based on statistical evaluation of processed LCS.

Sub-Matrix: **WATER**

				Method Blank (MB) Report	Laboratory Control Spike (LCS) Report			
				Result	Spike Concentration	Spike Recovery (%)	Recovery Limits (%)	
Method: Compound	CAS Number	LOR	Unit			LCS	Low	High
EP035G: Total Phenol by Discrete Analyser (QCLot: 1151308)								
EP035G: Phenols (Total)	----	0.05	mg/L	<0.05	0.50 mg/L	90.2	65.6	118



Matrix Spike (MS) Report

The quality control term Matrix Spike (MS) refers to an intralaboratory split sample spiked with a representative set of target analytes. The purpose of this QC parameter is to monitor potential matrix effects on analyte recoveries. Static Recovery Limits as per laboratory Data Quality Objectives (DQOs). Ideal recovery ranges stated may be waived in the event of sample matrix interference.

Sub-Matrix: **WATER**

				<i>Matrix Spike (MS) Report</i>			
		<i>Spike</i>	<i>Spike Recovery (%)</i>		<i>Recovery Limits (%)</i>		
<i>Laboratory sample ID</i>	<i>Client sample ID</i>	<i>Method: Compound</i>	<i>CAS Number</i>	<i>Concentration</i>	<i>MS</i>	<i>Low</i>	<i>High</i>
EP035G: Total Phenol by Discrete Analyser (QCLot: 1151308)							
EB0917173-001	Anonymous	EP035G: Phenols (Total)	----	0.42 mg/L	70.0	70	130



Environmental Division

INTERPRETIVE QUALITY CONTROL REPORT

Work Order	: EB0917296	Page	: 1 of 5
Client	: ALLUVIUM CONSULTING	Laboratory	: Environmental Division Brisbane
Contact	: MS ANNE MARIE CALVI	Contact	: Tim Kilmister
Address	: PO BOX 1581 TOWNSVILLE QLD, AUSTRALIA 4810	Address	: 32 Shand Street Stafford QLD Australia 4053
E-mail	: anne-marie@natres.com.au	E-mail	: Services.Brisbane@alsenviro.com
Telephone	: +61 07 47242170	Telephone	: +61-7-3243 7222
Facsimile	: ----	Facsimile	: +61-7-3243 7218
Project	: Alluvium Dalby	QC Level	: NEPM 1999 Schedule B(3) and ALS QCS3 requirement
Site	: ----		
C-O-C number	: ----	Date Samples Received	: 02-NOV-2009
Sampler	: ----	Issue Date	: 06-NOV-2009
Order number	: ----		
Quote number	: BN/580/09	No. of samples received	: 13
		No. of samples analysed	: 13

This report supersedes any previous report(s) with this reference. Results apply to the sample(s) as submitted. All pages of this report have been checked and approved for release.

This Interpretive Quality Control Report contains the following information:

- Analysis Holding Time Compliance
- Quality Control Parameter Frequency Compliance
- Brief Method Summaries
- Summary of Outliers

Environmental Division Brisbane

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Analysis Holding Time Compliance

The following report summarises extraction / preparation and analysis times and compares with recommended holding times. Dates reported represent first date of extraction or analysis and precludes subsequent dilutions and reruns. Information is also provided re the sample container (preservative) from which the analysis aliquot was taken. Elapsed period to analysis represents number of days from sampling where no extraction / digestion is involved or period from extraction / digestion where this is present. For composite samples, sampling date is assumed to be that of the oldest sample contributing to the composite. Sample date for laboratory produced leachates is assumed as the completion date of the leaching process. Outliers for holding time are based on USEPA SW 846, APHA, AS and NEPM (1999). A listing of breaches is provided in the Summary of Outliers.

Holding times for leachate methods (excluding elutriates) vary according to the analytes being determined on the resulting solution. For non-volatile analytes, the holding time compliance assessment compares the leach date with the shortest analyte holding time for the equivalent soil method. These soil holding times are: Organics (14 days); Mercury (28 days) & other metals (180 days). A recorded breach therefore does not guarantee a breach for all non-volatile parameters.

Matrix: **WATER** Evaluation: * = Holding time breach ; ✓ = Within holding time.

Method Container / Client Sample ID(s)	Sample Date	Extraction / Preparation			Analysis		
		Date extracted	Due for extraction	Evaluation	Date analysed	Due for analysis	Evaluation
EP035G: Total Phenol by Discrete Analyser							
Clear Plastic Bottle - Sulphuric Acid 8	14-OCT-2009	03-NOV-2009	11-NOV-2009	✓	03-NOV-2009	11-NOV-2009	✓
Clear Plastic Bottle - Sulphuric Acid 6, 4, 1, A5	15-OCT-2009	03-NOV-2009	12-NOV-2009	✓	03-NOV-2009	12-NOV-2009	✓
Clear Plastic Bottle - Sulphuric Acid A4, 16, 14, QA, 15, 17, A7, B	16-OCT-2009	03-NOV-2009	13-NOV-2009	✓	03-NOV-2009	13-NOV-2009	✓



Quality Control Parameter Frequency Compliance

The following report summarises the frequency of laboratory QC samples analysed within the analytical lot(s) in which the submitted sample(s) was(where) processed. Actual rate should be greater than or equal to the expected rate. A listing of breaches is provided in the Summary of Outliers.

Matrix: **WATER** Evaluation: ✖ = Quality Control frequency not within specification ; ✔ = Quality Control frequency within specification.

Quality Control Sample Type	Method	Count		Rate (%)			Quality Control Specification
		QC	Regular	Actual	Expected	Evaluation	
Analytical Methods							
Laboratory Duplicates (DUP)							
Total Phenol by Discrete Analyser	EP035G	2	19	10.5	10.0	✔	NEPM 1999 Schedule B(3) and ALS QCS3 requirement
Laboratory Control Samples (LCS)							
Total Phenol by Discrete Analyser	EP035G	1	19	5.3	5.0	✔	NEPM 1999 Schedule B(3) and ALS QCS3 requirement
Method Blanks (MB)							
Total Phenol by Discrete Analyser	EP035G	1	19	5.3	5.0	✔	NEPM 1999 Schedule B(3) and ALS QCS3 requirement
Matrix Spikes (MS)							
Total Phenol by Discrete Analyser	EP035G	1	19	5.3	5.0	✔	ALS QCS3 requirement



Brief Method Summaries

The analytical procedures used by the Environmental Division have been developed from established internationally recognized procedures such as those published by the US EPA, APHA, AS and NEPM. In house developed procedures are employed in the absence of documented standards or by client request. The following report provides brief descriptions of the analytical procedures employed for results reported in the Certificate of Analysis. Sources from which ALS methods have been developed are provided within the Method Descriptions.

<i>Analytical Methods</i>	<i>Method</i>	<i>Matrix</i>	<i>Method Descriptions</i>
Total Phenol by Discrete Analyser	EP035G	WATER	APHA 21st ed., 5530 B&D Steam distillable Phenols are reacted with 4-aminoantipyrine. The resultant colour intensity is measured by Seal. This method is compliant with NEPM (1999) Schedule B(3) (Appdx. 2)

<i>Preparation Methods</i>	<i>Method</i>	<i>Matrix</i>	<i>Method Descriptions</i>
Phenols After Microdistillation	EP035D	WATER	APHA 21st ed., 5530 A, B&D pH adjusted Steam distillable Phenolic compounds. The resultant colour intensity is measured by Discrete Analyser.



Summary of Outliers

Outliers : Quality Control Samples

The following report highlights outliers flagged in the Quality Control (QC) Report. Surrogate recovery limits are static and based on USEPA SW846 or ALS-QWI/EN/38 (in the absence of specific USEPA limits). This report displays QC Outliers (breaches) only.

Duplicates, Method Blanks, Laboratory Control Samples and Matrix Spikes

- For all matrices, no Method Blank value outliers occur.
- For all matrices, no Duplicate outliers occur.
- For all matrices, no Laboratory Control outliers occur.
- For all matrices, no Matrix Spike outliers occur.

Regular Sample Surrogates

- For all regular sample matrices, no surrogate recovery outliers occur.

Outliers : Analysis Holding Time Compliance

This report displays Holding Time breaches only. Only the respective Extraction / Preparation and/or Analysis component is/are displayed.

- No Analysis Holding Time Outliers exist.

Outliers : Frequency of Quality Control Samples

The following report highlights breaches in the Frequency of Quality Control Samples.

- No Quality Control Sample Frequency Outliers exist.



Environmental Division

CERTIFICATE OF ANALYSIS

Work Order	: EB0917296	Page	: 1 of 5
Client	: ALLUVIUM CONSULTING	Laboratory	: Environmental Division Brisbane
Contact	: MS ANNE MARIE CALVI	Contact	: Tim Kilmister
Address	: PO BOX 1581 TOWNSVILLE QLD, AUSTRALIA 4810	Address	: 32 Shand Street Stafford QLD Australia 4053
E-mail	: anne-marie@natres.com.au	E-mail	: Services.Brisbane@alsenviro.com
Telephone	: +61 07 47242170	Telephone	: +61-7-3243 7222
Facsimile	: ----	Facsimile	: +61-7-3243 7218
Project	: Alluvium Dalby	QC Level	: NEPM 1999 Schedule B(3) and ALS QCS3 requirement
Order number	: ----	Date Samples Received	: 02-NOV-2009
C-O-C number	: ----	Issue Date	: 06-NOV-2009
Sampler	: ----	No. of samples received	: 13
Site	: ----	No. of samples analysed	: 13
Quote number	: BN/580/09		

This report supersedes any previous report(s) with this reference. Results apply to the sample(s) as submitted. All pages of this report have been checked and approved for release.

This Certificate of Analysis contains the following information:

- General Comments
- Analytical Results



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Accredited for compliance with ISO/IEC 17025.

Signatories

This document has been electronically signed by the authorized signatories indicated below. Electronic signing has been carried out in compliance with procedures specified in 21 CFR Part 11.

Signatories	Position	Accreditation Category
Hoa Nguyen	Inorganic Chemist	Inorganics

Environmental Division Brisbane

Part of the **ALS Laboratory Group**

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General Comments

The analytical procedures used by the Environmental Division have been developed from established internationally recognized procedures such as those published by the USEPA, APHA, AS and NEPM. In house developed procedures are employed in the absence of documented standards or by client request.

Where moisture determination has been performed, results are reported on a dry weight basis.

Where a reported less than (<) result is higher than the LOR, this may be due to primary sample extract/digestate dilution and/or insufficient sample for analysis.

Where the LOR of a reported result differs from standard LOR, this may be due to high moisture content, insufficient sample (reduced weight employed) or matrix interference.

When date(s) and/or time(s) are shown bracketed, these have been assumed by the laboratory for processing purposes. If the sampling time is displayed as 0:00 the information was not provided by client.

Key : CAS Number = CAS registry number from database maintained by Chemical Abstracts Services. The Chemical Abstracts Service is a division of the American Chemical Society.

LOR = Limit of reporting

^ = This result is computed from individual analyte detections at or above the level of reporting

- **EP075: 'Sum of PAH' is the sum of the USEPA 16 priority PAHs**

Page : 3 of 5
 Work Order : EB0917296
 Client : ALLUVIUM CONSULTING
 Project : Alluvium Dalby



Analytical Results

Sub-Matrix: **WATER**

				Client sample ID	8	6	1	4	A5
				Client sampling date / time	14-OCT-2009 15:00	15-OCT-2009 15:00	15-OCT-2009 15:00	15-OCT-2009 15:00	15-OCT-2009 15:00
Compound	CAS Number	LOR	Unit		EB0917296-001	EB0917296-002	EB0917296-003	EB0917296-004	EB0917296-005
EP035G: Total Phenol by Discrete Analyser									
Phenols (Total)	----	0.05	mg/L		0.10	0.12	<0.05	0.20	<0.05

Page : 4 of 5
 Work Order : EB0917296
 Client : ALLUVIUM CONSULTING
 Project : Alluvium Dalby



Analytical Results

Sub-Matrix: **WATER**

				Client sample ID	A4	15	16	17	14
				Client sampling date / time	16-OCT-2009 15:00	16-OCT-2009 15:00	16-OCT-2009 15:00	16-OCT-2009 15:00	16-OCT-2009 15:00
Compound	CAS Number	LOR	Unit		EB0917296-006	EB0917296-007	EB0917296-008	EB0917296-009	EB0917296-010
EP035G: Total Phenol by Discrete Analyser									
Phenols (Total)	----	0.05	mg/L		0.38	0.14	<0.05	0.23	0.18



Analytical Results

Sub-Matrix: **WATER**

Client sample ID

Client sampling date / time

				A7	QA	B	----	----
				16-OCT-2009 15:00	16-OCT-2009 15:00	16-OCT-2009 15:00	----	----
Compound	CAS Number	LOR	Unit	EB0917296-011	EB0917296-012	EB0917296-013	----	----
EP035G: Total Phenol by Discrete Analyser								
Phenols (Total)	----	0.05	mg/L	0.16	0.33	<0.05	----	----

SAMPLE RECEIPT NOTIFICATION (SRN)

Comprehensive Report

Work Order	: EB0918276		
Amendment	: 5		
Client	: ALLUVIUM CONSULTING	Laboratory	: Environmental Division Brisbane
Contact	: MS MARTINE ADRIAANSEN	Contact	: Greg Vogel
Address	: PO BOX 1581 TOWNSVILLE QLD, AUSTRALIA 4810	Address	: 32 Shand Street Stafford QLD Australia 4053
E-mail	: martine@natres.com.au	E-mail	: Services.Brisbane@alsenviro.com
Telephone	: +61 07 47242170	Telephone	: +61 7 3243 7222
Facsimile	: ----	Facsimile	: +61 7 3243 7218
Project	: Surat Gas Project EIS	Page	: 1 of 3
Order number	: ----		
C-O-C number	: ----	Quote number	: EB2009ALLUVI0051 (BN/637/09)
Site	: Surat Gas Project		
Sampler	: A.C & M,A	QC Level	: NEPM 1999 Schedule B(3) and ALS QCS3 requirement

Dates

Date Samples Received	: 19-NOV-2009	Issue Date	: 05-DEC-2011 15:24
Client Requested Due Date	: 30-NOV-2009	Scheduled Reporting Date	: 26-FEB-2010

Delivery Details

Mode of Delivery	: Carrier	Temperature	: 15.4,98,20.2°C - Ice present
No. of coolers/boxes	: 3 LARGE	No. of samples received	: 6
Security Seal	: Intact.	No. of samples analysed	: 6

General Comments

- This report contains the following information:
 - Sample Container(s)/Preservation Non-Compliances
 - Summary of Sample(s) and Requested Analysis
 - Proactive Holding Time Report
 - Requested Deliverables
- **Samples received in appropriately pretreated and preserved containers.**
- **Please refer to the Proactive Holding Time Report table below which summarises breaches of recommended holding times that have occurred prior to samples/instructions being received at the laboratory. The absence of this summary table indicates that all samples have been received within the recommended holding times for the analysis requested.**
- Please direct any turn around / technical queries to the laboratory contact designated above.
- Please direct any queries related to sample condition / numbering / breakages to Maggie Kahi.
- Analytical work for this work order will be conducted at ALS Brisbane.
- Sample Disposal - Aqueous (14 days), Solid (90 days) from date of completion of work order.



Sample Container(s)/Preservation Non-Compliances

All comparisons are made against pretreatment/preservation AS, APHA, USEPA standards.

- No sample container / preservation non-compliance exist.

Summary of Sample(s) and Requested Analysis

Some items described below may be part of a laboratory process necessary for the execution of client requested tasks. Packages may contain additional analyses, such as the determination of moisture content and preparation tasks, that are included in the package.

If no sampling time is provided, the sampling time will default to 15:00 on the date of sampling. If no sampling date is provided, the sampling date will be assumed by the laboratory for processing purposes and will be shown bracketed without a time component.

Matrix: **WATER**

Laboratory sample ID Client sampling date / time Client sample ID

Laboratory sample ID	Client sampling date / time	Client sample ID	WATER - EA006 Sodium Adsorption Ratio	WATER - EA025H Suspended Solids (High Level)	WATER - EA045 Turbidity	WATER - EA065 Total Hardness as CaCO3	WATER - ED040F Dissolved Major Anions	WATER - ED045G Chloride by Discrete Analyser	WATER - EG035F Dissolved Mercury by FIMS	WATER - EG035T Total Mercury by FIMS
EB0918276-001	17-NOV-2009 06:45	20	✓	✓		✓	✓	✓	✓	✓
EB0918276-002	17-NOV-2009 06:45	QA	✓	✓		✓	✓	✓	✓	✓
EB0918276-003	17-NOV-2009 07:30	B	✓	✓		✓	✓	✓	✓	✓
EB0918276-004	17-NOV-2009 10:50	15	✓	✓	✓	✓	✓	✓	✓	✓
EB0918276-005	17-NOV-2009 12:30	27	✓	✓		✓	✓	✓	✓	✓
EB0918276-006	17-NOV-2009 13:15	33	✓	✓		✓	✓	✓	✓	✓

Matrix: **WATER**

Laboratory sample ID Client sampling date / time Client sample ID

Laboratory sample ID	Client sampling date / time	Client sample ID	WATER - EG094A-F Dissolved Metals in Fresh Water Suite A by ORC-ICPMS	WATER - EG094A-T Total Metals in Fresh water Suite A by ORC-ICPMS	WATER - EG094B-F Dissolved Metals in fresh water Suite B by ORC-ICPMS	WATER - EG094B-T Total Metals in Fresh Water Suite B by ORC-ICPMS	WATER - EK040-P Fluoride(PC)	WATER - EK255A-CM Ammonia as N (Ultra-trace by Flow Injection Analysis) for Catchment	WATER - EP074A VOC - MAH's	WATER - EP075A SVOC Phenols only SVOC Phenols only
EB0918276-001	17-NOV-2009 06:45	20	✓	✓	✓	✓	✓	✓	✓	✓
EB0918276-002	17-NOV-2009 06:45	QA	✓	✓	✓	✓	✓	✓	✓	✓
EB0918276-003	17-NOV-2009 07:30	B	✓	✓	✓	✓	✓	✓	✓	✓
EB0918276-004	17-NOV-2009 10:50	15	✓	✓	✓	✓	✓			
EB0918276-005	17-NOV-2009 12:30	27	✓	✓	✓	✓	✓	✓		✓
EB0918276-006	17-NOV-2009 13:15	33	✓	✓	✓	✓	✓			

QUALITY CONTROL REPORT

Work Order	: EB0918276	Page	: 1 of 13
Amendment	: 5		
Client	: ALLUVIUM CONSULTING	Laboratory	: Environmental Division Brisbane
Contact	: MS MARTINE ADRIAANSEN	Contact	: Greg Vogel
Address	: PO BOX 1581 TOWNSVILLE QLD, AUSTRALIA 4810	Address	: 32 Shand Street Stafford QLD Australia 4053
E-mail	: martine@natres.com.au	E-mail	: Services.Brisbane@alsenviro.com
Telephone	: +61 07 47242170	Telephone	: +61 7 3243 7222
Facsimile	: ----	Facsimile	: +61 7 3243 7218
Project	: Surat Gas Project EIS	QC Level	: NEPM 1999 Schedule B(3) and ALS QCS3 requirement
Site	: Surat Gas Project		
C-O-C number	: ----	Date Samples Received	: 19-NOV-2009
Sampler	: A.C & M,A	Issue Date	: 05-DEC-2011
Order number	: ----		
Quote number	: BN/637/09	No. of samples received	: 6
		No. of samples analysed	: 6

This report supersedes any previous report(s) with this reference. Results apply to the sample(s) as submitted. All pages of this report have been checked and approved for release.

This Quality Control Report contains the following information:

- Laboratory Duplicate (DUP) Report; Relative Percentage Difference (RPD) and Acceptance Limits
- Method Blank (MB) and Laboratory Control Spike (LCS) Report; Recovery and Acceptance Limits
- Matrix Spike (MS) Report; Recovery and Acceptance Limits



NATA Accredited Laboratory 825

This document is issued in accordance with NATA accreditation requirements.

Accredited for compliance with ISO/IEC 17025.

Signatories

This document has been electronically signed by the authorized signatories indicated below. Electronic signing has been carried out in compliance with procedures specified in 21 CFR Part 11.

<i>Signatories</i>	<i>Position</i>	<i>Accreditation Category</i>
Celine Conceicao	Senior Spectroscopist	Sydney Inorganics
Edwandy Fadjar	Organic Coordinator	Sydney Organics
Hoa Nguyen	Inorganic Chemist	Sydney Inorganics
Kim McCabe	Senior Inorganic Chemist	Brisbane Inorganics
Matt Frost	Senior Organic Chemist	Brisbane Organics
Sarah Ashworth	Assistant Laboratory Manager	Brisbane Organics
Stephen Hislop	Senior Inorganic Chemist	Brisbane Inorganics



General Comments

The analytical procedures used by the Environmental Division have been developed from established internationally recognized procedures such as those published by the USEPA, APHA, AS and NEPM. In house developed procedures are employed in the absence of documented standards or by client request.

Where moisture determination has been performed, results are reported on a dry weight basis.

Where a reported less than (<) result is higher than the LOR, this may be due to primary sample extract/digestate dilution and/or insufficient sample for analysis.

Where the LOR of a reported result differs from standard LOR, this may be due to high moisture content, insufficient sample (reduced weight employed) or matrix interference.

Key :
Anonymous = Refers to samples which are not specifically part of this work order but formed part of the QC process lot
CAS Number = CAS registry number from database maintained by Chemical Abstracts Services. The Chemical Abstracts Service is a division of the American Chemical Society.
LOR = Limit of reporting
RPD = Relative Percentage Difference
= Indicates failed QC



Laboratory Duplicate (DUP) Report

The quality control term Laboratory Duplicate refers to a randomly selected intralaboratory split. Laboratory duplicates provide information regarding method precision and sample heterogeneity. The permitted ranges for the Relative Percent Deviation (RPD) of Laboratory Duplicates are specified in ALS Method QWI-EN/38 and are dependent on the magnitude of results in comparison to the level of reporting: Result < 10 times LOR:- No Limit; Result between 10 and 20 times LOR:- 0% - 50%; Result > 20 times LOR:- 0% - 20%.

Sub-Matrix: **WATER**

				Laboratory Duplicate (DUP) Report					
Laboratory sample ID	Client sample ID	Method: Compound	CAS Number	LOR	Unit	Original Result	Duplicate Result	RPD (%)	Recovery Limits (%)
EB0918008-001	Anonymous	EA025H: Suspended Solids (SS)	----	5	mg/L	14	12	15.4	No Limit
EB0918276-005	27	EA025H: Suspended Solids (SS)	----	5	mg/L	172	173	0.8	0% - 20%
EB0918276-004	15	EA045: Turbidity	----	0.1	NTU	950	950	0.0	0% - 20%
EB0918265-001	Anonymous	ED040F: Sulfate as SO4 2-	14808-79-8	1	mg/L	1660	1630	1.5	0% - 20%
EB0918307-001	Anonymous	ED040F: Sulfate as SO4 2-	14808-79-8	1	mg/L	1	1	0.0	No Limit
EB0918265-001	Anonymous	ED045G: Chloride	16887-00-6	1	mg/L	740	737	0.4	0% - 20%
EB0918307-001	Anonymous	ED045G: Chloride	16887-00-6	1	mg/L	202	198	2.0	0% - 20%
EB0918265-001	Anonymous	ED093F: Calcium	7440-70-2	1	mg/L	16	16	0.0	0% - 50%
		ED093F: Magnesium	7439-95-4	1	mg/L	36	36	0.0	0% - 20%
		ED093F: Sodium	7440-23-5	1	mg/L	1590	1570	0.9	0% - 20%
EB0918307-001	Anonymous	ED093F: Calcium	7440-70-2	1	mg/L	7	7	0.0	No Limit
		ED093F: Magnesium	7439-95-4	1	mg/L	2	2	0.0	No Limit
		ED093F: Sodium	7440-23-5	1	mg/L	1410	1380	2.4	0% - 20%
EB0918276-001	20	EG035F: Mercury	7439-97-6	0.0001	mg/L	<0.0001	<0.0001	0.0	No Limit
ES0917680-007	Anonymous	EG035F: Mercury	7439-97-6	0.0001	mg/L	<0.0001	<0.0001	0.0	No Limit
ES0917683-001	Anonymous	EG035T: Mercury	7439-97-6	0.0001	mg/L	<0.0001	<0.0001	0.0	No Limit
ES0917556-003	Anonymous	EG035T: Mercury	7439-97-6	0.0001	mg/L	<0.0001	<0.0001	0.0	No Limit
EB0918276-003	B	EG094A-F: Cadmium	7440-43-9	0.05	µg/L	<0.05	<0.05	0.0	No Limit
		EG094A-F: Cobalt	7440-48-4	0.1	µg/L	<0.1	<0.1	0.0	No Limit
		EG094A-F: Lead	7439-92-1	0.1	µg/L	<0.1	<0.1	0.0	No Limit
		EG094A-F: Arsenic	7440-38-2	0.2	µg/L	<0.2	<0.2	0.0	No Limit
		EG094A-F: Vanadium	7440-62-2	0.2	µg/L	<0.2	<0.2	0.0	No Limit
		EG094A-F: Copper	7440-50-8	0.5	µg/L	<0.5	<0.5	0.0	No Limit
		EG094A-F: Nickel	7440-02-0	0.5	µg/L	<0.5	<0.5	0.0	No Limit
		EG094A-F: Zinc	7440-66-6	1	µg/L	2	2	0.0	No Limit
EB0918288-004	Anonymous	EG094A-F: Boron	7440-42-8	5	µg/L	<5	<5	0.0	No Limit
		EG094A-F: Cadmium	7440-43-9	0.05	µg/L	<0.05	<0.05	0.0	No Limit
		EG094A-F: Cobalt	7440-48-4	0.1	µg/L	1.4	1.4	0.0	0% - 50%



Sub-Matrix: **WATER**

				Laboratory Duplicate (DUP) Report						
Laboratory sample ID	Client sample ID	Method: Compound	CAS Number	LOR	Unit	Original Result	Duplicate Result	RPD (%)	Recovery Limits (%)	
EB0918288-004	Anonymous	EG094A-F: Lead	7439-92-1	0.1	µg/L	0.2	0.2	0.0	No Limit	
		EG094A-F: Arsenic	7440-38-2	0.2	µg/L	1.1	1.1	0.0	No Limit	
		EG094A-F: Vanadium	7440-62-2	0.2	µg/L	2.6	2.6	0.0	0% - 50%	
		EG094A-F: Copper	7440-50-8	0.5	µg/L	0.9	1.0	0.0	No Limit	
		EG094A-F: Nickel	7440-02-0	0.5	µg/L	1.8	1.8	0.0	No Limit	
		EG094A-F: Zinc	7440-66-6	1	µg/L	16	18	10.0	0% - 50%	
		EG094A-F: Boron	7440-42-8	5	µg/L	30	28	4.2	No Limit	
EB0918276-003	B	EG094B-F: Selenium	7782-49-2	0.2	µg/L	<0.2	<0.2	0.0	No Limit	
EB0918276-003	B	EG094A-T: Cadmium	7440-43-9	0.05	µg/L	<0.05	<0.05	0.0	No Limit	
		EG094A-T: Cobalt	7440-48-4	0.1	µg/L	<0.1	<0.1	0.0	No Limit	
		EG094A-T: Lead	7439-92-1	0.1	µg/L	<0.1	<0.1	0.0	No Limit	
		EG094A-T: Arsenic	7440-38-2	0.2	µg/L	<0.2	<0.2	0.0	No Limit	
		EG094A-T: Vanadium	7440-62-2	0.2	µg/L	<0.2	<0.2	0.0	No Limit	
		EG094A-T: Copper	7440-50-8	0.5	µg/L	<0.5	<0.5	0.0	No Limit	
		EG094A-T: Nickel	7440-02-0	0.5	µg/L	<0.5	<0.5	0.0	No Limit	
		EG094A-T: Zinc	7440-66-6	1	µg/L	<1	<1	0.0	No Limit	
EG094A-T: Boron	7440-42-8	5	µg/L	<5	<5	0.0	No Limit			
EB0918276-003	B	EG094B-T: Selenium	7782-49-2	0.2	µg/L	<0.2	<0.2	0.0	No Limit	
EB0918276-002	QA	EK040P: Fluoride	16984-48-8	0.1	mg/L	<0.1	<0.1	0.0	No Limit	
EB0918359-001	Anonymous	EK040P: Fluoride	16984-48-8	0.1	mg/L	0.6	0.6	0.0	No Limit	
EB0918261-001	Anonymous	EK057G: Nitrite as N	----	0.01	mg/L	<0.01	<0.01	0.0	No Limit	
EB0918265-001	Anonymous	EK057G: Nitrite as N	----	0.01	mg/L	<0.01	<0.01	0.0	No Limit	
EB0918269-001	Anonymous	EK059G: Nitrite + Nitrate as N	----	0.01	mg/L	0.11	0.10	0.0	0% - 50%	
EB0918276-005	27	EK059G: Nitrite + Nitrate as N	----	0.01	mg/L	0.08	0.06	0.0	No Limit	
EB0918276-001	20	EP074: Benzene	71-43-2	1	µg/L	<1	<1	0.0	No Limit	
		EP074: Toluene	108-88-3	2	µg/L	<2	<2	0.0	No Limit	
		EP074: Ethylbenzene	100-41-4	2	µg/L	<2	<2	0.0	No Limit	
		EP074: meta- & para-Xylene	108-38-3	2	µg/L	<2	<2	0.0	No Limit	
			106-42-3							
		EP074: ortho-Xylene	95-47-6	2	µg/L	<2	<2	0.0	No Limit	
		EP074: Styrene	100-42-5	5	µg/L	<5	<5	0.0	No Limit	
EP074: Isopropylbenzene	98-82-8	5	µg/L	<5	<5	0.0	No Limit			



Sub-Matrix: **WATER**

				Laboratory Duplicate (DUP) Report						
Laboratory sample ID	Client sample ID	Method: Compound	CAS Number	LOR	Unit	Original Result	Duplicate Result	RPD (%)	Recovery Limits (%)	
EB0918276-001	20	EP074: n-Propylbenzene	103-65-1	5	µg/L	<5	<5	0.0	No Limit	
		EP074: 1,3,5-Trimethylbenzene	108-67-8	5	µg/L	<5	<5	0.0	No Limit	
		EP074: sec-Butylbenzene	135-98-8	5	µg/L	<5	<5	0.0	No Limit	
		EP074: 1,2,4-Trimethylbenzene	95-63-6	5	µg/L	<5	<5	0.0	No Limit	
		EP074: tert-Butylbenzene	98-06-6	5	µg/L	<5	<5	0.0	No Limit	
		EP074: p-Isopropyltoluene	99-87-6	5	µg/L	<5	<5	0.0	No Limit	
		EP074: n-Butylbenzene	104-51-8	5	µg/L	<5	<5	0.0	No Limit	
EB0918323-001	Anonymous	EP074: Benzene	71-43-2	1	µg/L	<1	<1	0.0	No Limit	
		EP074: Toluene	108-88-3	2	µg/L	<2	<2	0.0	No Limit	
		EP074: Ethylbenzene	100-41-4	2	µg/L	<2	<2	0.0	No Limit	
		EP074: meta- & para-Xylene	108-38-3	2	µg/L	<2	<2	0.0	No Limit	
			106-42-3							
		EP074: ortho-Xylene	95-47-6	2	µg/L	<2	<2	0.0	No Limit	
		EP074: Styrene	100-42-5	5	µg/L	<5	<5	0.0	No Limit	
		EP074: Isopropylbenzene	98-82-8	5	µg/L	<5	<5	0.0	No Limit	
		EP074: n-Propylbenzene	103-65-1	5	µg/L	<5	<5	0.0	No Limit	
		EP074: 1,3,5-Trimethylbenzene	108-67-8	5	µg/L	<5	<5	0.0	No Limit	
		EP074: sec-Butylbenzene	135-98-8	5	µg/L	<5	<5	0.0	No Limit	
		EP074: 1,2,4-Trimethylbenzene	95-63-6	5	µg/L	<5	<5	0.0	No Limit	
		EP074: tert-Butylbenzene	98-06-6	5	µg/L	<5	<5	0.0	No Limit	
		EP074: p-Isopropyltoluene	99-87-6	5	µg/L	<5	<5	0.0	No Limit	
EP074: n-Butylbenzene	104-51-8	5	µg/L	<5	<5	0.0	No Limit			
EB0918276-001	20	EP080: C6 - C9 Fraction	----	20	µg/L	<20	<20	0.0	No Limit	
EB0918323-001	Anonymous	EP080: C6 - C9 Fraction	----	20	µg/L	<20	<20	0.0	No Limit	
EB0918222-001	Anonymous	EP080: C6 - C9 Fraction	----	20	µg/L	30	30	0.0	No Limit	
EB0918288-003	Anonymous	EP080: C6 - C9 Fraction	----	20	µg/L	<20	<20	0.0	No Limit	
EB0918394-034	Anonymous	EP071: C15 - C28 Fraction	----	100	µg/L	170	160	9.4	No Limit	
		EP071: C10 - C14 Fraction	----	50	µg/L	<50	<50	0.0	No Limit	
		EP071: C29 - C36 Fraction	----	50	µg/L	80	60	15.3	No Limit	
EB0918276-001	20	EK267PA-CM: Total Phosphorus as P	----	0.005	mg/L	1.08	1.14	5.4	0% - 20%	
EM0911557-001	Anonymous	EK267PA-CM: Total Phosphorus as P	----	0.005	mg/L	0.017	0.017	0.0	No Limit	
EB0918276-001	20	EK262PA-CM: Total Nitrogen as N	----	0.05	mg/L	0.43	0.41	5.0	No Limit	
EM0911557-001	Anonymous	EK262PA-CM: Total Nitrogen as N	----	0.05	mg/L	<0.05	<0.05	0.0	No Limit	

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 Work Order : EB0918276 Amendment 5
 Client : ALLUVIUM CONSULTING
 Project : Surat Gas Project EIS



Sub-Matrix: **WATER**

Laboratory Duplicate (DUP) Report

<i>Laboratory sample ID</i>	<i>Client sample ID</i>	<i>Method: Compound</i>	<i>CAS Number</i>	<i>LOR</i>	<i>Unit</i>	<i>Original Result</i>	<i>Duplicate Result</i>	<i>RPD (%)</i>	<i>Recovery Limits (%)</i>
EB0918276-001	20	EK255A-CM: Ammonia as N	7664-41-7	0.005	mg/L	0.120	0.126	4.5	0% - 20%
ES0917781-001	Anonymous	EK255A-CM: Ammonia as N	7664-41-7	0.005	mg/L	0.026	0.028	9.9	No Limit



Method Blank (MB) and Laboratory Control Spike (LCS) Report

The quality control term Method / Laboratory Blank refers to an analyte free matrix to which all reagents are added in the same volumes or proportions as used in standard sample preparation. The purpose of this QC parameter is to monitor potential laboratory contamination. The quality control term Laboratory Control Sample (LCS) refers to a certified reference material, or a known interference free matrix spiked with target analytes. The purpose of this QC parameter is to monitor method precision and accuracy independent of sample matrix. Dynamic Recovery Limits are based on statistical evaluation of processed LCS.

Sub-Matrix: WATER

				Method Blank (MB) Report Result	Laboratory Control Spike (LCS) Report			
					Spike Concentration	Spike Recovery (%) LCS	Recovery Limits (%)	
Method: Compound	CAS Number	LOR	Unit	Low			High	
EA025: Suspended Solids (QCLot: 1170577)								
EA025H: Suspended Solids (SS)	----	5	mg/L	<5	150 mg/L	101	86	108
EA045: Turbidity (QCLot: 1169854)								
EA045: Turbidity	----	0.1	NTU	<0.1	40.0 NTU	100	96	104
ED040F: Dissolved Major Anions (QCLot: 1169743)								
ED040F: Sulfate as SO4 2-	14808-79-8	1	mg/L	<1	----	----	----	----
ED045G: Chloride Discrete analyser (QCLot: 1169745)								
ED045G: Chloride	16887-00-6	1	mg/L	<1	1000 mg/L	89.3	90	130
ED093F: Dissolved Major Cations (QCLot: 1169744)								
ED093F: Calcium	7440-70-2	1	mg/L	<1	----	----	----	----
ED093F: Magnesium	7439-95-4	1	mg/L	<1	----	----	----	----
ED093F: Sodium	7440-23-5	1	mg/L	<1	----	----	----	----
EG035F: Dissolved Mercury by FIMS (QCLot: 1170899)								
EG035F: Mercury	7439-97-6	0.0001	mg/L	<0.0001	0.010 mg/L	90.7	86	116
EG035T: Total Recoverable Mercury by FIMS (QCLot: 1172848)								
EG035T: Mercury	7439-97-6	0.0001	mg/L	<0.0001	0.010 mg/L	101	81	119
EG094F: Dissolved Metals in Fresh Water by ORC-ICPMS (QCLot: 1172263)								
EG094A-F: Arsenic	7440-38-2	0.2	µg/L	<0.2	10 µg/L	97.6	81	121
EG094A-F: Boron	7440-42-8	5	µg/L	<5	----	----	----	----
EG094A-F: Cadmium	7440-43-9	0.05	µg/L	<0.05	10 µg/L	98.9	70	130
EG094A-F: Cobalt	7440-48-4	0.1	µg/L	<0.1	10 µg/L	103	70	130
EG094A-F: Copper	7440-50-8	0.5	µg/L	<0.5	10 µg/L	102	70	130
EG094A-F: Lead	7439-92-1	0.1	µg/L	<0.1	10 µg/L	73.6	70	130
EG094A-F: Nickel	7440-02-0	0.5	µg/L	<0.5	10 µg/L	101	70	130
EG094A-F: Vanadium	7440-62-2	0.2	µg/L	<0.2	10 µg/L	106	70	130
EG094A-F: Zinc	7440-66-6	1	µg/L	<1	10 µg/L	98.6	70	130
EG094F: Dissolved Metals in Fresh Water by ORC-ICPMS (QCLot: 1172264)								
EG094B-F: Selenium	7782-49-2	0.2	µg/L	<0.2	10 µg/L	106	74	122
EG094T: Total metals in Fresh water by ORC-ICPMS (QCLot: 1172223)								
EG094A-T: Arsenic	7440-38-2	0.2	µg/L	<0.2	10 µg/L	105	70	130
EG094A-T: Boron	7440-42-8	5	µg/L	<5	----	----	----	----
EG094A-T: Cadmium	7440-43-9	0.05	µg/L	<0.05	10 µg/L	95.2	70	130
EG094A-T: Cobalt	7440-48-4	0.1	µg/L	<0.1	10 µg/L	104	70	130
EG094A-T: Copper	7440-50-8	0.5	µg/L	<0.5	10 µg/L	103	70	130



Sub-Matrix: **WATER**

Method: Compound	CAS Number	LOR	Unit	Method Blank (MB) Report	Laboratory Control Spike (LCS) Report				
				Result	Spike Concentration	Spike Recovery (%)		Recovery Limits (%)	
						LCS	Low	High	
EG094T: Total metals in Fresh water by ORC-ICPMS (QCLot: 1172223) - continued									
EG094A-T: Lead	7439-92-1	0.1	µg/L	<0.1	10 µg/L	121	70	130	
EG094A-T: Nickel	7440-02-0	0.5	µg/L	<0.5	10 µg/L	102	70	130	
EG094A-T: Vanadium	7440-62-2	0.2	µg/L	<0.2	10 µg/L	97.2	70	130	
EG094A-T: Zinc	7440-66-6	1	µg/L	<1	10 µg/L	94.6	70	130	
EG094T: Total metals in Fresh water by ORC-ICPMS (QCLot: 1172224)									
EG094B-T: Selenium	7782-49-2	0.2	µg/L	<0.2	10 µg/L	92.2	70	130	
EK040P: Fluoride by PC Titrator (QCLot: 1172418)									
EK040P: Fluoride	16984-48-8	0.1	mg/L	<0.1	10 mg/L	87.5	75	123	
EK057G: Nitrite as N by Discrete Analyser (QCLot: 1169742)									
EK057G: Nitrite as N	----	0.01	mg/L	<0.01	0.5 mg/L	101	74	128	
EK059G: NOX as N by Discrete Analyser (QCLot: 1175206)									
EK059G: Nitrite + Nitrate as N	----	0.01	mg/L	<0.01	0.5 mg/L	111	70	130	
EP074A: Monocyclic Aromatic Hydrocarbons (QCLot: 1170522)									
EP074: Benzene	71-43-2	1	µg/L	<1	10 µg/L	102	75	122	
EP074: Toluene	108-88-3	2	µg/L	<2	10 µg/L	107	71.2	124	
EP074: Ethylbenzene	100-41-4	2	µg/L	<2	10 µg/L	104	76	120	
EP074: meta- & para-Xylene	108-38-3 106-42-3	2	µg/L	<2	20 µg/L	93.3	68	132	
EP074: Styrene	100-42-5	5	µg/L	<5	10 µg/L	102	68	127	
EP074: ortho-Xylene	95-47-6	2	µg/L	<2	10 µg/L	106	76	122	
EP074: Isopropylbenzene	98-82-8	5	µg/L	<5	10 µg/L	106	74	123	
EP074: n-Propylbenzene	103-65-1	5	µg/L	<5	10 µg/L	103	69	125	
EP074: 1,3,5-Trimethylbenzene	108-67-8	5	µg/L	<5	10 µg/L	103	74	121	
EP074: sec-Butylbenzene	135-98-8	5	µg/L	<5	10 µg/L	104	72	124	
EP074: 1,2,4-Trimethylbenzene	95-63-6	5	µg/L	<5	10 µg/L	104	73.5	124	
EP074: tert-Butylbenzene	98-06-6	5	µg/L	<5	10 µg/L	102	71.6	128	
EP074: p-Isopropyltoluene	99-87-6	5	µg/L	<5	10 µg/L	109	68.3	130	
EP074: n-Butylbenzene	104-51-8	5	µg/L	<5	10 µg/L	105	67	126	
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons (QCLot: 1171187)									
EP132-LL: Naphthalene	91-20-3	0.02	µg/L	<0.02	0.025 µg/L	# 118	68.3	116	
EP132-LL: Acenaphthylene	208-96-8	0.02	µg/L	<0.02	0.025 µg/L	# 115	72.4	112	
EP132-LL: Acenaphthene	83-32-9	0.02	µg/L	<0.02	0.025 µg/L	108	73.2	111	
EP132-LL: Fluorene	86-73-7	0.02	µg/L	<0.02	0.025 µg/L	# 117	72.9	114	
EP132-LL: Phenanthrene	85-01-8	0.02	µg/L	<0.02	0.025 µg/L	108	74.8	112	
EP132-LL: Anthracene	120-12-7	0.02	µg/L	<0.02	0.025 µg/L	92.4	73.4	113	
EP132-LL: Fluoranthene	206-44-0	0.02	µg/L	<0.02	0.025 µg/L	102	74.8	117	
EP132-LL: Pyrene	129-00-0	0.02	µg/L	<0.02	0.025 µg/L	107	74.1	117	
EP132-LL: Benz(a)anthracene	56-55-3	0.02	µg/L	<0.02	0.025 µg/L	# 114	73.6	114	



Sub-Matrix: **WATER**

Method: Compound	CAS Number	LOR	Unit	Method Blank (MB) Report	Laboratory Control Spike (LCS) Report				
				Result	Spike	Spike Recovery (%)		Recovery Limits (%)	
					Concentration	LCS	Low	High	
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons (QCLot: 1171187) - continued									
EP132-LL: Chrysene	218-01-9	0.02	µg/L	<0.02	0.025 µg/L	100	69.6	120	
EP132-LL: Benzo(b)fluoranthene	205-99-2	0.02	µg/L	<0.02	0.025 µg/L	# 120	71.4	119	
EP132-LL: Benzo(k)fluoranthene	207-08-9	0.02	µg/L	<0.02	0.025 µg/L	87.5	74.8	118	
EP132-LL: Benzo(a)pyrene	50-32-8	0.005	µg/L	<0.005	0.025 µg/L	108	75.2	117	
EP132-LL: Indeno(1.2.3.cd)pyrene	193-39-5	0.02	µg/L	<0.02	0.025 µg/L	105	67.8	119	
EP132-LL: Dibenz(a,h)anthracene	53-70-3	0.02	µg/L	<0.02	0.025 µg/L	103	71.5	117	
EP132-LL: Benzo(g,h,i)perylene	191-24-2	0.02	µg/L	<0.02	0.025 µg/L	104	66.6	121	
EP132-LL: Total PAH	----	0.005	µg/L	<0.005	----	----	----	----	
EP075A: Phenolic Compounds (QCLot: 1171126)									
EP075: Phenol	108-95-2	2	µg/L	<2	5 µg/L	30.3	18.1	52	
EP075: 2-Chlorophenol	95-57-8	2	µg/L	<2	5 µg/L	68.8	47	109	
EP075: 2-Methylphenol	95-48-7	2	µg/L	<2	5 µg/L	61.3	54	99.4	
EP075: 3- & 4-Methylphenol	1319-77-3	2	µg/L	----	10 µg/L	54.1	46	92	
		4	µg/L	<4	----	----	----	----	
EP075: 2-Nitrophenol	88-75-5	2	µg/L	<2	5 µg/L	76.7	48	108	
EP075: 2,4-Dimethylphenol	105-67-9	2	µg/L	<2	5 µg/L	63.3	54	104	
EP075: 2,4-Dichlorophenol	120-83-2	2	µg/L	<2	5 µg/L	76.7	63	122	
EP075: 2,6-Dichlorophenol	87-65-0	2	µg/L	<2	5 µg/L	76.4	60	114	
EP075: 4-Chloro-3-Methylphenol	59-50-7	2	µg/L	<2	5 µg/L	78.0	58	118	
EP075: 2,4,6-Trichlorophenol	88-06-2	2	µg/L	<2	5 µg/L	81.2	60	117	
EP075: 2,4,5-Trichlorophenol	95-95-4	2	µg/L	<2	5 µg/L	83.8	63	134	
EP075: Pentachlorophenol	87-86-5	4	µg/L	<4	5 µg/L	83.5	32	140	
EP080/071: Total Petroleum Hydrocarbons (QCLot: 1170523)									
EP080: C6 - C9 Fraction	----	20	µg/L	<20	160 µg/L	102	73	135	
EP080/071: Total Petroleum Hydrocarbons (QCLot: 1170524)									
EP080: C6 - C9 Fraction	----	20	µg/L	<20	160 µg/L	101	73	135	
EP080/071: Total Petroleum Hydrocarbons (QCLot: 1171125)									
EP071: C10 - C14 Fraction	----	50	µg/L	<50	1200 µg/L	104	49	110	
EP071: C15 - C28 Fraction	----	100	µg/L	<100	2040 µg/L	110	58	130	
EP071: C29 - C36 Fraction	----	50	µg/L	<50	----	----	----	----	
EP130A: Organophosphorus Pesticides (Ultra-trace) (QCLot: 1171189)									
EP130-CM: Bromophos-ethyl	4824-78-6	0.02	µg/L	<0.02	----	----	----	----	
		0.10	µg/L	----	1 µg/L	88.8	35.4	143	
EP130-CM: Carbophenothion	786-19-6	0.02	µg/L	<0.02	----	----	----	----	
		0.10	µg/L	----	1 µg/L	73.9	5.13	171	
EP130-CM: Chlorfenvinphos (E)	18708-86-6	0.02	µg/L	<0.02	----	----	----	----	
		0.10	µg/L	----	0.1 µg/L	83.9	41.7	138	
EP130-CM: Chlorfenvinphos (Z)	18708-87-7	0.02	µg/L	<0.02	----	----	----	----	
		0.10	µg/L	----	1 µg/L	71.8	44.6	155	



Sub-Matrix: **WATER**

Method: Compound	CAS Number	LOR	Unit	Method Blank (MB) Report	Laboratory Control Spike (LCS) Report			
				Result	Spike Concentration	Spike Recovery (%)	Recovery Limits (%)	
					LCS	Low	High	
EP130A: Organophosphorus Pesticides (Ultra-trace) (QCLot: 1171189) - continued								
EP130-CM: Chlorpyrifos	2921-88-2	0.01 0.05	µg/L µg/L	<0.010 ----	---- 1 µg/L	---- 67.6	---- 38.5	---- 145
EP130-CM: Chlorpyrifos-methyl	5598-13-0	0.02 0.10	µg/L µg/L	<0.02 ----	---- 1 µg/L	---- 64.8	---- 40.3	---- 135
EP130-CM: Demeton-S-methyl	919-86-8	0.02 0.10	µg/L µg/L	<0.02 ----	---- 1 µg/L	---- 89.4	---- 20.7	---- 178
EP130-CM: Diazinon	333-41-5	0.02 0.10	µg/L µg/L	<0.02 ----	---- 1 µg/L	---- 84.4	---- 38.7	---- 146
EP130-CM: Dichlorvos	62-73-7	0.02 0.10	µg/L µg/L	<0.02 ----	---- 1 µg/L	---- 81.5	---- 18.4	---- 151
EP130-CM: Dimethoate	60-51-5	0.02 0.10	µg/L µg/L	<0.02 ----	---- 1 µg/L	---- 67.6	---- 27.4	---- 131
EP130-CM: Ethion	563-12-2	0.02 0.10	µg/L µg/L	<0.02 ----	---- 1 µg/L	---- 70.5	---- 36.1	---- 147
EP130-CM: Fenamiphos	22224-92-6	0.02 0.10	µg/L µg/L	<0.02 ----	---- 1 µg/L	---- 102	---- 4.43	---- 168
EP130-CM: Fenthion	55-38-9	0.02 0.10	µg/L µg/L	<0.02 ----	---- 1 µg/L	---- 80.4	---- 23.2	---- 145
EP130-CM: Malathion	121-75-5	0.02 0.10	µg/L µg/L	<0.02 ----	---- 1 µg/L	---- 76.4	---- 40.7	---- 136
EP130-CM: Azinphos Methyl	86-50-0	0.02 0.10	µg/L µg/L	<0.02 ----	---- 1 µg/L	---- 103	---- 1.35	---- 163
EP130-CM: Monocrotophos	6923-22-4	0.02 0.10	µg/L µg/L	<0.02 ----	---- 1 µg/L	---- 17.0	---- 10	---- 86.3
EP130-CM: Parathion	56-38-2	0.02 0.10	µg/L µg/L	<0.02 ----	---- 1 µg/L	---- 83.4	---- 35.5	---- 141
EP130-CM: Parathion-methyl	298-00-0	0.02 0.10	µg/L µg/L	<0.02 ----	---- 1 µg/L	---- 71.3	---- 31.1	---- 144
EP130-CM: Pirimphos-ethyl	23505-41-1	0.02 0.10	µg/L µg/L	<0.02 ----	---- 1 µg/L	---- 104	---- 38.9	---- 142
EP130-CM: Prothiofos	34643-46-4	0.02 0.10	µg/L µg/L	<0.02 ----	---- 1 µg/L	---- 81.2	---- 40	---- 138
EP131A: Organochlorine Pesticides (QCLot: 1171188)								
EP131A-CM: Aldrin	309-00-2	0.01	µg/L	<0.010	0.1 µg/L	87.0	35.8	139
EP131A-CM: alpha-BHC	319-84-6	0.01	µg/L	<0.010	0.1 µg/L	81.0	19.7	153
EP131A-CM: beta-BHC	319-85-7	0.01	µg/L	<0.010	0.1 µg/L	93.0	43.8	136
EP131A-CM: delta-BHC	319-86-8	0.01	µg/L	<0.010	0.1 µg/L	103	37.4	144
EP131A-CM: 4,4'-DDD	72-54-8	0.01	µg/L	<0.010	0.1 µg/L	111	37.5	145
EP131A-CM: 4,4'-DDE	72-55-9	0.01	µg/L	<0.010	0.1 µg/L	83.0	30.5	146
EP131A-CM: 4,4'-DDT	50-29-3	0.01	µg/L	<0.010	0.1 µg/L	73.0	31	151



Sub-Matrix: **WATER**

Method: Compound	CAS Number	LOR	Unit	Method Blank (MB) Report	Laboratory Control Spike (LCS) Report				
				Result	Spike	Spike Recovery (%)		Recovery Limits (%)	
					Concentration	LCS	Low	High	
EP131A: Organochlorine Pesticides (QCLot: 1171188) - continued									
EP131A-CM: Dieldrin	60-57-1	0.01	µg/L	<0.010	0.1 µg/L	107	34.4	145	
EP131A-CM: alpha-Endosulfan	959-98-8	0.01	µg/L	<0.010	0.1 µg/L	98.0	30.2	141	
EP131A-CM: beta-Endosulfan	33213-65-9	0.01	µg/L	<0.010	0.1 µg/L	81.0	30.3	148	
EP131A-CM: Endosulfan sulfate	1031-07-8	0.01	µg/L	<0.010	0.1 µg/L	102	19.1	150	
EP131A-CM: Endrin	72-20-8	0.01	µg/L	<0.010	0.1 µg/L	92.0	13	165	
EP131A-CM: Endrin aldehyde	7421-93-4	0.01	µg/L	<0.010	0.1 µg/L	34.0	28.3	134	
EP131A-CM: Endrin ketone	53494-70-5	0.01	µg/L	<0.010	0.1 µg/L	92.0	15.1	146	
EP131A-CM: Heptachlor	76-44-8	0.005	µg/L	<0.005	0.1 µg/L	87.0	33.2	148	
EP131A-CM: Heptachlor epoxide	1024-57-3	0.01	µg/L	<0.010	0.1 µg/L	104	36	143	
EP131A-CM: Hexachlorobenzene (HCB)	118-74-1	0.01	µg/L	<0.010	0.1 µg/L	70.0	14	146	
EP131A-CM: gamma-BHC	58-89-9	0.01	µg/L	<0.010	0.1 µg/L	93.0	27.2	147	
EP131A-CM: Methoxychlor	72-43-5	0.01	µg/L	<0.010	0.1 µg/L	103	34.4	150	
EP131A-CM: cis-Chlordane	5103-71-9	0.01	µg/L	<0.010	0.1 µg/L	120	15.4	152	
EP131A-CM: trans-Chlordane	5103-74-2	0.01	µg/L	<0.010	0.1 µg/L	89.0	45.1	140	
Ultra-Trace Nutrients (QCLot: 1169838)									
EK267PA-CM: Total Phosphorus as P	----	0.005	mg/L	<0.005	0.44 mg/L	93.1	72	114	
Ultra-Trace Nutrients (QCLot: 1169839)									
EK262PA-CM: Total Nitrogen as N	----	0.01	mg/L	<0.01	----	----	----	----	
		0.05	mg/L	----	1.0 mg/L	90.8	70	117	
Ultra-Trace Nutrients (QCLot: 1170084)									
EK255A-CM: Ammonia as N	7664-41-7	0.005	mg/L	<0.005	0.1 mg/L	89.2	75	121	



Matrix Spike (MS) Report

The quality control term Matrix Spike (MS) refers to an intralaboratory split sample spiked with a representative set of target analytes. The purpose of this QC parameter is to monitor potential matrix effects on analyte recoveries. Static Recovery Limits as per laboratory Data Quality Objectives (DQOs). Ideal recovery ranges stated may be waived in the event of sample matrix interference.

Sub-Matrix: **WATER**

				Matrix Spike (MS) Report			
Laboratory sample ID	Client sample ID	Method: Compound	CAS Number	Spike Concentration	Spike Recovery (%)	Recovery Limits (%)	
					MS	Low	High
ED045G: Chloride Discrete analyser (QCLot: 1169745)							
EB0918265-002	Anonymous	ED045G: Chloride	16887-00-6	400 mg/L	75.5	70	130
EG035F: Dissolved Mercury by FIMS (QCLot: 1170899)							
EB0918276-001	20	EG035F: Mercury	7439-97-6	0.0100 mg/L	130	70	130
EG035T: Total Recoverable Mercury by FIMS (QCLot: 1172848)							
ES0917709-001	Anonymous	EG035T: Mercury	7439-97-6	0.010 mg/L	80.9	70	130
EG094F: Dissolved Metals in Fresh Water by ORC-ICPMS (QCLot: 1172263)							
EB0918276-003	B	EG094A-F: Arsenic	7440-38-2	50 µg/L	106	70	130
		EG094A-F: Cadmium	7440-43-9	12.5 µg/L	88.1	70	130
		EG094A-F: Cobalt	7440-48-4	50 µg/L	92.6	70	130
		EG094A-F: Copper	7440-50-8	50 µg/L	94.0	70	130
		EG094A-F: Lead	7439-92-1	50 µg/L	88.1	70	130
		EG094A-F: Nickel	7440-02-0	50 µg/L	91.4	70	130
		EG094A-F: Vanadium	7440-62-2	50 µg/L	101	70	130
		EG094A-F: Zinc	7440-66-6	50 µg/L	96.0	70	130
EG094T: Total metals in Fresh water by ORC-ICPMS (QCLot: 1172223)							
EB0918276-003	B	EG094A-T: Arsenic	7440-38-2	50 µg/L	101	70	130
		EG094A-T: Cadmium	7440-43-9	12.5 µg/L	94.5	70	130
		EG094A-T: Cobalt	7440-48-4	50 µg/L	100	70	130
		EG094A-T: Copper	7440-50-8	50 µg/L	102	70	130
		EG094A-T: Lead	7439-92-1	50 µg/L	120	70	130
		EG094A-T: Nickel	7440-02-0	50 µg/L	98.2	70	130
		EG094A-T: Vanadium	7440-62-2	50 µg/L	97.2	70	130
		EG094A-T: Zinc	7440-66-6	50 µg/L	98.5	70	130
EK040P: Fluoride by PC Titrator (QCLot: 1172418)							
EB0918276-001	20	EK040P: Fluoride	16984-48-8	4.9 mg/L	103	70	130
EK057G: Nitrite as N by Discrete Analyser (QCLot: 1169742)							
EB0918265-002	Anonymous	EK057G: Nitrite as N	----	0.4 mg/L	114	70	130
EK059G: NOX as N by Discrete Analyser (QCLot: 1175206)							
EB0918272-001	Anonymous	EK059G: Nitrite + Nitrate as N	----	2.0 mg/L	93.8	70	130
EP074A: Monocyclic Aromatic Hydrocarbons (QCLot: 1170522)							
EB0918276-002	QA	EP074: Benzene	71-43-2	10 µg/L	102	70	130
		EP074: Toluene	108-88-3	10 µg/L	115	70	130
EP080/071: Total Petroleum Hydrocarbons (QCLot: 1170523)							
EB0918276-002	QA	EP080: C6 - C9 Fraction	----	140 µg/L	85.7	70	130



Sub-Matrix: **WATER**

				<i>Matrix Spike (MS) Report</i>			
<i>Laboratory sample ID</i>	<i>Client sample ID</i>	<i>Method: Compound</i>	<i>CAS Number</i>	<i>Spike</i>	<i>Spike Recovery (%)</i>	<i>Recovery Limits (%)</i>	
				<i>Concentration</i>	<i>MS</i>	<i>Low</i>	<i>High</i>
EP080/071: Total Petroleum Hydrocarbons (QCLot: 1170524)							
EB0918222-002	Anonymous	EP080: C6 - C9 Fraction	----	140 µg/L	81.7	70	130
EP080/071: Total Petroleum Hydrocarbons (QCLot: 1171125)							
EB0918394-036	Anonymous	EP071: C10 - C14 Fraction	----	1200 µg/L	104	70	130
		EP071: C15 - C28 Fraction	----	2040 µg/L	73.2	70	130
Ultra-Trace Nutrients (QCLot: 1169838)							
EB0918276-001	20	EK267PA-CM: Total Phosphorus as P	----	0.5 mg/L	90.0	70	130
Ultra-Trace Nutrients (QCLot: 1169839)							
EB0918276-001	20	EK262PA-CM: Total Nitrogen as N	----	2.5 mg/L	72.1	70	130
Ultra-Trace Nutrients (QCLot: 1170084)							
ES0917781-001	Anonymous	EK255A-CM: Ammonia as N	7664-41-7	0.1 mg/L	75.0	70	130

INTERPRETIVE QUALITY CONTROL REPORT

Work Order	: EB0918276	Page	: 1 of 12
Amendment	: 5		
Client	: ALLUVIUM CONSULTING	Laboratory	: Environmental Division Brisbane
Contact	: MS MARTINE ADRIAANSEN	Contact	: Greg Vogel
Address	: PO BOX 1581 TOWNSVILLE QLD, AUSTRALIA 4810	Address	: 32 Shand Street Stafford QLD Australia 4053
E-mail	: martine@natres.com.au	E-mail	: Services.Brisbane@alsenviro.com
Telephone	: +61 07 47242170	Telephone	: +61 7 3243 7222
Facsimile	: ----	Facsimile	: +61 7 3243 7218
Project	: Surat Gas Project EIS	QC Level	: NEPM 1999 Schedule B(3) and ALS QCS3 requirement
Site	: Surat Gas Project	Date Samples Received	: 19-NOV-2009
C-O-C number	: ----	Issue Date	: 05-DEC-2011
Sampler	: A.C & M,A	No. of samples received	: 6
Order number	: ----	No. of samples analysed	: 6
Quote number	: BN/637/09		

This report supersedes any previous report(s) with this reference. Results apply to the sample(s) as submitted. All pages of this report have been checked and approved for release.

This Interpretive Quality Control Report contains the following information:

- Analysis Holding Time Compliance
- Quality Control Parameter Frequency Compliance
- Brief Method Summaries
- Summary of Outliers



Analysis Holding Time Compliance

The following report summarises extraction / preparation and analysis times and compares with recommended holding times. Dates reported represent first date of extraction or analysis and precludes subsequent dilutions and reruns. Information is also provided re the sample container (preservative) from which the analysis aliquot was taken. Elapsed period to analysis represents number of days from sampling where no extraction / digestion is involved or period from extraction / digestion where this is present. For composite samples, sampling date is assumed to be that of the oldest sample contributing to the composite. Sample date for laboratory produced leachates is assumed as the completion date of the leaching process. Outliers for holding time are based on USEPA SW 846, APHA, AS and NEPM (1999). A listing of breaches is provided in the Summary of Outliers.

Holding times for leachate methods (excluding elutriates) vary according to the analytes being determined on the resulting solution. For non-volatile analytes, the holding time compliance assessment compares the leach date with the shortest analyte holding time for the equivalent soil method. These soil holding times are: Organics (14 days); Mercury (28 days) & other metals (180 days). A recorded breach therefore does not guarantee a breach for all non-volatile parameters.

Matrix: WATER

Evaluation: * = Holding time breach ; ✓ = Within holding time.

Method Container / Client Sample ID(s)	Sample Date	Extraction / Preparation			Analysis		
		Date extracted	Due for extraction	Evaluation	Date analysed	Due for analysis	Evaluation
EA025: Suspended Solids							
Clear Plastic Bottle - Natural (EA025H) 20, QA, B, 15, 27, 33	17-NOV-2009	----	----	----	23-NOV-2009	24-NOV-2009	✓
EA045: Turbidity							
Clear Plastic Bottle - Natural (EA045) 15	17-NOV-2009	----	----	----	20-NOV-2009	19-NOV-2009	*
ED040F: Dissolved Major Anions							
Clear Plastic Bottle - Natural (ED040F) 20, QA, B, 15, 27, 33	17-NOV-2009	---	15-DEC-2009	----	20-NOV-2009	15-DEC-2009	✓
ED045G: Chloride Discrete analyser							
Clear Plastic Bottle - Natural (ED045G) 20, QA, B, 15, 27, 33	17-NOV-2009	---	15-DEC-2009	----	20-NOV-2009	15-DEC-2009	✓
ED093F: Dissolved Major Cations							
Clear Plastic Bottle - Natural (ED093F) 20, QA, B, 15, 27, 33	17-NOV-2009	---	15-DEC-2009	----	20-NOV-2009	15-DEC-2009	✓
EG035F: Dissolved Mercury by FIMS							
Clear HDPE (U-T ORC) - Filtered; Lab-acidified (EG035F) 20, QA, B, 15, 27, 33	17-NOV-2009	---	15-DEC-2009	----	25-NOV-2009	15-DEC-2009	✓
EG035T: Total Recoverable Mercury by FIMS							
Clear HDPE (U-T ORC) - Unfiltered; Lab-acidified (EG035T) 20, QA, B, 15, 27, 33	17-NOV-2009	----	----	----	25-NOV-2009	01-DEC-2009	✓



Matrix: **WATER**

Evaluation: * = Holding time breach ; ✓ = Within holding time.

Method Container / Client Sample ID(s)	Sample Date	Extraction / Preparation			Analysis		
		Date extracted	Due for extraction	Evaluation	Date analysed	Due for analysis	Evaluation
EG094F: Dissolved Metals in Fresh Water by ORC-ICPMS							
Clear HDPE (U-T ORC) - Filtered; Lab-acidified (EG094A-F) 20, QA, B, 15, 27, 33	17-NOV-2009	25-NOV-2009	16-MAY-2010	✓	25-NOV-2009	16-MAY-2010	✓
EG094T: Total metals in Fresh water by ORC-ICPMS							
Clear HDPE (U-T ORC) - Unfiltered; Lab-acidified (EG094A-T) 20, QA, B, 15, 27, 33	17-NOV-2009	25-NOV-2009	16-MAY-2010	✓	25-NOV-2009	16-MAY-2010	✓
EG094F: Dissolved Metals in Fresh Water by ORC-ICPMS							
Clear HDPE (U-T ORC) - Filtered; Lab-acidified (EG094B-F) 20, QA, B, 15, 27, 33	17-NOV-2009	25-NOV-2009	16-MAY-2010	✓	25-NOV-2009	16-MAY-2010	✓
EG094T: Total metals in Fresh water by ORC-ICPMS							
Clear HDPE (U-T ORC) - Unfiltered; Lab-acidified (EG094B-T) 20, QA, B, 15, 27, 33	17-NOV-2009	25-NOV-2009	16-MAY-2010	✓	25-NOV-2009	16-MAY-2010	✓
EK040P: Fluoride by PC Titrator							
Clear Plastic Bottle - Natural (EK040P) 20, QA, B, 15, 27, 33	17-NOV-2009	---	15-DEC-2009	----	24-NOV-2009	15-DEC-2009	✓
EK057G: Nitrite as N by Discrete Analyser							
Clear Plastic Bottle - Natural (EK057G) 20, QA, B, 15, 27, 33	17-NOV-2009	---	19-NOV-2009	----	20-NOV-2009	19-NOV-2009	*
EK059G: NOX as N by Discrete Analyser							
Clear Plastic Bottle - Sulphuric Acid (EK059G) 20, QA, B, 15, 27, 33	17-NOV-2009	---	15-DEC-2009	----	26-NOV-2009	15-DEC-2009	✓
Ultra-Trace Nutrients							
Clear Plastic Bottle - Filtered and Frozen (AS) (EK255A-CM) 20, QA, B, 15, 27, 33	17-NOV-2009	---	15-DEC-2009	----	20-NOV-2009	15-DEC-2009	✓
Ultra-Trace Nutrients							
Clear Plastic Bottle - Frozen (AS) (EK262PA-CM) 20, QA, B, 15, 27, 33	17-NOV-2009	20-NOV-2009	15-DEC-2009	✓	20-NOV-2009	15-DEC-2009	✓



Matrix: WATER

Evaluation: * = Holding time breach ; ✓ = Within holding time.

Method Container / Client Sample ID(s)	Sample Date	Extraction / Preparation			Analysis		
		Date extracted	Due for extraction	Evaluation	Date analysed	Due for analysis	Evaluation
Ultra-Trace Nutrients							
Clear Plastic Bottle - Frozen (AS) (EK267PA-CM) 20, QA, B, 15, 27, 33	17-NOV-2009	20-NOV-2009	15-DEC-2009	✓	20-NOV-2009	15-DEC-2009	✓
EP080/071: Total Petroleum Hydrocarbons							
Amber Glass Bottle - Unpreserved (EP071) 20, QA, B, 15, 27, 33	17-NOV-2009	23-NOV-2009	24-NOV-2009	✓	24-NOV-2009	02-JAN-2010	✓
EP074A: Monocyclic Aromatic Hydrocarbons							
Amber VOC Vial - HCl (EP074) 20, QA, B, 27	17-NOV-2009	---	01-DEC-2009	----	24-NOV-2009	01-DEC-2009	✓
EP075A: Phenolic Compounds							
Amber Glass Bottle - Unpreserved (EP075) 20, QA, B, 27	17-NOV-2009	23-NOV-2009	24-NOV-2009	✓	24-NOV-2009	02-JAN-2010	✓
EP080/071: Total Petroleum Hydrocarbons							
Amber VOC Vial - HCl (EP080) 20, QA, B, 15, 27, 33	17-NOV-2009	---	01-DEC-2009	----	24-NOV-2009	01-DEC-2009	✓
EP130A: Organophosphorus Pesticides (Ultra-trace)							
Amber Glass Bottle - Unpreserved (EP130-CM) 20, QA, B, 27	17-NOV-2009	23-NOV-2009	24-NOV-2009	✓	24-NOV-2009	02-JAN-2010	✓
EP131A: Organochlorine Pesticides							
Amber Glass Bottle - Unpreserved (EP131A-CM) 20, QA, B, 27	17-NOV-2009	23-NOV-2009	24-NOV-2009	✓	24-NOV-2009	02-JAN-2010	✓
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons							
Amber Glass Bottle - Unpreserved (EP132-LL) 20, QA, B, 27	17-NOV-2009	23-NOV-2009	24-NOV-2009	✓	24-NOV-2009	02-JAN-2010	✓



Quality Control Parameter Frequency Compliance

The following report summarises the frequency of laboratory QC samples analysed within the analytical lot(s) in which the submitted sample(s) was(where) processed. Actual rate should be greater than or equal to the expected rate. A listing of breaches is provided in the Summary of Outliers.

Matrix: **WATER** Evaluation: ✖ = Quality Control frequency not within specification ; ✔ = Quality Control frequency within specification.

Quality Control Sample Type	Method	Count		Rate (%)			Quality Control Specification
		QC	Regular	Actual	Expected	Evaluation	
Laboratory Duplicates (DUP)							
Ammonia as N - Ultra-Trace for Catchment Monitoring	EK255A-CM	2	14	14.3	10.0	✔	NEPM 1999 Schedule B(3) and ALS QCS3 requirement
Chloride by Discrete Analyser	ED045G	2	11	18.2	10.0	✔	NEPM 1999 Schedule B(3) and ALS QCS3 requirement
Dissolved Mercury by FIMS	EG035F	2	20	10.0	10.0	✔	NEPM 1999 Schedule B(3) and ALS QCS3 requirement
Dissolved Metals in Fresh Water -Suite A by ORC-ICPMS	EG094A-F	2	10	20.0	10.0	✔	NEPM 1999 Schedule B(3) and ALS QCS3 requirement
Dissolved Metals in Fresh Water -Suite B by ORC-ICPMS	EG094B-F	1	10	10.0	10.0	✔	NEPM 1999 Schedule B(3) and ALS QCS3 requirement
Fluoride by PC Titrator	EK040P	2	20	10.0	10.0	✔	NEPM 1999 Schedule B(3) and ALS QCS3 requirement
Major Anions - Dissolved	ED040F	2	11	18.2	10.0	✔	NEPM 1999 Schedule B(3) and ALS QCS3 requirement
Major Cations - Dissolved	ED093F	2	14	14.3	10.0	✔	NEPM 1999 Schedule B(3) and ALS QCS3 requirement
Nitrite and Nitrate as N (NOx) by Discrete Analyser	EK059G	2	20	10.0	10.0	✔	NEPM 1999 Schedule B(3) and ALS QCS3 requirement
Nitrite as N by Discrete Analyser	EK057G	2	17	11.8	10.0	✔	NEPM 1999 Schedule B(3) and ALS QCS3 requirement
Suspended Solids (High Level)	EA025H	2	13	15.4	10.0	✔	NEPM 1999 Schedule B(3) and ALS QCS3 requirement
Total Mercury by FIMS	EG035T	2	20	10.0	10.0	✔	NEPM 1999 Schedule B(3) and ALS QCS3 requirement
Total Metals in Fresh Water -Suite A by ORC-ICPMS	EG094A-T	1	10	10.0	10.0	✔	NEPM 1999 Schedule B(3) and ALS QCS3 requirement
Total Metals in Fresh Water -Suite B by ORC-ICPMS	EG094B-T	1	10	10.0	10.0	✔	NEPM 1999 Schedule B(3) and ALS QCS3 requirement
Total Nitrogen as N (Persulfate digestion)-Ultra-Trace - CM	EK262PA-CM	2	6	33.3	10.0	✔	NEPM 1999 Schedule B(3) and ALS QCS3 requirement
Total Phosphorus(Persulfate Digestion) - Ultra-Trace for CM	EK267PA-CM	2	12	16.7	10.0	✔	NEPM 1999 Schedule B(3) and ALS QCS3 requirement
TPH - Semivolatile Fraction	EP071	1	20	5.0	10.0	✖	NEPM 1999 Schedule B(3) and ALS QCS3 requirement
TPH Volatiles/BTEX	EP080	4	33	12.1	10.0	✔	NEPM 1999 Schedule B(3) and ALS QCS3 requirement
Turbidity	EA045	1	6	16.7	10.0	✔	NEPM 1999 Schedule B(3) and ALS QCS3 requirement
Volatile Organic Compounds	EP074	2	13	15.4	10.0	✔	NEPM 1999 Schedule B(3) and ALS QCS3 requirement
Laboratory Control Samples (LCS)							
Ammonia as N - Ultra-Trace for Catchment Monitoring	EK255A-CM	1	14	7.1	5.0	✔	NEPM 1999 Schedule B(3) and ALS QCS3 requirement
Chloride by Discrete Analyser	ED045G	2	11	18.2	10.0	✔	NEPM 1999 Schedule B(3) and ALS QCS3 requirement
Dissolved Mercury by FIMS	EG035F	1	20	5.0	5.0	✔	NEPM 1999 Schedule B(3) and ALS QCS3 requirement
Dissolved Metals in Fresh Water -Suite A by ORC-ICPMS	EG094A-F	1	10	10.0	5.0	✔	NEPM 1999 Schedule B(3) and ALS QCS3 requirement
Dissolved Metals in Fresh Water -Suite B by ORC-ICPMS	EG094B-F	1	10	10.0	5.0	✔	NEPM 1999 Schedule B(3) and ALS QCS3 requirement
Fluoride by PC Titrator	EK040P	1	20	5.0	5.0	✔	NEPM 1999 Schedule B(3) and ALS QCS3 requirement
Nitrite and Nitrate as N (NOx) by Discrete Analyser	EK059G	1	20	5.0	5.0	✔	NEPM 1999 Schedule B(3) and ALS QCS3 requirement
Nitrite as N by Discrete Analyser	EK057G	1	17	5.9	5.0	✔	NEPM 1999 Schedule B(3) and ALS QCS3 requirement
Organochlorine Pesticides (Super Ultra-trace) for CM	EP131A-CM	1	4	25.0	5.0	✔	NEPM 1999 Schedule B(3) and ALS QCS3 requirement
Organophosphorus Pesticides (Ultra-trace) for Catchment M	EP130-CM	1	4	25.0	5.0	✔	NEPM 1999 Schedule B(3) and ALS QCS3 requirement
PAH Compounds in Water	EP132-LL	1	4	25.0	5.0	✔	NEPM 1999 Schedule B(3) and ALS QCS3 requirement
Semivolatile Organic Compounds	EP075	1	4	25.0	5.0	✔	NEPM 1999 Schedule B(3) and ALS QCS3 requirement
Suspended Solids (High Level)	EA025H	1	13	7.7	5.0	✔	NEPM 1999 Schedule B(3) and ALS QCS3 requirement
Total Mercury by FIMS	EG035T	1	20	5.0	5.0	✔	NEPM 1999 Schedule B(3) and ALS QCS3 requirement
Total Metals in Fresh Water -Suite A by ORC-ICPMS	EG094A-T	1	10	10.0	5.0	✔	NEPM 1999 Schedule B(3) and ALS QCS3 requirement
Total Metals in Fresh Water -Suite B by ORC-ICPMS	EG094B-T	1	10	10.0	5.0	✔	NEPM 1999 Schedule B(3) and ALS QCS3 requirement
Total Nitrogen as N (Persulfate digestion)-Ultra-Trace - CM	EK262PA-CM	1	6	16.7	10.0	✔	NEPM 1999 Schedule B(3) and ALS QCS3 requirement



Matrix: **WATER** Evaluation: ✖ = Quality Control frequency not within specification ; ✔ = Quality Control frequency within specification.

Quality Control Sample Type	Method	Count		Rate (%)			Quality Control Specification
		QC	Regular	Actual	Expected	Evaluation	
Analytical Methods							
Laboratory Control Samples (LCS) - Continued							
Total Phosphorus(Persulfate Digestion) - Ultra-Trace for CM	EK267PA-CM	1	12	8.3	10.0	✖	NEPM 1999 Schedule B(3) and ALS QCS3 requirement
TPH - Semivolatile Fraction	EP071	1	20	5.0	5.0	✔	NEPM 1999 Schedule B(3) and ALS QCS3 requirement
TPH Volatiles/BTEX	EP080	2	33	6.1	5.0	✔	NEPM 1999 Schedule B(3) and ALS QCS3 requirement
Turbidity	EA045	1	6	16.7	5.0	✔	NEPM 1999 Schedule B(3) and ALS QCS3 requirement
Volatile Organic Compounds	EP074	1	13	7.7	5.0	✔	NEPM 1999 Schedule B(3) and ALS QCS3 requirement
Method Blanks (MB)							
Ammonia as N - Ultra-Trace for Catchment Monitoring	EK255A-CM	1	14	7.1	5.0	✔	NEPM 1999 Schedule B(3) and ALS QCS3 requirement
Chloride by Discrete Analyser	ED045G	1	11	9.1	5.0	✔	NEPM 1999 Schedule B(3) and ALS QCS3 requirement
Dissolved Mercury by FIMS	EG035F	1	20	5.0	5.0	✔	NEPM 1999 Schedule B(3) and ALS QCS3 requirement
Dissolved Metals in Fresh Water -Suite A by ORC-ICPMS	EG094A-F	1	10	10.0	5.0	✔	NEPM 1999 Schedule B(3) and ALS QCS3 requirement
Dissolved Metals in Fresh Water -Suite B by ORC-ICPMS	EG094B-F	1	10	10.0	5.0	✔	NEPM 1999 Schedule B(3) and ALS QCS3 requirement
Fluoride by PC Titrator	EK040P	1	20	5.0	5.0	✔	NEPM 1999 Schedule B(3) and ALS QCS3 requirement
Major Anions - Dissolved	ED040F	1	11	9.1	5.0	✔	NEPM 1999 Schedule B(3) and ALS QCS3 requirement
Major Cations - Dissolved	ED093F	1	14	7.1	5.0	✔	NEPM 1999 Schedule B(3) and ALS QCS3 requirement
Nitrite and Nitrate as N (NOx) by Discrete Analyser	EK059G	1	20	5.0	5.0	✔	NEPM 1999 Schedule B(3) and ALS QCS3 requirement
Nitrite as N by Discrete Analyser	EK057G	1	17	5.9	5.0	✔	NEPM 1999 Schedule B(3) and ALS QCS3 requirement
Organochlorine Pesticides (Super Ultra-trace) for CM	EP131A-CM	1	4	25.0	5.0	✔	NEPM 1999 Schedule B(3) and ALS QCS3 requirement
Organophosphorus Pesticides (Ultra-trace) for Catchment M	EP130-CM	1	4	25.0	5.0	✔	NEPM 1999 Schedule B(3) and ALS QCS3 requirement
PAH Compounds in Water	EP132-LL	1	4	25.0	5.0	✔	NEPM 1999 Schedule B(3) and ALS QCS3 requirement
Semivolatile Organic Compounds	EP075	1	4	25.0	5.0	✔	NEPM 1999 Schedule B(3) and ALS QCS3 requirement
Suspended Solids (High Level)	EA025H	1	13	7.7	5.0	✔	NEPM 1999 Schedule B(3) and ALS QCS3 requirement
Total Mercury by FIMS	EG035T	1	20	5.0	5.0	✔	NEPM 1999 Schedule B(3) and ALS QCS3 requirement
Total Metals in Fresh Water -Suite A by ORC-ICPMS	EG094A-T	1	10	10.0	5.0	✔	NEPM 1999 Schedule B(3) and ALS QCS3 requirement
Total Metals in Fresh Water -Suite B by ORC-ICPMS	EG094B-T	1	10	10.0	5.0	✔	NEPM 1999 Schedule B(3) and ALS QCS3 requirement
Total Nitrogen as N (Persulfate digestion)-Ultra-Trace - CM	EK262PA-CM	1	6	16.7	5.0	✔	NEPM 1999 Schedule B(3) and ALS QCS3 requirement
Total Phosphorus(Persulfate Digestion) - Ultra-Trace for CM	EK267PA-CM	1	12	8.3	5.0	✔	NEPM 1999 Schedule B(3) and ALS QCS3 requirement
TPH - Semivolatile Fraction	EP071	1	20	5.0	5.0	✔	NEPM 1999 Schedule B(3) and ALS QCS3 requirement
TPH Volatiles/BTEX	EP080	2	33	6.1	5.0	✔	NEPM 1999 Schedule B(3) and ALS QCS3 requirement
Turbidity	EA045	1	6	16.7	5.0	✔	NEPM 1999 Schedule B(3) and ALS QCS3 requirement
Volatile Organic Compounds	EP074	1	13	7.7	5.0	✔	NEPM 1999 Schedule B(3) and ALS QCS3 requirement
Matrix Spikes (MS)							
Ammonia as N - Ultra-Trace for Catchment Monitoring	EK255A-CM	1	14	7.1	5.0	✔	ALS QCS3 requirement
Chloride by Discrete Analyser	ED045G	1	11	9.1	5.0	✔	ALS QCS3 requirement
Dissolved Mercury by FIMS	EG035F	1	20	5.0	5.0	✔	ALS QCS3 requirement
Dissolved Metals in Fresh Water -Suite A by ORC-ICPMS	EG094A-F	1	10	10.0	5.0	✔	ALS QCS3 requirement
Fluoride by PC Titrator	EK040P	1	20	5.0	5.0	✔	ALS QCS3 requirement
Nitrite and Nitrate as N (NOx) by Discrete Analyser	EK059G	1	20	5.0	5.0	✔	ALS QCS3 requirement
Nitrite as N by Discrete Analyser	EK057G	1	17	5.9	5.0	✔	ALS QCS3 requirement
Total Mercury by FIMS	EG035T	1	20	5.0	5.0	✔	ALS QCS3 requirement
Total Metals in Fresh Water -Suite A by ORC-ICPMS	EG094A-T	1	10	10.0	5.0	✔	ALS QCS3 requirement
Total Nitrogen as N (Persulfate digestion)-Ultra-Trace - CM	EK262PA-CM	1	6	16.7	5.0	✔	ALS QCS3 requirement



Matrix: **WATER** Evaluation: ✖ = Quality Control frequency not within specification ; ✔ = Quality Control frequency within specification.

Quality Control Sample Type	Method	Count		Rate (%)			Quality Control Specification
		QC	Regular	Actual	Expected	Evaluation	
Matrix Spikes (MS) - Continued							
Total Phosphorus(Persulfate Digestion) - Ultra-Trace for CM	EK267PA-CM	1	12	8.3	5.0	✔	ALS QCS3 requirement
TPH - Semivolatile Fraction	EP071	1	20	5.0	5.0	✔	ALS QCS3 requirement
TPH Volatiles/BTEX	EP080	2	33	6.1	5.0	✔	ALS QCS3 requirement
Volatile Organic Compounds	EP074	1	13	7.7	5.0	✔	ALS QCS3 requirement



Brief Method Summaries

The analytical procedures used by the Environmental Division have been developed from established internationally recognized procedures such as those published by the US EPA, APHA, AS and NEPM. In house developed procedures are employed in the absence of documented standards or by client request. The following report provides brief descriptions of the analytical procedures employed for results reported in the Certificate of Analysis. Sources from which ALS methods have been developed are provided within the Method Descriptions.

Analytical Methods	Method	Matrix	Method Descriptions
Sodium Adsorption Ratio	EA006	WATER	APHA 21st ed., 3120 Ca, Mg, Na. This method is compliant with NEPM (1999) Schedule B(3) (Appdx. 2)
Suspended Solids (High Level)	EA025H	WATER	APHA 21st ed., 2540D A gravimetric procedure employed to determine the amount of `non-filterable` residue in a aqueous sample. The prescribed GFC (1.2um) filter is rinsed with deionised water, oven dried and weighed prior to analysis. A well-mixed sample is filtered through a glass fibre filter (1.2um). The residue on the filter paper is dried at 104+/-2C . This method is compliant with NEPM (1999) Schedule B(3) (Appdx. 2)
Turbidity	EA045	WATER	APHA 21st ed., 2130 B. This method is compliant with NEPM (1999) Schedule B(3) (Appdx. 2)
Hardness as CaCO3	EA065	WATER	APHA 21st ed., 2340 B. This method is compliant with NEPM (1999) Schedule B(3) (Appdx. 2)
Major Anions - Dissolved	ED040F	WATER	APHA 21st ed., 3120. The 0.45um filtered samples are determined by ICP/AES for Sulfur and/or Silicon content and reported as Sulfate and/or Silica after conversion by gravimetric factor.
Chloride by Discrete Analyser	ED045G	WATER	APHA 21st ed., 4500 Cl - G.The thiocyanate ion is liberated from mercuric thiocyanate through sequestration of mercury by the chloride ion to form non-ionised mercuric chloride.in the presence of ferric ions the liberated thiocyanate forms highly-coloured ferric thiocyanate which is measured at 480 nm APHA 21st edition seal method 2 017-1-L april 2003
Major Cations - Dissolved	ED093F	WATER	Major Cations is determined based on APHA 21st ed., 3120; USEPA SW 846 - 6010 The ICPAES technique ionises the 0.45um filtered sample atoms emitting a characteristic spectrum. This spectrum is then compared against matrix matched standards for quantification. This method is compliant with NEPM (1999) Schedule B(3) (Appdx. 2) Sodium Absorption Ratio is calculated from Ca, Mg and Na which determined by ALS in house method QWI-EN/ED093F. This method is compliant with NEPM (1999) Schedule B(3) (Appdx. 2) Total Hardness is calculated based on APHA 21st ed., 2340 B. This method is compliant with NEPM (1999) Schedule B(3) (Appdx. 2)
Dissolved Mercury by FIMS	EG035F	WATER	AS 3550, APHA 21st ed. 3112 Hg - B (Flow-injection (SnCl2)(Cold Vapour generation) AAS) Samples are 0.45 um filtered prior to analysis. FIM-AAS is an automated flameless atomic absorption technique. A bromate/bromide reagent is used to oxidise any organic mercury compounds in the filtered sample. The ionic mercury is reduced online to atomic mercury vapour by SnCl2 which is then purged into a heated quartz cell. Quantification is by comparing absorbance against a calibration curve. This method is compliant with NEPM (1999) Schedule B(3) (Appdx. 2)
Total Mercury by FIMS	EG035T	WATER	AS 3550, APHA 21st ed. 3112 Hg - B (Flow-injection (SnCl2)(Cold Vapour generation) AAS) FIM-AAS is an automated flameless atomic absorption technique. A bromate/bromide reagent is used to oxidise any organic mercury compounds in the unfiltered sample. The ionic mercury is reduced online to atomic mercury vapour by SnCl2 which is then purged into a heated quartz cell. Quantification is by comparing absorbance against a calibration curve. This method is compliant with NEPM (1999) Schedule B(3) (Appdx. 2)
Dissolved Metals in Fresh Water -Suite A by ORC-ICPMS	EG094A-F	WATER	APHA 21st ed., 3125; USEPA SW846 - 6020 Samples are 0.45 um filtered prior to analysis. The ORC-ICPMS technique removes interfering species through a series of chemical reactions prior to ion detection. Ions are passed into a high vacuum mass spectrometer, which separates the analytes based on their distinct mass to charge ratios prior to measurement by a discrete dynode ion detector. This method is compliant with NEPM (1999) Schedule B(3) (Appdx. 2)



Analytical Methods	Method	Matrix	Method Descriptions
Total Metals in Fresh Water -Suite A by ORC-ICPMS	EG094A-T	WATER	APHA 21st ed., 3125; USEPA SW846 - 6020 Samples are 0.45 um filtered prior to analysis. The ORC-ICPMS technique removes interfering species through a series of chemical reactions prior to ion detection. Ions are passed into a high vacuum mass spectrometer, which separates the analytes based on their distinct mass to charge ratios prior to measurement by a discrete dynode ion detector. This method is compliant with NEPM (1999) Schedule B(3) (Appdx. 2)
Dissolved Metals in Fresh Water -Suite B by ORC-ICPMS	EG094B-F	WATER	APHA 21st ed., 3125; USEPA SW846 - 6020 Samples are 0.45 um filtered prior to analysis. The ORC-ICPMS technique removes interfering species through a series of chemical reactions prior to ion detection. Ions are passed into a high vacuum mass spectrometer, which separates the analytes based on their distinct mass to charge ratios prior to measurement by a discrete dynode ion detector. This method is compliant with NEPM (1999) Schedule B(3) (Appdx. 2)
Total Metals in Fresh Water -Suite B by ORC-ICPMS	EG094B-T	WATER	APHA 21st ed., 3125; USEPA SW846 - 6020 Samples are 0.45 um filtered prior to analysis. The ORC-ICPMS technique removes interfering species through a series of chemical reactions prior to ion detection. Ions are passed into a high vacuum mass spectrometer, which separates the analytes based on their distinct mass to charge ratios prior to measurement by a discrete dynode ion detector. This method is compliant with NEPM (1999) Schedule B(3) (Appdx. 2)
Fluoride by PC Titrator	EK040P	WATER	APHA 21st ed., 4500 F--C CDTA is added to the sample to provide a uniform ionic strength background, adjust pH, and break up complexes. Fluoride concentration is determined by either manual or automatic ISE measurement. This method is compliant with NEPM (1999) Schedule B(3) (Appdx. 2)
Nitrite as N by Discrete Analyser	EK057G	WATER	APHA 21st ed., 4500-NO2- B. Nitrite is determined by direct colourimetry by Discrete Analyser. This method is compliant with NEPM (1999) Schedule B(3) (Appdx. 2)
Nitrate as N by Discrete Analyser	EK058G	WATER	APHA 21st ed., 4500-NO3- F. Nitrate is reduced to nitrite by way of a cadmium reduction column followed by quantification by Discrete Analyser. Nitrite is determined separately by direct colourimetry and result for Nitrate calculated as the difference between the two results. This method is compliant with NEPM (1999) Schedule B(3) (Appdx. 2)
Nitrite and Nitrate as N (NOx) by Discrete Analyser	EK059G	WATER	APHA 21st ed., 4500-NO3- F. Combined oxidised Nitrogen (NO2+NO3) is determined by Cadmium Reduction and direct colourimetry by Discrete Analyser. This method is compliant with NEPM (1999) Schedule B(3) (Appdx. 2)
Ammonia as N - Ultra-Trace for Catchment Monitoring	EK255A-CM	WATER	APHA 21st ed., 4500-NH3 H Ammonia is determined by direct colorimetry by FIA. This method is compliant with NEPM (1999) Schedule B(3) (Appdx. 2)
Total Nitrogen as N (Persulfate digestion) -Ultra-Trace - CM	EK262PA-CM	WATER	APHA 21st ed., 4500-P J. Persulfate Method for Simultaneous Determination of Total Nitrogen and Total Phosphorus. As sample is digested with persulfate under alkaline conditions yielding orthophosphate and nitrate. Following digestion, analytes are determined by flow injection analysis. This method is compliant with NEPM (1999) Schedule B(3) (Appdx. 2)
Total Phosphorus(Persulfate Digestion) - Ultra-Trace for CM	EK267PA-CM	WATER	APHA 21st ed., 4500-P J. Persulfate Method for Simultaneous Determination of Total Nitrogen and Total Phosphorus. As sample is digested with persulfate under alkaline conditions yielding orthophosphate and nitrate. Following digestion, analytes are determined by flow injection analysis. This method is compliant with NEPM (1999) Schedule B(3) (Appdx. 2)
TPH - Semivolatle Fraction	EP071	WATER	USEPA SW 846 - 8015A The sample extract is analysed by Capillary GC/FID and quantification is by comparison against an established 5 point calibration curve of n-Alkane standards. This method is compliant with NEPM (1999) Schedule B(3) (Appdx. 2)
Volatile Organic Compounds	EP074	WATER	USEPA SW 846 - 8260B Water samples are directly purged prior to analysis by Capillary GC/MS and quantification is by comparison against an established 5 point calibration curve. This method is compliant with NEPM (1999) Schedule B(3) (Appdx. 2)
Semivolatle Organic Compounds	EP075	WATER	USEPA SW 846 - 8270D Sample extracts are analysed by Capillary GC/MS and quantification is by comparison against an established 5 point calibration curve. This method is compliant with NEPM (1999) Schedule B(3) (Appdx. 2)



Analytical Methods	Method	Matrix	Method Descriptions
TPH Volatiles/BTEX	EP080	WATER	USEPA SW 846 - 8260B Water samples are directly purged prior to analysis by Capillary GC/MS and quantification is by comparison against an established 5 point calibration curve. Alternatively, a sample is equilibrated in a headspace vial and a portion of the headspace determined by GCMS analysis. This method is compliant with NEPM (1999) Schedule B(3) (Appdx. 2)
Organophosphorus Pesticides (Ultra-trace) for Catchment M	EP130-CM	WATER	USEPA Method 3640 (GPC cleanup), 8141 (GC/FPD - Capillary Column) This method is compliant with NEPM (1999) Schedule B(3) (Appdx. 2)
Organochlorine Pesticides (Super Ultra-trace) for CM	EP131A-CM	WATER	USEPA Method 3640 (GPC cleanup), 3620 (Florisil), 8081/8082 (GC/uECD/uECD). This method is compliant with NEPM (1999) Schedule B(3) (Appdx. 2)
PAH Compounds in Water	EP132-LL	WATER	8270 GCMS, LVI, Capillary column, SIM mode. This method is compliant with NEPM (1999) Schedule B(3) (Appdx. 2)
Glycol (Water)	GLY-WAT	WATER	Glycols in water matrices conducted by Subcontracting Laboratory.
Preparation Methods	Method	Matrix	Method Descriptions
Persulfate Digestion for UT TN and TP for FIA finish.	EK262/267-PA Prep	WATER	APHA 21st ed., 4500 P - J. This method is compliant with NEPM (1999) Schedule B(3) (Appdx. 2)
Digestion for Total Recoverable Metals - ORC	EN25-ORC	WATER	Modified USEPA SW846-3005. This is an Ultrapure Nitric acid digestion procedure used to prepare surface and ground water samples for analysis by ORC- ICPMS. This method is compliant with NEPM (1999) Schedule B(3) (Appdx. 2)
Separatory Funnel Extraction of Liquids	ORG14	WATER	USEPA SW 846 - 3510B 500 mL to 1L of sample is transferred to a separatory funnel and serially extracted three times using 60mL DCM for each extract. The resultant extracts are combined, dehydrated and concentrated for analysis. This method is compliant with NEPM (1999) Schedule B(3) (Appdx. 2). ALS default excludes sediment which may be resident in the container.
Sep. Funnel Extraction /Acetylation of Phenolic Compounds	ORG14-AC	WATER	USEPA 3510 (Extraction)/ In-house (Acetylation): A 1L sample is extracted into dichloromethane and concentrated to 1 mL with exchange into cyclohexane. Phenolic compounds are reacted with acetic anhydride to yield phenyl acetates suitable for ultra-trace analysis. This method is compliant with NEPM (1999) Schedule B(3) (Appdx. 2). ALS default excludes sediment which may be resident in the container.
Sep. Funnel Extraction of Liquids (Ultra-trace pesticides.)	ORG14-UTP	WATER	USEPA 3510 Samples are extracted into dichloromethane, concentrated and exchanged into an appropriate solvent for GPC and florisil cleanup as required. This method is compliant with NEPM (1999) Schedule B(3) (Appdx. 2). ALS default excludes sediment which may be resident in the container.



Summary of Outliers

Outliers : Quality Control Samples

The following report highlights outliers flagged in the Quality Control (QC) Report. Surrogate recovery limits are static and based on USEPA SW846 or ALS-QWI/EN/38 (in the absence of specific USEPA limits). This report displays QC Outliers (breaches) only.

Duplicates, Method Blanks, Laboratory Control Samples and Matrix Spikes

Matrix: **WATER**

Compound Group Name	Laboratory Sample ID	Client Sample ID	Analyte	CAS Number	Data	Limits	Comment
Laboratory Control Spike (LCS) Recoveries							
ED045G: Chloride Discrete analyser	1350134-052	----	Chloride	16887-00-6	89.3 %	90-110%	Recovery less than lower control limit
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons	1351856-002	----	Naphthalene	91-20-3	118 %	68.3-116%	Recovery greater than upper control limit
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons	1351856-002	----	Acenaphthylene	208-96-8	115 %	72.4-112%	Recovery greater than upper control limit
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons	1351856-002	----	Fluorene	86-73-7	117 %	72.9-114%	Recovery greater than upper control limit
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons	1351856-002	----	Benz(a)anthracene	56-55-3	114 %	73.6-114%	Recovery greater than upper control limit
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons	1351856-002	----	Benzo(b)fluoranthene	205-99-2	120 %	71.4-119%	Recovery greater than upper control limit

- For all matrices, no Method Blank value outliers occur.
- For all matrices, no Duplicate outliers occur.
- For all matrices, no Matrix Spike outliers occur.

Regular Sample Surrogates

- For all regular sample matrices, no surrogate recovery outliers occur.

Outliers : Analysis Holding Time Compliance

This report displays Holding Time breaches only. Only the respective Extraction / Preparation and/or Analysis component is/are displayed.

Matrix: **WATER**

Method	Container / Client Sample ID(s)	Extraction / Preparation			Analysis		
		Date extracted	Due for extraction	Days overdue	Date analysed	Due for analysis	Days overdue
EA045: Turbidity							
Clear Plastic Bottle - Natural							
15		----	----	----	20-NOV-2009	19-NOV-2009	1
EK057G: Nitrite as N by Discrete Analyser							
Clear Plastic Bottle - Natural							
20, B, 27,	QA, 15, 33	----	----	----	20-NOV-2009	19-NOV-2009	1

Outliers : Frequency of Quality Control Samples

The following report highlights breaches in the Frequency of Quality Control Samples.

Matrix: **WATER**



Matrix: **WATER**

Quality Control Sample Type Method	Count		Rate (%)		Quality Control Specification
	QC	Regular	Actual	Expected	
Laboratory Duplicates (DUP)					
TPH - Semivolatile Fraction	1	20	5.0	10.0	NEPM 1999 Schedule B(3) and ALS QCS3 requirement
Laboratory Control Samples (LCS)					
Total Phosphorus(Persulfate Digestion) - Ultra-Trace for CM	1	12	8.3	10.0	NEPM 1999 Schedule B(3) and ALS QCS3 requirement

CERTIFICATE OF ANALYSIS

Work Order	: EB0918276	Page	: 1 of 11
Amendment	: 5		
Client	: ALLUVIUM CONSULTING	Laboratory	: Environmental Division Brisbane
Contact	: MS MARTINE ADRIAANSEN	Contact	: Greg Vogel
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Project	: Surat Gas Project EIS	QC Level	: NEPM 1999 Schedule B(3) and ALS QCS3 requirement
Order number	: ----		
C-O-C number	: ----	Date Samples Received	: 19-NOV-2009
Sampler	: A.C & M,A	Issue Date	: 05-DEC-2011
Site	: Surat Gas Project		
Quote number	: BN/637/09	No. of samples received	: 6
		No. of samples analysed	: 6

This report supersedes any previous report(s) with this reference. Results apply to the sample(s) as submitted. All pages of this report have been checked and approved for release.

This Certificate of Analysis contains the following information:

- General Comments
- Analytical Results
- Surrogate Control Limits



NATA Accredited Laboratory 825

This document is issued in accordance with NATA accreditation requirements.

Accredited for compliance with ISO/IEC 17025.

Signatories

This document has been electronically signed by the authorized signatories indicated below. Electronic signing has been carried out in compliance with procedures specified in 21 CFR Part 11.

<i>Signatories</i>	<i>Position</i>	<i>Accreditation Category</i>
Celine Conceicao	Senior Spectroscopist	Sydney Inorganics
Edwandy Fadjar	Organic Coordinator	Sydney Organics
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Kim McCabe	Senior Inorganic Chemist	Brisbane Inorganics
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Stephen Hislop	Senior Inorganic Chemist	Brisbane Inorganics



General Comments

The analytical procedures used by the Environmental Division have been developed from established internationally recognized procedures such as those published by the USEPA, APHA, AS and NEPM. In house developed procedures are employed in the absence of documented standards or by client request.

Where moisture determination has been performed, results are reported on a dry weight basis.

Where a reported less than (<) result is higher than the LOR, this may be due to primary sample extract/digestate dilution and/or insufficient sample for analysis.

Where the LOR of a reported result differs from standard LOR, this may be due to high moisture content, insufficient sample (reduced weight employed) or matrix interference.

When sampling time information is not provided by the client, sampling dates are shown without a time component. In these instances, the time component has been assumed by the laboratory for processing purposes.

Key : CAS Number = CAS registry number from database maintained by Chemical Abstracts Services. The Chemical Abstracts Service is a division of the American Chemical Society.

LOR = Limit of reporting

^ = This result is computed from individual analyte detections at or above the level of reporting

- **ED045G (Chloride): LCS recovery falls outside Dynamic Control Limits. It is however within ALS Static Control Limits and hence deemed acceptable.**
- **EG094: It is recognised that total concentration is less than dissolved for some metal analytes. However, the difference is within experimental variation of the methods.**
- **EG094F: Work Order EB918276: Sample #3 results have been confirmed by re- analysis for Zn**
- **EP075: 'Sum of PAH' is the sum of the USEPA 16 priority PAHs**
- **This report has been amended and re-released to allow additional pertinent comments to be added to the report. All analysis results are as per the previous report.**
- **This report has been amended to alter the site details, project reference code or order number. All analysis results are as per the previous report.**
- **UT PAH: LCS recovery for various analytes falls outside Dynamic Control Limits. It is however within USEPA control Limits and hence deemed acceptable.**



Analytical Results

Sub-Matrix: WATER

				Client sample ID				
				20	QA	B	15	27
				17-NOV-2009 06:45	17-NOV-2009 06:45	17-NOV-2009 07:30	17-NOV-2009 10:50	17-NOV-2009 12:30
				Client sampling date / time				
Compound	CAS Number	LOR	Unit	EB0918276-001	EB0918276-002	EB0918276-003	EB0918276-004	EB0918276-005
EA006: Sodium Adsorption Ratio (SAR)								
Sodium Adsorption Ratio	----	0.01	-	3.94	4.15	----	----	2.82
Sodium Adsorption Ratio	----	0.01	-	----	----	<0.01	<0.01	----
EA025: Suspended Solids								
Suspended Solids (SS)	----	5	mg/L	131	123	<5	64	172
EA045: Turbidity								
Turbidity	----	0.1	NTU	----	----	----	950	----
EA065: Total Hardness as CaCO3								
Total Hardness as CaCO3	----	1	mg/L	22	18	<1	<1	4
ED040F: Dissolved Major Anions								
Sulfate as SO4 2-	14808-79-8	1	mg/L	13	12	<1	6	3
ED045G: Chloride Discrete analyser								
Chloride	16887-00-6	1	mg/L	46	46	<1	18	15
ED093F: Dissolved Major Cations								
Calcium	7440-70-2	1	mg/L	2	2	<1	<1	<1
Magnesium	7439-95-4	1	mg/L	4	3	<1	<1	1
Sodium	7440-23-5	1	mg/L	42	40	<1	31	14
EG035F: Dissolved Mercury by FIMS								
Mercury	7439-97-6	0.0001	mg/L	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
EG035T: Total Recoverable Mercury by FIMS								
Mercury	7439-97-6	0.0001	mg/L	<0.0001	<0.0001	<0.0001	0.0001	0.0002
EG094F: Dissolved Metals in Fresh Water by ORC-ICPMS								
Selenium	7782-49-2	0.2	µg/L	<0.2	<0.2	<0.2	0.5	0.4
Arsenic	7440-38-2	0.2	µg/L	0.5	0.5	<0.2	1.8	1.3
Boron	7440-42-8	5	µg/L	15	14	<5	11	18
Cadmium	7440-43-9	0.05	µg/L	<0.05	<0.05	<0.05	<0.05	<0.05
Cobalt	7440-48-4	0.1	µg/L	0.7	0.7	<0.1	0.8	1.3
Copper	7440-50-8	0.5	µg/L	<0.5	<0.5	<0.5	1.5	0.9
Lead	7439-92-1	0.1	µg/L	<0.1	<0.1	<0.1	0.4	0.8
Nickel	7440-02-0	0.5	µg/L	<0.5	<0.5	<0.5	1.2	1.7
Vanadium	7440-62-2	0.2	µg/L	0.4	0.4	<0.2	6.4	6.3
Zinc	7440-66-6	1	µg/L	2	2	2	7	8
EG094T: Total metals in Fresh water by ORC-ICPMS								
Selenium	7782-49-2	0.2	µg/L	0.3	0.3	<0.2	1.5	1.1
Arsenic	7440-38-2	0.2	µg/L	1.3	1.4	<0.2	10.4	4.6
Boron	7440-42-8	5	µg/L	10	10	<5	6	13



Analytical Results

Sub-Matrix: WATER

Client sample ID
 Client sampling date / time

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				EB0918276-001	EB0918276-002	EB0918276-003	EB0918276-004	EB0918276-005
EG094T: Total metals in Fresh water by ORC-ICPMS - Continued								
Cadmium	7440-43-9	0.05	µg/L	<0.05	<0.05	<0.05	0.10	<0.05
Cobalt	7440-48-4	0.1	µg/L	4.3	4.5	<0.1	29.2	16.9
Copper	7440-50-8	0.5	µg/L	4.0	4.1	<0.5	22.6	8.5
Lead	7439-92-1	0.1	µg/L	6.3	6.7	<0.1	27.4	21.5
Nickel	7440-02-0	0.5	µg/L	1.9	2.0	<0.5	18.0	11.7
Vanadium	7440-62-2	0.2	µg/L	21.4	22.7	<0.2	116	60.6
Zinc	7440-66-6	1	µg/L	14	14	<1	91	40
EK040P: Fluoride by PC Titrator								
Fluoride	16984-48-8	0.1	mg/L	<0.1	<0.1	<0.1	<0.1	<0.1
EK057G: Nitrite as N by Discrete Analyser								
Nitrite as N	----	0.01	mg/L	<0.01	<0.01	<0.01	<0.01	0.01
EK058G: Nitrate as N by Discrete Analyser								
Nitrate as N	14797-55-8	0.01	mg/L	0.07	0.06	0.02	0.03	0.06
EK059G: NOX as N by Discrete Analyser								
Nitrite + Nitrate as N	----	0.01	mg/L	0.07	0.06	0.02	0.03	0.08
EP074A: Monocyclic Aromatic Hydrocarbons								
Benzene	71-43-2	1	µg/L	<1	<1	<1	----	<1
Toluene	108-88-3	2	µg/L	<2	<2	<2	----	<2
Ethylbenzene	100-41-4	2	µg/L	<2	<2	<2	----	<2
meta- & para-Xylene	108-38-3 106-42-3	2	µg/L	<2	<2	<2	----	<2
Styrene	100-42-5	5	µg/L	<5	<5	<5	----	<5
ortho-Xylene	95-47-6	2	µg/L	<2	<2	<2	----	<2
Isopropylbenzene	98-82-8	5	µg/L	<5	<5	<5	----	<5
n-Propylbenzene	103-65-1	5	µg/L	<5	<5	<5	----	<5
1.3.5-Trimethylbenzene	108-67-8	5	µg/L	<5	<5	<5	----	<5
sec-Butylbenzene	135-98-8	5	µg/L	<5	<5	<5	----	<5
1.2.4-Trimethylbenzene	95-63-6	5	µg/L	<5	<5	<5	----	<5
tert-Butylbenzene	98-06-6	5	µg/L	<5	<5	<5	----	<5
p-Isopropyltoluene	99-87-6	5	µg/L	<5	<5	<5	----	<5
n-Butylbenzene	104-51-8	5	µg/L	<5	<5	<5	----	<5
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons								
Naphthalene	91-20-3	0.02	µg/L	0.08	<0.02	<0.02	----	<0.02
Acenaphthylene	208-96-8	0.02	µg/L	<0.02	<0.02	<0.02	----	<0.02
Acenaphthene	83-32-9	0.02	µg/L	<0.02	<0.02	<0.02	----	<0.02
Fluorene	86-73-7	0.02	µg/L	<0.02	<0.02	<0.02	----	<0.02
Phenanthrene	85-01-8	0.02	µg/L	<0.02	<0.02	<0.02	----	<0.02



Analytical Results

Sub-Matrix: WATER

Client sample ID
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				EB0918276-001	EB0918276-002	EB0918276-003	EB0918276-004	EB0918276-005
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons - Continued								
Anthracene	120-12-7	0.02	µg/L	<0.02	<0.02	<0.02	----	<0.02
Fluoranthene	206-44-0	0.02	µg/L	<0.02	<0.02	<0.02	----	<0.02
Pyrene	129-00-0	0.02	µg/L	<0.02	<0.02	<0.02	----	<0.02
Benz(a)anthracene	56-55-3	0.02	µg/L	<0.02	<0.02	<0.02	----	<0.02
Chrysene	218-01-9	0.02	µg/L	<0.02	<0.02	<0.02	----	<0.02
Benzo(b)fluoranthene	205-99-2	0.02	µg/L	<0.02	<0.02	<0.02	----	<0.02
Benzo(k)fluoranthene	207-08-9	0.02	µg/L	<0.02	<0.02	<0.02	----	<0.02
Benzo(a)pyrene	50-32-8	0.005	µg/L	<0.005	<0.005	<0.005	----	<0.005
Indeno(1.2.3.cd)pyrene	193-39-5	0.02	µg/L	<0.02	<0.02	<0.02	----	<0.02
Dibenz(a,h)anthracene	53-70-3	0.02	µg/L	<0.02	<0.02	<0.02	----	<0.02
Benzo(g,h,i)perylene	191-24-2	0.02	µg/L	<0.02	<0.02	<0.02	----	<0.02
^ Total PAH	----	0.005	µg/L	<0.005	<0.005	<0.005	----	<0.005
EP075A: Phenolic Compounds								
Phenol	108-95-2	2	µg/L	<2	<2	<2	----	<2
2-Chlorophenol	95-57-8	2	µg/L	<2	<2	<2	----	<2
2-Methylphenol	95-48-7	2	µg/L	<2	<2	<2	----	<2
3- & 4-Methylphenol	1319-77-3	2	µg/L	<4	<4	<4	----	<4
2-Nitrophenol	88-75-5	2	µg/L	<2	<2	<2	----	<2
2,4-Dimethylphenol	105-67-9	2	µg/L	<2	<2	<2	----	<2
2,4-Dichlorophenol	120-83-2	2	µg/L	<2	<2	<2	----	<2
2,6-Dichlorophenol	87-65-0	2	µg/L	<2	<2	<2	----	<2
4-Chloro-3-Methylphenol	59-50-7	2	µg/L	<2	<2	<2	----	<2
2,4,6-Trichlorophenol	88-06-2	2	µg/L	<2	<2	<2	----	<2
2,4,5-Trichlorophenol	95-95-4	2	µg/L	<2	<2	<2	----	<2
Pentachlorophenol	87-86-5	4	µg/L	<4	<4	<4	----	<4
EP080/071: Total Petroleum Hydrocarbons								
C6 - C9 Fraction	----	20	µg/L	<20	<20	<20	<20	<20
C10 - C14 Fraction	----	50	µg/L	<50	<50	<50	<50	<50
C15 - C28 Fraction	----	100	µg/L	210	180	<100	220	270
C29 - C36 Fraction	----	50	µg/L	80	90	<50	90	80
^ C10 - C36 Fraction (sum)	----	50	µg/L	290	270	<50	310	350
EP130A: Organophosphorus Pesticides (Ultra-trace)								
Bromophos-ethyl	4824-78-6	0.02	µg/L	<0.02	<0.02	<0.02	----	<0.02
Carbophenothion	786-19-6	0.02	µg/L	<0.02	<0.02	<0.02	----	<0.02
Chlorfenvinphos (E)	18708-86-6	0.02	µg/L	<0.02	<0.02	<0.02	----	<0.02
Chlorfenvinphos (Z)	18708-87-7	0.02	µg/L	<0.02	<0.02	<0.02	----	<0.02



Analytical Results

Sub-Matrix: WATER

Client sample ID

Client sampling date / time

Compound	CAS Number	LOR	Unit	20	QA	B	15	27
				17-NOV-2009 06:45	17-NOV-2009 06:45	17-NOV-2009 07:30	17-NOV-2009 10:50	17-NOV-2009 12:30
				EB0918276-001	EB0918276-002	EB0918276-003	EB0918276-004	EB0918276-005
EP130A: Organophosphorus Pesticides (Ultra-trace) - Continued								
Chlorpyrifos	2921-88-2	0.010	µg/L	<0.010	<0.010	<0.010	----	<0.010
Chlorpyrifos-methyl	5598-13-0	0.02	µg/L	<0.02	<0.02	<0.02	----	<0.02
Demeton-S-methyl	919-86-8	0.02	µg/L	<0.02	<0.02	<0.02	----	<0.02
Diazinon	333-41-5	0.02	µg/L	<0.02	<0.02	<0.02	----	<0.02
Dichlorvos	62-73-7	0.02	µg/L	<0.02	<0.02	<0.02	----	<0.02
Dimethoate	60-51-5	0.02	µg/L	<0.02	<0.02	<0.02	----	<0.02
Ethion	563-12-2	0.02	µg/L	<0.02	<0.02	<0.02	----	<0.02
Fenamiphos	22224-92-6	0.02	µg/L	<0.02	<0.02	<0.02	----	<0.02
Fenthion	55-38-9	0.02	µg/L	<0.02	<0.02	<0.02	----	<0.02
Malathion	121-75-5	0.02	µg/L	<0.02	<0.02	<0.02	----	<0.02
Azinphos Methyl	86-50-0	0.02	µg/L	<0.02	<0.02	<0.02	----	<0.02
Monocrotophos	6923-22-4	0.02	µg/L	<0.02	<0.02	<0.02	----	<0.02
Parathion	56-38-2	0.02	µg/L	<0.02	<0.02	<0.02	----	<0.02
Parathion-methyl	298-00-0	0.02	µg/L	<0.02	<0.02	<0.02	----	<0.02
Pirimphos-ethyl	23505-41-1	0.02	µg/L	<0.02	<0.02	<0.02	----	<0.02
Prothiofos	34643-46-4	0.02	µg/L	<0.02	<0.02	<0.02	----	<0.02
EP131A: Organochlorine Pesticides								
Aldrin	309-00-2	0.002	µg/L	<0.002	<0.002	<0.002	----	<0.002
alpha-BHC	319-84-6	0.002	µg/L	<0.002	<0.002	<0.002	----	<0.002
beta-BHC	319-85-7	0.002	µg/L	<0.002	<0.002	<0.002	----	<0.002
delta-BHC	319-86-8	0.002	µg/L	<0.002	<0.002	<0.002	----	<0.002
4.4'-DDD	72-54-8	0.002	µg/L	<0.002	<0.002	<0.002	----	<0.002
4.4'-DDE	72-55-9	0.002	µg/L	<0.002	<0.002	<0.002	----	<0.002
4.4'-DDT	50-29-3	0.002	µg/L	<0.002	<0.002	<0.002	----	<0.002
^ DDT (total)	----	0.002	µg/L	<0.002	<0.002	<0.002	----	<0.002
Dieldrin	60-57-1	0.002	µg/L	<0.002	<0.002	<0.002	----	<0.002
alpha-Endosulfan	959-98-8	0.002	µg/L	<0.002	<0.002	<0.002	----	<0.002
beta-Endosulfan	33213-65-9	0.002	µg/L	<0.002	<0.002	<0.002	----	<0.002
Endosulfan sulfate	1031-07-8	0.002	µg/L	<0.002	<0.002	<0.002	----	<0.002
^ Endosulfan (sum)	115-29-7	0.002	µg/L	<0.002	<0.002	<0.002	----	<0.002
Endrin	72-20-8	0.002	µg/L	<0.002	<0.002	<0.002	----	<0.002
Endrin aldehyde	7421-93-4	0.002	µg/L	<0.002	<0.002	<0.002	----	<0.002
Endrin ketone	53494-70-5	0.002	µg/L	<0.002	<0.002	<0.002	----	<0.002
Heptachlor	76-44-8	0.001	µg/L	<0.001	<0.001	<0.001	----	<0.001
Heptachlor epoxide	1024-57-3	0.002	µg/L	<0.002	<0.002	<0.002	----	<0.002
Hexachlorobenzene (HCB)	118-74-1	0.002	µg/L	<0.002	<0.002	<0.002	----	<0.002



Analytical Results

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				Client sampling date / time				
Compound	CAS Number	LOR	Unit	EB0918276-001	EB0918276-002	EB0918276-003	EB0918276-004	EB0918276-005
EP131A: Organochlorine Pesticides - Continued								
gamma-BHC	58-89-9	0.002	µg/L	<0.002	<0.002	<0.002	----	<0.002
Methoxychlor	72-43-5	0.002	µg/L	<0.002	<0.002	<0.002	----	<0.002
cis-Chlordane	5103-71-9	0.002	µg/L	<0.002	<0.002	<0.002	----	<0.002
trans-Chlordane	5103-74-2	0.002	µg/L	<0.002	<0.002	<0.002	----	<0.002
^ Total Chlordane (sum)	----	0.002	µg/L	<0.002	<0.002	<0.002	----	<0.002
^ Oxychlordane	27304-13-8	0.002	µg/L	<0.002	<0.002	<0.002	----	<0.002
Ultra-Trace Nutrients								
Ammonia as N	7664-41-7	0.005	mg/L	0.120	0.120	0.047	0.099	0.095
Total Nitrogen as N	----	0.05	mg/L	0.43	0.43	<0.05	0.90	0.88
Total Phosphorus as P	----	0.005	mg/L	1.08	1.22	<0.005	0.730	0.438
EP074S: VOC Surrogates								
1,2-Dichloroethane-D4	17060-07-0	0.1	%	87.4	85.3	82.7	----	86.8
Toluene-D8	2037-26-5	0.1	%	107	106	108	----	107
4-Bromofluorobenzene	460-00-4	0.1	%	90.0	97.0	89.6	----	88.1
EP075S: Acid Extractable Surrogates								
2-Fluorophenol	367-12-4	0.1	%	39.0	42.9	46.8	----	40.6
Phenol-d6	13127-88-3	0.1	%	25.6	27.6	32.7	----	27.4
2-Chlorophenol-D4	93951-73-6	0.1	%	62.2	67.1	77.8	----	67.5
2,4,6-Tribromophenol	118-79-6	0.1	%	83.4	88.8	79.6	----	95.0
EP075T: Base/Neutral Extractable Surrogates								
Nitrobenzene-D5	4165-60-0	0.1	%	69.6	74.8	88.9	----	75.9
1,2-Dichlorobenzene-D4	2199-69-1	0.1	%	61.4	66.2	77.2	----	65.7
2-Fluorobiphenyl	321-60-8	0.1	%	68.6	73.0	90.1	----	74.6
Anthracene-d10	1719-06-8	0.1	%	84.0	87.9	101	----	92.4
4-Terphenyl-d14	1718-51-0	0.1	%	91.4	94.6	113	----	102
EP080S: TPH(V)/BTEX Surrogates								
1,2-Dichloroethane-D4	17060-07-0	0.1	%	101	99.3	96.5	101	102
Toluene-D8	2037-26-5	0.1	%	107	102	104	103	107
4-Bromofluorobenzene	460-00-4	0.1	%	94.1	102	89.6	100	91.5
EP130S: Organophosphorus Pesticide Surrogate								
DEF	78-48-8	0.1	%	89.5	93.8	86.7	----	84.1
EP131S: OC Pesticide Surrogate								
Dibromo-DDE	21655-73-2	0.1	%	83.0	91.0	88.5	----	73.0
EP132T: Base/Neutral Extractable Surrogates								
2-Fluorobiphenyl	321-60-8	0.1	%	107	92.2	106	----	106
Anthracene-d10	1719-06-8	0.1	%	79.4	80.6	98.7	----	83.8



Analytical Results

Sub-Matrix: **WATER**

				Client sample ID	20	QA	B	15	27
				Client sampling date / time	17-NOV-2009 06:45	17-NOV-2009 06:45	17-NOV-2009 07:30	17-NOV-2009 10:50	17-NOV-2009 12:30
Compound	CAS Number	LOR	Unit		EB0918276-001	EB0918276-002	EB0918276-003	EB0918276-004	EB0918276-005
EP132T: Base/Neutral Extractable Surrogates - Continued									
4-Terphenyl-d14	1718-51-0	0.1	%		82.1	86.7	85.8	----	83.6



Analytical Results

Sub-Matrix: **WATER**

			Client sample ID	33	---	---	---	---
			Client sampling date / time	17-NOV-2009 13:15	---	---	---	---
Compound	CAS Number	LOR	Unit	EB0918276-006	---	---	---	---
EA006: Sodium Adsorption Ratio (SAR)								
Sodium Adsorption Ratio	---	0.01	-	0.72	---	---	---	---
EA025: Suspended Solids								
Suspended Solids (SS)	---	5	mg/L	21	---	---	---	---
EA065: Total Hardness as CaCO3								
Total Hardness as CaCO3	---	1	mg/L	14	---	---	---	---
ED040F: Dissolved Major Anions								
Sulfate as SO4 2-	14808-79-8	1	mg/L	2	---	---	---	---
ED045G: Chloride Discrete analyser								
Chloride	16887-00-6	1	mg/L	4	---	---	---	---
ED093F: Dissolved Major Cations								
Calcium	7440-70-2	1	mg/L	3	---	---	---	---
Magnesium	7439-95-4	1	mg/L	2	---	---	---	---
Sodium	7440-23-5	1	mg/L	6	---	---	---	---
EG035F: Dissolved Mercury by FIMS								
Mercury	7439-97-6	0.0001	mg/L	<0.0001	---	---	---	---
EG035T: Total Recoverable Mercury by FIMS								
Mercury	7439-97-6	0.0001	mg/L	<0.0001	---	---	---	---
EG094F: Dissolved Metals in Fresh Water by ORC-ICPMS								
Selenium	7782-49-2	0.2	µg/L	<0.2	---	---	---	---
Arsenic	7440-38-2	0.2	µg/L	1.6	---	---	---	---
Boron	7440-42-8	5	µg/L	15	---	---	---	---
Cadmium	7440-43-9	0.05	µg/L	<0.05	---	---	---	---
Cobalt	7440-48-4	0.1	µg/L	0.8	---	---	---	---
Copper	7440-50-8	0.5	µg/L	1.8	---	---	---	---
Lead	7439-92-1	0.1	µg/L	1.0	---	---	---	---
Nickel	7440-02-0	0.5	µg/L	2.7	---	---	---	---
Vanadium	7440-62-2	0.2	µg/L	4.4	---	---	---	---
Zinc	7440-66-6	1	µg/L	9	---	---	---	---
EG094T: Total metals in Fresh water by ORC-ICPMS								
Selenium	7782-49-2	0.2	µg/L	<0.2	---	---	---	---
Arsenic	7440-38-2	0.2	µg/L	1.9	---	---	---	---
Boron	7440-42-8	5	µg/L	11	---	---	---	---
Cadmium	7440-43-9	0.05	µg/L	<0.05	---	---	---	---
Cobalt	7440-48-4	0.1	µg/L	1.1	---	---	---	---
Copper	7440-50-8	0.5	µg/L	2.1	---	---	---	---
Lead	7439-92-1	0.1	µg/L	2.2	---	---	---	---



Analytical Results

Sub-Matrix: **WATER**

			Client sample ID	33	----	----	----	----
			Client sampling date / time	17-NOV-2009 13:15	----	----	----	----
Compound	CAS Number	LOR	Unit	EB0918276-006	----	----	----	----
EG094T: Total metals in Fresh water by ORC-ICPMS - Continued								
Nickel	7440-02-0	0.5	µg/L	2.8	----	----	----	----
Vanadium	7440-62-2	0.2	µg/L	5.7	----	----	----	----
Zinc	7440-66-6	1	µg/L	8	----	----	----	----
EK040P: Fluoride by PC Titrator								
Fluoride	16984-48-8	0.1	mg/L	<0.1	----	----	----	----
EK057G: Nitrite as N by Discrete Analyser								
Nitrite as N	----	0.01	mg/L	<0.01	----	----	----	----
EK058G: Nitrate as N by Discrete Analyser								
Nitrate as N	14797-55-8	0.01	mg/L	0.02	----	----	----	----
EK059G: NOX as N by Discrete Analyser								
Nitrite + Nitrate as N	----	0.01	mg/L	0.02	----	----	----	----
EP080/071: Total Petroleum Hydrocarbons								
C6 - C9 Fraction	----	20	µg/L	<20	----	----	----	----
C10 - C14 Fraction	----	50	µg/L	70	----	----	----	----
C15 - C28 Fraction	----	100	µg/L	260	----	----	----	----
C29 - C36 Fraction	----	50	µg/L	80	----	----	----	----
^ C10 - C36 Fraction (sum)	----	50	µg/L	410	----	----	----	----
Ultra-Trace Nutrients								
Ammonia as N	7664-41-7	0.005	mg/L	0.033	----	----	----	----
Total Nitrogen as N	----	0.05	mg/L	0.25	----	----	----	----
Total Phosphorus as P	----	0.005	mg/L	0.170	----	----	----	----
EP080S: TPH(V)/BTEX Surrogates								
1,2-Dichloroethane-D4	17060-07-0	0.1	%	97.7	----	----	----	----
Toluene-D8	2037-26-5	0.1	%	98.3	----	----	----	----
4-Bromofluorobenzene	460-00-4	0.1	%	96.5	----	----	----	----



Surrogate Control Limits

Sub-Matrix: WATER		Recovery Limits (%)	
Compound	CAS Number	Low	High
EP074S: VOC Surrogates			
1,2-Dichloroethane-D4	17060-07-0	80	120
Toluene-D8	2037-26-5	88	110
4-Bromofluorobenzene	460-00-4	86	115
EP075S: Acid Extractable Surrogates			
2-Fluorophenol	367-12-4	21	100
Phenol-d6	13127-88-3	10	94
2-Chlorophenol-D4	93951-73-6	23	134
2,4,6-Tribromophenol	118-79-6	10	123
EP075T: Base/Neutral Extractable Surrogates			
Nitrobenzene-D5	4165-60-0	35	114
1,2-Dichlorobenzene-D4	2199-69-1	32	129
2-Fluorobiphenyl	321-60-8	43	116
Anthracene-d10	1719-06-8	27	133
4-Terphenyl-d14	1718-51-0	33	141
EP080S: TPH(V)/BTEX Surrogates			
1,2-Dichloroethane-D4	17060-07-0	80	120
Toluene-D8	2037-26-5	88	110
4-Bromofluorobenzene	460-00-4	86	115
EP130S: Organophosphorus Pesticide Surrogate			
DEF	78-48-8	----	----
EP131S: OC Pesticide Surrogate			
Dibromo-DDE	21655-73-2	----	----
EP132T: Base/Neutral Extractable Surrogates			
2-Fluorobiphenyl	321-60-8	57.6	113
Anthracene-d10	1719-06-8	60.4	125
4-Terphenyl-d14	1718-51-0	58.2	128

23 February 2010

Report No. ACS093793R

ALS Environmental
32 Shand St
Stafford, OLD, 4053

Dear Michael,

Date of Sample Receipt: 24th November 2009
No. of Samples Received: 4

Results (mg/L)

Sample ID:	Reference No.	Lab No:	TEG
20	EB0918276-1	3793-1	< 5
QA	EB0918276-2	3793-2	< 5
B	EB0918276-3	3793-3	< 5
27	EB0918276-5	3793-4	< 5

QC Data

Blank	-	-	< 5
Blank Spike	-	-	83%
Matrix Spike	EB0918276-1	3793-1	91%

Method: ACS-TM-AM-003

Yours faithfully,
ACS Laboratories (Australia)

Craig Hicks
Business Development Manager

SAMPLE RECEIPT NOTIFICATION (SRN)

Comprehensive Report

Work Order	: EB0918288		
Amendment	: 1		
Client	: ALLUVIUM CONSULTING	Laboratory	: Environmental Division Brisbane
Contact	: MS MARTINE ADRIAANSEN	Contact	: Greg Vogel
Address	: PO BOX 1581 TOWNSVILLE QLD, AUSTRALIA 4810	Address	: 32 Shand Street Stafford QLD Australia 4053
E-mail	: martine@natres.com.au	E-mail	: Services.Brisbane@alsenviro.com
Telephone	: +61 07 47242170	Telephone	: +61 7 3243 7222
Facsimile	: ----	Facsimile	: +61 7 3243 7218
Project	: Surat Gas Project EIS	Page	: 1 of 3
Order number	: ----		
C-O-C number	: ----	Quote number	: EB2009ALLUVI0051 (BN/637/09)
Site	: Surat Gas Project		
Sampler	: A.C & M.A	QC Level	: NEPM 1999 Schedule B(3) and ALS QCS3 requirement

Dates

Date Samples Received	: 19-NOV-2009	Issue Date	: 05-DEC-2011 15:21
Client Requested Due Date	: 30-NOV-2009	Scheduled Reporting Date	: 30-NOV-2009

Delivery Details

Mode of Delivery	: Carrier	Temperature	: 15.4°C - Ice present
No. of coolers/boxes	: 3 LARGE	No. of samples received	: 4
Security Seal	: Intact.	No. of samples analysed	: 4

General Comments

- This report contains the following information:
 - Sample Container(s)/Preservation Non-Compliances
 - Summary of Sample(s) and Requested Analysis
 - Proactive Holding Time Report
 - Requested Deliverables
- **Samples received in appropriately pretreated and preserved containers.**
- **Please refer to the Proactive Holding Time Report table below which summarises breaches of recommended holding times that have occurred prior to samples/instructions being received at the laboratory. The absence of this summary table indicates that all samples have been received within the recommended holding times for the analysis requested.**
- Please direct any turn around / technical queries to the laboratory contact designated above.
- Please direct any queries related to sample condition / numbering / breakages to Maggie Kahi.
- Analytical work for this work order will be conducted at ALS Brisbane.
- Sample Disposal - Aqueous (14 days), Solid (90 days) from date of completion of work order.



Sample Container(s)/Preservation Non-Compliances

All comparisons are made against pretreatment/preservation AS, APHA, USEPA standards.

- No sample container / preservation non-compliance exist.

Summary of Sample(s) and Requested Analysis

Some items described below may be part of a laboratory process necessary for the execution of client requested tasks. Packages may contain additional analyses, such as the determination of moisture content and preparation tasks, that are included in the package.

If no sampling time is provided, the sampling time will default to 15:00 on the date of sampling. If no sampling date is provided, the sampling date will be assumed by the laboratory for processing purposes and will be shown bracketed without a time component.

Matrix: **WATER**

Laboratory sample ID	Client sampling date / time	Client sample ID
EB0918288-001	17-NOV-2009 15:30	17
EB0918288-002	17-NOV-2009 15:00	16
EB0918288-003	18-NOV-2009 15:00	8
EB0918288-004	18-NOV-2009 15:00	A5

WATER - EA006 Sodium Adsorption Ratio	WATER - EA025H Suspended Solids (High Level)	WATER - EA045 Turbidity	WATER - EA065 Total Hardness as CaCO3	WATER - ED040F Dissolved Major Anions	WATER - ED045G Chloride by Discrete Analyser	WATER - EG035F Dissolved Mercury by FIMS	WATER - EG035T Total Mercury by FIMS
✓	✓	✓	✓	✓	✓	✓	✓
✓	✓		✓	✓	✓	✓	✓
✓	✓		✓	✓	✓	✓	✓
✓	✓	✓	✓	✓	✓	✓	✓

Matrix: **WATER**

Laboratory sample ID	Client sampling date / time	Client sample ID
EB0918288-001	17-NOV-2009 15:30	17
EB0918288-002	17-NOV-2009 15:00	16
EB0918288-003	18-NOV-2009 15:00	8
EB0918288-004	18-NOV-2009 15:00	A5

WATER - EG094A-F Dissolved Metals in Fresh Water Suite A by ORC-ICPMS	WATER - EG094A-T Total Metals in Fresh water Suite A by ORC-ICPMS	WATER - EG094B-F Dissolved Metals in fresh water Suite B by ORC-ICPMS	WATER - EG094B-T Total Metals in Fresh Water Suite B by ORC-ICPMS	WATER - EK040-P Fluoride(PC)	WATER - EK255A-CM Ammonia as N (Ultra-trace by Flow Injection Analysis) for Catchment	WATER - NT-04 Nitrite and Nitrate	WATER - TPH TPH (fractions)
✓	✓	✓	✓	✓	✓	✓	✓
✓	✓	✓	✓	✓	✓	✓	✓
✓	✓	✓	✓	✓	✓	✓	✓
✓	✓	✓	✓	✓	✓	✓	✓

Matrix: **WATER**

Laboratory sample ID	Client sampling date / time	Client sample ID
EB0918288-001	17-NOV-2009 15:30	17
EB0918288-002	17-NOV-2009 15:00	16
EB0918288-003	18-NOV-2009 15:00	8
EB0918288-004	18-NOV-2009 15:00	A5

WATER - UTN-1 Ultratrace Nitrogen (Total) and Phosphorus (Total)
✓
✓
✓
✓



Proactive Holding Time Report

Sample(s) have been received within the recommended holding times for the requested analysis.

Requested Deliverables

MR JASON CARTER

- *AU Certificate of Analysis - NATA (COA)	Email	jason.carter@alluvium.com.au
- *AU Interpretive QC Report - DEFAULT (Anon QCI Rep) (QCI)	Email	jason.carter@alluvium.com.au
- *AU QC Report - DEFAULT (Anon QC Rep) - NATA (QC)	Email	jason.carter@alluvium.com.au
- A4 - AU Sample Receipt Notification - Environmental (SRN)	Email	jason.carter@alluvium.com.au
- A4 - AU Tax Invoice (INV)	Email	jason.carter@alluvium.com.au
- Default - Chain of Custody (COC)	Email	jason.carter@alluvium.com.au
- EDI Format - ENMRG (ENMRG)	Email	jason.carter@alluvium.com.au

MS ANNE MARIE CALVI

- *AU Certificate of Analysis - NATA (COA)	Email	anne-marie@natres.com.au
- *AU Interpretive QC Report - DEFAULT (Anon QCI Rep) (QCI)	Email	anne-marie@natres.com.au
- *AU QC Report - DEFAULT (Anon QC Rep) - NATA (QC)	Email	anne-marie@natres.com.au
- A4 - AU Sample Receipt Notification - Environmental (SRN)	Email	anne-marie@natres.com.au
- A4 - AU Tax Invoice (INV)	Email	anne-marie@natres.com.au
- Default - Chain of Custody (COC)	Email	anne-marie@natres.com.au
- EDI Format - ENMRG (ENMRG)	Email	anne-marie@natres.com.au
- EDI Format - XTab (XTAB)	Email	anne-marie@natres.com.au

MS MARTINE ADRIAANSEN

- *AU Certificate of Analysis - NATA (COA)	Email	martine@natres.com.au
- *AU Interpretive QC Report - DEFAULT (Anon QCI Rep) (QCI)	Email	martine@natres.com.au
- *AU QC Report - DEFAULT (Anon QC Rep) - NATA (QC)	Email	martine@natres.com.au
- A4 - AU Sample Receipt Notification - Environmental (SRN)	Email	martine@natres.com.au
- A4 - AU Tax Invoice (INV)	Email	martine@natres.com.au
- Default - Chain of Custody (COC)	Email	martine@natres.com.au
- EDI Format - ENMRG (ENMRG)	Email	martine@natres.com.au
- EDI Format - XTab (XTAB)	Email	martine@natres.com.au

QUALITY CONTROL REPORT

Work Order	: EB0918288	Page	: 1 of 9
Amendment	: 1		
Client	: ALLUVIUM CONSULTING	Laboratory	: Environmental Division Brisbane
Contact	: MS MARTINE ADRIAANSEN	Contact	: Greg Vogel
Address	: PO BOX 1581 TOWNSVILLE QLD, AUSTRALIA 4810	Address	: 32 Shand Street Stafford QLD Australia 4053
E-mail	: martine@natres.com.au	E-mail	: Services.Brisbane@alsenviro.com
Telephone	: +61 07 47242170	Telephone	: +61 7 3243 7222
Facsimile	: ----	Facsimile	: +61 7 3243 7218
Project	: Surat Gas Project EIS	QC Level	: NEPM 1999 Schedule B(3) and ALS QCS3 requirement
Site	: Surat Gas Project		
C-O-C number	: ----	Date Samples Received	: 19-NOV-2009
Sampler	: A.C & M.A	Issue Date	: 05-DEC-2011
Order number	: ----		
Quote number	: BN/637/09	No. of samples received	: 4
		No. of samples analysed	: 4

This report supersedes any previous report(s) with this reference. Results apply to the sample(s) as submitted. All pages of this report have been checked and approved for release.

This Quality Control Report contains the following information:

- Laboratory Duplicate (DUP) Report; Relative Percentage Difference (RPD) and Acceptance Limits
- Method Blank (MB) and Laboratory Control Spike (LCS) Report; Recovery and Acceptance Limits
- Matrix Spike (MS) Report; Recovery and Acceptance Limits



NATA Accredited Laboratory 825

This document is issued in accordance with NATA accreditation requirements.

Accredited for compliance with ISO/IEC 17025.

Signatories

This document has been electronically signed by the authorized signatories indicated below. Electronic signing has been carried out in compliance with procedures specified in 21 CFR Part 11.

<i>Signatories</i>	<i>Position</i>	<i>Accreditation Category</i>
Celine Conceicao	Senior Spectroscopist	Sydney Inorganics
Hoa Nguyen	Inorganic Chemist	Sydney Inorganics
Kim McCabe	Senior Inorganic Chemist	Brisbane Inorganics
Matt Frost	Senior Organic Chemist	Brisbane Organics
Stephen Hislop	Senior Inorganic Chemist	Brisbane Inorganics



General Comments

The analytical procedures used by the Environmental Division have been developed from established internationally recognized procedures such as those published by the USEPA, APHA, AS and NEPM. In house developed procedures are employed in the absence of documented standards or by client request.

Where moisture determination has been performed, results are reported on a dry weight basis.

Where a reported less than (<) result is higher than the LOR, this may be due to primary sample extract/digestate dilution and/or insufficient sample for analysis.

Where the LOR of a reported result differs from standard LOR, this may be due to high moisture content, insufficient sample (reduced weight employed) or matrix interference.

Key :
Anonymous = Refers to samples which are not specifically part of this work order but formed part of the QC process lot
CAS Number = CAS registry number from database maintained by Chemical Abstracts Services. The Chemical Abstracts Service is a division of the American Chemical Society.
LOR = Limit of reporting
RPD = Relative Percentage Difference
= Indicates failed QC



Laboratory Duplicate (DUP) Report

The quality control term Laboratory Duplicate refers to a randomly selected intralaboratory split. Laboratory duplicates provide information regarding method precision and sample heterogeneity. The permitted ranges for the Relative Percent Deviation (RPD) of Laboratory Duplicates are specified in ALS Method QWI-EN/38 and are dependent on the magnitude of results in comparison to the level of reporting: Result < 10 times LOR:- No Limit; Result between 10 and 20 times LOR:- 0% - 50%; Result > 20 times LOR:- 0% - 20%.

Sub-Matrix: **WATER**

				Laboratory Duplicate (DUP) Report					
Laboratory sample ID	Client sample ID	Method: Compound	CAS Number	LOR	Unit	Original Result	Duplicate Result	RPD (%)	Recovery Limits (%)
EB0918238-001	Anonymous	EA025H: Suspended Solids (SS)	----	5	mg/L	46	46	0.0	No Limit
EB0918288-001	17	EA025H: Suspended Solids (SS)	----	5	mg/L	757	747	1.3	0% - 20%
EB0918276-004	Anonymous	EA045: Turbidity	----	0.1	NTU	950	950	0.0	0% - 20%
EB0918179-001	Anonymous	ED040F: Sulfate as SO4 2-	14808-79-8	1	mg/L	783	816	4.2	0% - 20%
EB0918296-001	Anonymous	ED040F: Sulfate as SO4 2-	14808-79-8	1	mg/L	3110	3180	2.3	0% - 20%
EB0918179-001	Anonymous	ED045G: Chloride	16887-00-6	1	mg/L	249	249	0.0	0% - 20%
EB0918288-001	17	ED045G: Chloride	16887-00-6	1	mg/L	7	7	0.0	No Limit
EB0918179-001	Anonymous	ED093F: Calcium	7440-70-2	1	mg/L	64	64	0.0	0% - 20%
		ED093F: Magnesium	7439-95-4	1	mg/L	4	4	0.0	No Limit
		ED093F: Sodium	7440-23-5	1	mg/L	1210	1220	0.7	0% - 20%
EB0918288-001	17	ED093F: Calcium	7440-70-2	1	mg/L	6	6	0.0	No Limit
		ED093F: Magnesium	7439-95-4	1	mg/L	3	3	0.0	No Limit
		ED093F: Sodium	7440-23-5	1	mg/L	12	12	0.0	0% - 50%
ES0917683-001	Anonymous	EG035T: Mercury	7439-97-6	0.0001	mg/L	<0.0001	<0.0001	0.0	No Limit
ES0917556-003	Anonymous	EG035T: Mercury	7439-97-6	0.0001	mg/L	<0.0001	<0.0001	0.0	No Limit
EB0918276-003	Anonymous	EG094A-F: Cadmium	7440-43-9	0.05	µg/L	<0.05	<0.05	0.0	No Limit
		EG094A-F: Cobalt	7440-48-4	0.1	µg/L	<0.1	<0.1	0.0	No Limit
		EG094A-F: Lead	7439-92-1	0.1	µg/L	<0.1	<0.1	0.0	No Limit
		EG094A-F: Arsenic	7440-38-2	0.2	µg/L	<0.2	<0.2	0.0	No Limit
		EG094A-F: Vanadium	7440-62-2	0.2	µg/L	<0.2	<0.2	0.0	No Limit
		EG094A-F: Copper	7440-50-8	0.5	µg/L	<0.5	<0.5	0.0	No Limit
		EG094A-F: Nickel	7440-02-0	0.5	µg/L	<0.5	<0.5	0.0	No Limit
		EG094A-F: Zinc	7440-66-6	1	µg/L	2	2	0.0	No Limit
		EG094A-F: Boron	7440-42-8	5	µg/L	<5	<5	0.0	No Limit
EB0918288-004	A5	EG094A-F: Cadmium	7440-43-9	0.05	µg/L	<0.05	<0.05	0.0	No Limit
		EG094A-F: Cobalt	7440-48-4	0.1	µg/L	1.4	1.4	0.0	0% - 50%
		EG094A-F: Lead	7439-92-1	0.1	µg/L	0.2	0.2	0.0	No Limit
		EG094A-F: Arsenic	7440-38-2	0.2	µg/L	1.1	1.1	0.0	No Limit
		EG094A-F: Vanadium	7440-62-2	0.2	µg/L	2.6	2.6	0.0	0% - 50%



Sub-Matrix: **WATER**

				Laboratory Duplicate (DUP) Report					
Laboratory sample ID	Client sample ID	Method: Compound	CAS Number	LOR	Unit	Original Result	Duplicate Result	RPD (%)	Recovery Limits (%)
EB0918288-004	A5	EG094A-F: Copper	7440-50-8	0.5	µg/L	0.9	1.0	0.0	No Limit
		EG094A-F: Nickel	7440-02-0	0.5	µg/L	1.8	1.8	0.0	No Limit
		EG094A-F: Zinc	7440-66-6	1	µg/L	16	18	10.0	0% - 50%
		EG094A-F: Boron	7440-42-8	5	µg/L	30	28	4.2	No Limit
EB0918276-003	Anonymous	EG094B-F: Selenium	7782-49-2	0.2	µg/L	<0.2	<0.2	0.0	No Limit
EB0918276-003	Anonymous	EG094A-T: Cadmium	7440-43-9	0.05	µg/L	<0.05	<0.05	0.0	No Limit
		EG094A-T: Cobalt	7440-48-4	0.1	µg/L	<0.1	<0.1	0.0	No Limit
		EG094A-T: Lead	7439-92-1	0.1	µg/L	<0.1	<0.1	0.0	No Limit
		EG094A-T: Arsenic	7440-38-2	0.2	µg/L	<0.2	<0.2	0.0	No Limit
		EG094A-T: Vanadium	7440-62-2	0.2	µg/L	<0.2	<0.2	0.0	No Limit
		EG094A-T: Copper	7440-50-8	0.5	µg/L	<0.5	<0.5	0.0	No Limit
		EG094A-T: Nickel	7440-02-0	0.5	µg/L	<0.5	<0.5	0.0	No Limit
		EG094A-T: Zinc	7440-66-6	1	µg/L	<1	<1	0.0	No Limit
EG094A-T: Boron	7440-42-8	5	µg/L	<5	<5	0.0	No Limit		
EB0918276-003	Anonymous	EG094B-T: Selenium	7782-49-2	0.2	µg/L	<0.2	<0.2	0.0	No Limit
EB0918276-002	Anonymous	EK040P: Fluoride	16984-48-8	0.1	mg/L	<0.1	<0.1	0.0	No Limit
EB0918359-001	Anonymous	EK040P: Fluoride	16984-48-8	0.1	mg/L	0.6	0.6	0.0	No Limit
EB0918288-001	17	EK057G: Nitrite as N	----	0.01	mg/L	0.08	0.08	0.0	No Limit
EB0918354-004	Anonymous	EK057G: Nitrite as N	----	0.01	mg/L	0.02	0.02	0.0	No Limit
EB0918269-001	Anonymous	EK059G: Nitrite + Nitrate as N	----	0.01	mg/L	0.11	0.10	0.0	0% - 50%
EB0918276-005	Anonymous	EK059G: Nitrite + Nitrate as N	----	0.01	mg/L	0.08	0.06	0.0	No Limit
EB0918222-001	Anonymous	EP080: C6 - C9 Fraction	----	20	µg/L	30	30	0.0	No Limit
EB0918288-003	8	EP080: C6 - C9 Fraction	----	20	µg/L	<20	<20	0.0	No Limit
EB0918394-034	Anonymous	EP071: C15 - C28 Fraction	----	100	µg/L	170	160	9.4	No Limit
		EP071: C10 - C14 Fraction	----	50	µg/L	<50	<50	0.0	No Limit
		EP071: C29 - C36 Fraction	----	50	µg/L	80	60	15.3	No Limit
EB0918288-001	17	EK255A-CM: Ammonia as N	7664-41-7	0.005	mg/L	0.070	0.062	11.8	0% - 50%
EB0918288-001	17	EK267PA-CM: Total Phosphorus as P	----	0.005	mg/L	0.353	0.374	5.8	0% - 20%

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 Work Order : EB0918288 Amendment 1
 Client : ALLUVIUM CONSULTING
 Project : Surat Gas Project EIS



Sub-Matrix: **WATER**

Laboratory Duplicate (DUP) Report

<i>Laboratory sample ID</i>	<i>Client sample ID</i>	<i>Method: Compound</i>	<i>CAS Number</i>	<i>LOR</i>	<i>Unit</i>	<i>Original Result</i>	<i>Duplicate Result</i>	<i>RPD (%)</i>	<i>Recovery Limits (%)</i>
EB0918288-001	17	EK262PA-CM: Total Nitrogen as N	----	0.05	mg/L	2.40	2.32	3.6	0% - 20%



Method Blank (MB) and Laboratory Control Spike (LCS) Report

The quality control term Method / Laboratory Blank refers to an analyte free matrix to which all reagents are added in the same volumes or proportions as used in standard sample preparation. The purpose of this QC parameter is to monitor potential laboratory contamination. The quality control term Laboratory Control Sample (LCS) refers to a certified reference material, or a known interference free matrix spiked with target analytes. The purpose of this QC parameter is to monitor method precision and accuracy independent of sample matrix. Dynamic Recovery Limits are based on statistical evaluation of processed LCS.

Sub-Matrix: WATER

				Method Blank (MB) Report	Laboratory Control Spike (LCS) Report			
Method: Compound	CAS Number	LOR	Unit	Result	Spike Concentration	Spike Recovery (%) LCS	Recovery Limits (%) Low High	
EA025: Suspended Solids (QCLot: 1172442)								
EA025H: Suspended Solids (SS)	----	5	mg/L	<5	150 mg/L	96.0	86	108
EA045: Turbidity (QCLot: 1169854)								
EA045: Turbidity	----	0.1	NTU	<0.1	40.0 NTU	100	96	104
ED040F: Dissolved Major Anions (QCLot: 1169924)								
ED040F: Sulfate as SO4 2-	14808-79-8	1	mg/L	<1	----	----	----	----
ED045G: Chloride Discrete analyser (QCLot: 1169926)								
ED045G: Chloride	16887-00-6	1	mg/L	<1	1000 mg/L	86.8	90	130
ED093F: Dissolved Major Cations (QCLot: 1169925)								
ED093F: Calcium	7440-70-2	1	mg/L	<1	----	----	----	----
ED093F: Magnesium	7439-95-4	1	mg/L	<1	----	----	----	----
ED093F: Sodium	7440-23-5	1	mg/L	<1	----	----	----	----
EG035T: Total Recoverable Mercury by FIMS (QCLot: 1172848)								
EG035T: Mercury	7439-97-6	0.0001	mg/L	<0.0001	0.010 mg/L	101	81	119
EG094F: Dissolved Metals in Fresh Water by ORC-ICPMS (QCLot: 1172263)								
EG094A-F: Arsenic	7440-38-2	0.2	µg/L	<0.2	10 µg/L	97.6	81	121
EG094A-F: Boron	7440-42-8	5	µg/L	<5	----	----	----	----
EG094A-F: Cadmium	7440-43-9	0.05	µg/L	<0.05	10 µg/L	98.9	70	130
EG094A-F: Cobalt	7440-48-4	0.1	µg/L	<0.1	10 µg/L	103	70	130
EG094A-F: Copper	7440-50-8	0.5	µg/L	<0.5	10 µg/L	102	70	130
EG094A-F: Lead	7439-92-1	0.1	µg/L	<0.1	10 µg/L	73.6	70	130
EG094A-F: Nickel	7440-02-0	0.5	µg/L	<0.5	10 µg/L	101	70	130
EG094A-F: Vanadium	7440-62-2	0.2	µg/L	<0.2	10 µg/L	106	70	130
EG094A-F: Zinc	7440-66-6	1	µg/L	<1	10 µg/L	98.6	70	130
EG094F: Dissolved Metals in Fresh Water by ORC-ICPMS (QCLot: 1172264)								
EG094B-F: Selenium	7782-49-2	0.2	µg/L	<0.2	10 µg/L	106	74	122
EG094T: Total metals in Fresh water by ORC-ICPMS (QCLot: 1172223)								
EG094A-T: Arsenic	7440-38-2	0.2	µg/L	<0.2	10 µg/L	105	70	130
EG094A-T: Boron	7440-42-8	5	µg/L	<5	----	----	----	----
EG094A-T: Cadmium	7440-43-9	0.05	µg/L	<0.05	10 µg/L	95.2	70	130
EG094A-T: Cobalt	7440-48-4	0.1	µg/L	<0.1	10 µg/L	104	70	130
EG094A-T: Copper	7440-50-8	0.5	µg/L	<0.5	10 µg/L	103	70	130
EG094A-T: Lead	7439-92-1	0.1	µg/L	<0.1	10 µg/L	121	70	130
EG094A-T: Nickel	7440-02-0	0.5	µg/L	<0.5	10 µg/L	102	70	130



Sub-Matrix: **WATER**

Method: Compound	CAS Number	LOR	Unit	Method Blank (MB) Report Result	Laboratory Control Spike (LCS) Report			
					Spike Concentration	Spike Recovery (%)	Recovery Limits (%)	
						LCS	Low	High
EG094T: Total metals in Fresh water by ORC-ICPMS (QCLot: 1172223) - continued								
EG094A-T: Vanadium	7440-62-2	0.2	µg/L	<0.2	10 µg/L	97.2	70	130
EG094A-T: Zinc	7440-66-6	1	µg/L	<1	10 µg/L	94.6	70	130
EG094T: Total metals in Fresh water by ORC-ICPMS (QCLot: 1172224)								
EG094B-T: Selenium	7782-49-2	0.2	µg/L	<0.2	10 µg/L	92.2	70	130
EK040P: Fluoride by PC Titrator (QCLot: 1172418)								
EK040P: Fluoride	16984-48-8	0.1	mg/L	<0.1	10 mg/L	87.5	75	123
EK057G: Nitrite as N by Discrete Analyser (QCLot: 1169927)								
EK057G: Nitrite as N	----	0.01	mg/L	<0.01	0.5 mg/L	100	74	128
EK059G: NOX as N by Discrete Analyser (QCLot: 1175206)								
EK059G: Nitrite + Nitrate as N	----	0.01	mg/L	<0.01	0.5 mg/L	111	70	130
EP080/071: Total Petroleum Hydrocarbons (QCLot: 1170524)								
EP080: C6 - C9 Fraction	----	20	µg/L	<20	160 µg/L	101	73	135
EP080/071: Total Petroleum Hydrocarbons (QCLot: 1171125)								
EP071: C10 - C14 Fraction	----	50	µg/L	<50	1200 µg/L	104	49	110
EP071: C15 - C28 Fraction	----	100	µg/L	<100	2040 µg/L	110	58	130
EP071: C29 - C36 Fraction	----	50	µg/L	<50	----	----	----	----
Ultra-Trace Nutrients (QCLot: 1171514)								
EK255A-CM: Ammonia as N	7664-41-7	0.005	mg/L	<0.005	0.1 mg/L	95.8	75	121
Ultra-Trace Nutrients (QCLot: 1171775)								
EK267PA-CM: Total Phosphorus as P	----	0.005	mg/L	<0.005	0.44 mg/L	95.7	72	114
Ultra-Trace Nutrients (QCLot: 1171776)								
EK262PA-CM: Total Nitrogen as N	----	0.01	mg/L	<0.01	----	----	----	----
		0.05	mg/L	----	1.0 mg/L	95.8	70	117



Matrix Spike (MS) Report

The quality control term Matrix Spike (MS) refers to an intralaboratory split sample spiked with a representative set of target analytes. The purpose of this QC parameter is to monitor potential matrix effects on analyte recoveries. Static Recovery Limits as per laboratory Data Quality Objectives (DQOs). Ideal recovery ranges stated may be waived in the event of sample matrix interference.

Sub-Matrix: **WATER**

Laboratory sample ID	Client sample ID	Method: Compound	CAS Number	Matrix Spike (MS) Report			
				Spike Concentration	Spike Recovery (%)	Recovery Limits (%)	
					MS	Low	High
ED045G: Chloride Discrete analyser (QCLot: 1169926)							
EB0918288-002	16	ED045G: Chloride	16887-00-6	400 mg/L	105	70	130
EG035T: Total Recoverable Mercury by FIMS (QCLot: 1172848)							
ES0917709-001	Anonymous	EG035T: Mercury	7439-97-6	0.010 mg/L	80.9	70	130
EG094F: Dissolved Metals in Fresh Water by ORC-ICPMS (QCLot: 1172263)							
EB0918276-003	Anonymous	EG094A-F: Arsenic	7440-38-2	50 µg/L	106	70	130
		EG094A-F: Cadmium	7440-43-9	12.5 µg/L	88.1	70	130
		EG094A-F: Cobalt	7440-48-4	50 µg/L	92.6	70	130
		EG094A-F: Copper	7440-50-8	50 µg/L	94.0	70	130
		EG094A-F: Lead	7439-92-1	50 µg/L	88.1	70	130
		EG094A-F: Nickel	7440-02-0	50 µg/L	91.4	70	130
		EG094A-F: Vanadium	7440-62-2	50 µg/L	101	70	130
		EG094A-F: Zinc	7440-66-6	50 µg/L	96.0	70	130
EG094T: Total metals in Fresh water by ORC-ICPMS (QCLot: 1172223)							
EB0918276-003	Anonymous	EG094A-T: Arsenic	7440-38-2	50 µg/L	101	70	130
		EG094A-T: Cadmium	7440-43-9	12.5 µg/L	94.5	70	130
		EG094A-T: Cobalt	7440-48-4	50 µg/L	100	70	130
		EG094A-T: Copper	7440-50-8	50 µg/L	102	70	130
		EG094A-T: Lead	7439-92-1	50 µg/L	120	70	130
		EG094A-T: Nickel	7440-02-0	50 µg/L	98.2	70	130
		EG094A-T: Vanadium	7440-62-2	50 µg/L	97.2	70	130
		EG094A-T: Zinc	7440-66-6	50 µg/L	98.5	70	130
EK040P: Fluoride by PC Titrator (QCLot: 1172418)							
EB0918276-001	Anonymous	EK040P: Fluoride	16984-48-8	4.9 mg/L	103	70	130
EK057G: Nitrite as N by Discrete Analyser (QCLot: 1169927)							
EB0918288-002	16	EK057G: Nitrite as N	----	0.4 mg/L	86.5	70	130
EK059G: NOX as N by Discrete Analyser (QCLot: 1175206)							
EB0918272-001	Anonymous	EK059G: Nitrite + Nitrate as N	----	2.0 mg/L	93.8	70	130
EP080/071: Total Petroleum Hydrocarbons (QCLot: 1170524)							
EB0918222-002	Anonymous	EP080: C6 - C9 Fraction	----	140 µg/L	81.7	70	130
EP080/071: Total Petroleum Hydrocarbons (QCLot: 1171125)							
EB0918394-036	Anonymous	EP071: C10 - C14 Fraction	----	1200 µg/L	104	70	130
		EP071: C15 - C28 Fraction	----	2040 µg/L	73.2	70	130
Ultra-Trace Nutrients (QCLot: 1171514)							
EB0918288-001	17	EK255A-CM: Ammonia as N	7664-41-7	0.1 mg/L	80.0	70	130



Sub-Matrix: WATER

				<i>Matrix Spike (MS) Report</i>			
				<i>Spike</i>	<i>Spike Recovery (%)</i>	<i>Recovery Limits (%)</i>	
<i>Laboratory sample ID</i>	<i>Client sample ID</i>	<i>Method: Compound</i>	<i>CAS Number</i>	<i>Concentration</i>	<i>MS</i>	<i>Low</i>	<i>High</i>
Ultra-Trace Nutrients (QCLot: 1171775)							
EB0918288-001	17	EK267PA-CM: Total Phosphorus as P	----	0.5 mg/L	85.0	70	130
Ultra-Trace Nutrients (QCLot: 1171776)							
EB0918288-001	17	EK262PA-CM: Total Nitrogen as N	----	10.0 mg/L	91.5	70	130

INTERPRETIVE QUALITY CONTROL REPORT

Work Order	: EB0918288	Page	: 1 of 10
Amendment	: 1		
Client	: ALLUVIUM CONSULTING	Laboratory	: Environmental Division Brisbane
Contact	: MS MARTINE ADRIAANSEN	Contact	: Greg Vogel
Address	: PO BOX 1581 TOWNSVILLE QLD, AUSTRALIA 4810	Address	: 32 Shand Street Stafford QLD Australia 4053
E-mail	: martine@natres.com.au	E-mail	: Services.Brisbane@alsenviro.com
Telephone	: +61 07 47242170	Telephone	: +61 7 3243 7222
Facsimile	: ----	Facsimile	: +61 7 3243 7218
Project	: Surat Gas Project EIS	QC Level	: NEPM 1999 Schedule B(3) and ALS QCS3 requirement
Site	: Surat Gas Project		
C-O-C number	: ----	Date Samples Received	: 19-NOV-2009
Sampler	: A.C & M.A	Issue Date	: 05-DEC-2011
Order number	: ----		
Quote number	: BN/637/09	No. of samples received	: 4
		No. of samples analysed	: 4

This report supersedes any previous report(s) with this reference. Results apply to the sample(s) as submitted. All pages of this report have been checked and approved for release.

This Interpretive Quality Control Report contains the following information:

- Analysis Holding Time Compliance
- Quality Control Parameter Frequency Compliance
- Brief Method Summaries
- Summary of Outliers



Analysis Holding Time Compliance

The following report summarises extraction / preparation and analysis times and compares with recommended holding times. Dates reported represent first date of extraction or analysis and precludes subsequent dilutions and reruns. Information is also provided re the sample container (preservative) from which the analysis aliquot was taken. Elapsed period to analysis represents number of days from sampling where no extraction / digestion is involved or period from extraction / digestion where this is present. For composite samples, sampling date is assumed to be that of the oldest sample contributing to the composite. Sample date for laboratory produced leachates is assumed as the completion date of the leaching process. Outliers for holding time are based on USEPA SW 846, APHA, AS and NEPM (1999). A listing of breaches is provided in the Summary of Outliers.

Holding times for leachate methods (excluding elutriates) vary according to the analytes being determined on the resulting solution. For non-volatile analytes, the holding time compliance assessment compares the leach date with the shortest analyte holding time for the equivalent soil method. These soil holding times are: Organics (14 days); Mercury (28 days) & other metals (180 days). A recorded breach therefore does not guarantee a breach for all non-volatile parameters.

Matrix: WATER

Evaluation: * = Holding time breach ; ✓ = Within holding time.

Method Container / Client Sample ID(s)	Sample Date	Extraction / Preparation			Analysis			
		Date extracted	Due for extraction	Evaluation	Date analysed	Due for analysis	Evaluation	
EA025: Suspended Solids								
Clear Plastic Bottle - Natural (EA025H) 17,	16	17-NOV-2009	----	----	----	24-NOV-2009	24-NOV-2009	✓
Clear Plastic Bottle - Natural (EA025H) 8,	A5	18-NOV-2009	----	----	----	24-NOV-2009	25-NOV-2009	✓
EA045: Turbidity								
Clear Plastic Bottle - Natural (EA045) 17		17-NOV-2009	----	----	----	20-NOV-2009	19-NOV-2009	*
Clear Plastic Bottle - Natural (EA045) A5		18-NOV-2009	----	----	----	20-NOV-2009	20-NOV-2009	✓
ED040F: Dissolved Major Anions								
Clear Plastic Bottle - Natural (ED040F) 17,	16	17-NOV-2009	---	15-DEC-2009	----	20-NOV-2009	15-DEC-2009	✓
Clear Plastic Bottle - Natural (ED040F) 8,	A5	18-NOV-2009	---	16-DEC-2009	----	20-NOV-2009	16-DEC-2009	✓
ED045G: Chloride Discrete analyser								
Clear Plastic Bottle - Natural (ED045G) 17,	16	17-NOV-2009	---	15-DEC-2009	----	20-NOV-2009	15-DEC-2009	✓
Clear Plastic Bottle - Natural (ED045G) 8,	A5	18-NOV-2009	---	16-DEC-2009	----	20-NOV-2009	16-DEC-2009	✓
ED093F: Dissolved Major Cations								
Clear Plastic Bottle - Natural (ED093F) 17,	16	17-NOV-2009	---	15-DEC-2009	----	20-NOV-2009	15-DEC-2009	✓
Clear Plastic Bottle - Natural (ED093F) 8,	A5	18-NOV-2009	---	16-DEC-2009	----	20-NOV-2009	16-DEC-2009	✓
EG035F: Dissolved Mercury by FIMS								
Clear HDPE (U-T ORC) - Filtered; Lab-acidified (EG035F) 17,	16	17-NOV-2009	---	15-DEC-2009	----	27-NOV-2009	15-DEC-2009	✓
Clear HDPE (U-T ORC) - Filtered; Lab-acidified (EG035F) 8,	A5	18-NOV-2009	---	16-DEC-2009	----	27-NOV-2009	16-DEC-2009	✓
EG035T: Total Recoverable Mercury by FIMS								
Clear HDPE (U-T ORC) - Unfiltered; Lab-acidified (EG035T) 17,	16	17-NOV-2009	----	----	----	25-NOV-2009	01-DEC-2009	✓
Clear HDPE (U-T ORC) - Unfiltered; Lab-acidified (EG035T) 8,	A5	18-NOV-2009	----	----	----	25-NOV-2009	02-DEC-2009	✓



Matrix: WATER

Evaluation: * = Holding time breach ; ✓ = Within holding time.

Method Container / Client Sample ID(s)	Sample Date	Extraction / Preparation			Analysis		
		Date extracted	Due for extraction	Evaluation	Date analysed	Due for analysis	Evaluation
EG094F: Dissolved Metals in Fresh Water by ORC-ICPMS							
Clear HDPE (U-T ORC) - Filtered; Lab-acidified (EG094A-F) 17, 16	17-NOV-2009	25-NOV-2009	16-MAY-2010	✓	25-NOV-2009	16-MAY-2010	✓
Clear HDPE (U-T ORC) - Filtered; Lab-acidified (EG094A-F) 8, A5	18-NOV-2009	25-NOV-2009	17-MAY-2010	✓	25-NOV-2009	17-MAY-2010	✓
EG094T: Total metals in Fresh water by ORC-ICPMS							
Clear HDPE (U-T ORC) - Unfiltered; Lab-acidified (EG094A-T) 17, 16	17-NOV-2009	25-NOV-2009	16-MAY-2010	✓	25-NOV-2009	16-MAY-2010	✓
Clear HDPE (U-T ORC) - Unfiltered; Lab-acidified (EG094A-T) 8, A5	18-NOV-2009	25-NOV-2009	17-MAY-2010	✓	25-NOV-2009	17-MAY-2010	✓
EG094F: Dissolved Metals in Fresh Water by ORC-ICPMS							
Clear HDPE (U-T ORC) - Filtered; Lab-acidified (EG094B-F) 17, 16	17-NOV-2009	25-NOV-2009	16-MAY-2010	✓	25-NOV-2009	16-MAY-2010	✓
Clear HDPE (U-T ORC) - Filtered; Lab-acidified (EG094B-F) 8, A5	18-NOV-2009	25-NOV-2009	17-MAY-2010	✓	25-NOV-2009	17-MAY-2010	✓
EG094T: Total metals in Fresh water by ORC-ICPMS							
Clear HDPE (U-T ORC) - Unfiltered; Lab-acidified (EG094B-T) 17, 16	17-NOV-2009	25-NOV-2009	16-MAY-2010	✓	25-NOV-2009	16-MAY-2010	✓
Clear HDPE (U-T ORC) - Unfiltered; Lab-acidified (EG094B-T) 8, A5	18-NOV-2009	25-NOV-2009	17-MAY-2010	✓	25-NOV-2009	17-MAY-2010	✓
EK040P: Fluoride by PC Titrator							
Clear Plastic Bottle - Natural (EK040P) 17, 16	17-NOV-2009	---	15-DEC-2009	----	24-NOV-2009	15-DEC-2009	✓
Clear Plastic Bottle - Natural (EK040P) 8, A5	18-NOV-2009	---	16-DEC-2009	----	24-NOV-2009	16-DEC-2009	✓
EK057G: Nitrite as N by Discrete Analyser							
Clear Plastic Bottle - Natural (EK057G) 17, 16	17-NOV-2009	---	19-NOV-2009	----	20-NOV-2009	19-NOV-2009	*
Clear Plastic Bottle - Natural (EK057G) 8, A5	18-NOV-2009	---	20-NOV-2009	----	20-NOV-2009	20-NOV-2009	✓
EK059G: NOX as N by Discrete Analyser							
Clear Plastic Bottle - Sulphuric Acid (EK059G) 17, 16	17-NOV-2009	---	15-DEC-2009	----	26-NOV-2009	15-DEC-2009	✓
Clear Plastic Bottle - Sulphuric Acid (EK059G) 8, A5	18-NOV-2009	---	16-DEC-2009	----	26-NOV-2009	16-DEC-2009	✓
Ultra-Trace Nutrients							
Clear Plastic Bottle - Filtered and Frozen (AS) (EK255A-CM) 17, 16	17-NOV-2009	---	15-DEC-2009	----	23-NOV-2009	15-DEC-2009	✓
Clear Plastic Bottle - Filtered and Frozen (AS) (EK255A-CM) 8, A5	18-NOV-2009	---	16-DEC-2009	----	23-NOV-2009	16-DEC-2009	✓
Ultra-Trace Nutrients							
Clear Plastic Bottle - Frozen (AS) (EK262PA-CM) 17, 16	17-NOV-2009	23-NOV-2009	15-DEC-2009	✓	23-NOV-2009	15-DEC-2009	✓
Clear Plastic Bottle - Frozen (AS) (EK262PA-CM) 8, A5	18-NOV-2009	23-NOV-2009	16-DEC-2009	✓	23-NOV-2009	16-DEC-2009	✓



Matrix: **WATER**

Evaluation: * = Holding time breach ; ✓ = Within holding time.

Method Container / Client Sample ID(s)	Sample Date	Extraction / Preparation			Analysis			
		Date extracted	Due for extraction	Evaluation	Date analysed	Due for analysis	Evaluation	
Ultra-Trace Nutrients								
Clear Plastic Bottle - Frozen (AS) (EK267PA-CM) 17,	16	17-NOV-2009	23-NOV-2009	15-DEC-2009	✓	23-NOV-2009	15-DEC-2009	✓
Clear Plastic Bottle - Frozen (AS) (EK267PA-CM) 8,	A5	18-NOV-2009	23-NOV-2009	16-DEC-2009	✓	23-NOV-2009	16-DEC-2009	✓
EP080/071: Total Petroleum Hydrocarbons								
Amber Glass Bottle - Unpreserved (EP071) 17,	16	17-NOV-2009	23-NOV-2009	24-NOV-2009	✓	24-NOV-2009	02-JAN-2010	✓
Amber Glass Bottle - Unpreserved (EP071) 8,	A5	18-NOV-2009	23-NOV-2009	25-NOV-2009	✓	24-NOV-2009	02-JAN-2010	✓
EP080/071: Total Petroleum Hydrocarbons								
Amber VOC Vial - HCl (EP080) 17,	16	17-NOV-2009	---	01-DEC-2009	----	24-NOV-2009	01-DEC-2009	✓
Amber VOC Vial - HCl (EP080) 8,	A5	18-NOV-2009	---	02-DEC-2009	----	24-NOV-2009	02-DEC-2009	✓



Quality Control Parameter Frequency Compliance

The following report summarises the frequency of laboratory QC samples analysed within the analytical lot(s) in which the submitted sample(s) was(where) processed. Actual rate should be greater than or equal to the expected rate. A listing of breaches is provided in the Summary of Outliers.

Matrix: **WATER** Evaluation: ✖ = Quality Control frequency not within specification ; ✔ = Quality Control frequency within specification.

Quality Control Sample Type	Method	Count		Rate (%)			Quality Control Specification
		QC	Regular	Actual	Expected	Evaluation	
Laboratory Duplicates (DUP)							
Ammonia as N - Ultra-Trace for Catchment Monitoring	EK255A-CM	1	4	25.0	10.0	✔	NEPM 1999 Schedule B(3) and ALS QCS3 requirement
Chloride by Discrete Analyser	ED045G	2	16	12.5	10.0	✔	NEPM 1999 Schedule B(3) and ALS QCS3 requirement
Dissolved Metals in Fresh Water -Suite A by ORC-ICPMS	EG094A-F	2	10	20.0	10.0	✔	NEPM 1999 Schedule B(3) and ALS QCS3 requirement
Dissolved Metals in Fresh Water -Suite B by ORC-ICPMS	EG094B-F	1	10	10.0	10.0	✔	NEPM 1999 Schedule B(3) and ALS QCS3 requirement
Fluoride by PC Titrator	EK040P	2	20	10.0	10.0	✔	NEPM 1999 Schedule B(3) and ALS QCS3 requirement
Major Anions - Dissolved	ED040F	2	20	10.0	10.0	✔	NEPM 1999 Schedule B(3) and ALS QCS3 requirement
Major Cations - Dissolved	ED093F	2	20	10.0	10.0	✔	NEPM 1999 Schedule B(3) and ALS QCS3 requirement
Nitrite and Nitrate as N (NO _x) by Discrete Analyser	EK059G	2	20	10.0	10.0	✔	NEPM 1999 Schedule B(3) and ALS QCS3 requirement
Nitrite as N by Discrete Analyser	EK057G	2	20	10.0	10.0	✔	NEPM 1999 Schedule B(3) and ALS QCS3 requirement
Suspended Solids (High Level)	EA025H	2	14	14.3	10.0	✔	NEPM 1999 Schedule B(3) and ALS QCS3 requirement
Total Mercury by FIMS	EG035T	2	20	10.0	10.0	✔	NEPM 1999 Schedule B(3) and ALS QCS3 requirement
Total Metals in Fresh Water -Suite A by ORC-ICPMS	EG094A-T	1	10	10.0	10.0	✔	NEPM 1999 Schedule B(3) and ALS QCS3 requirement
Total Metals in Fresh Water -Suite B by ORC-ICPMS	EG094B-T	1	10	10.0	10.0	✔	NEPM 1999 Schedule B(3) and ALS QCS3 requirement
Total Nitrogen as N (Persulfate digestion)-Ultra-Trace - CM	EK262PA-CM	1	4	25.0	10.0	✔	NEPM 1999 Schedule B(3) and ALS QCS3 requirement
Total Phosphorus(Persulfate Digestion) - Ultra-Trace for CM	EK267PA-CM	1	4	25.0	10.0	✔	NEPM 1999 Schedule B(3) and ALS QCS3 requirement
TPH - Semivolatile Fraction	EP071	1	20	5.0	10.0	✖	NEPM 1999 Schedule B(3) and ALS QCS3 requirement
TPH Volatiles/BTEX	EP080	2	16	12.5	10.0	✔	NEPM 1999 Schedule B(3) and ALS QCS3 requirement
Turbidity	EA045	1	6	16.7	10.0	✔	NEPM 1999 Schedule B(3) and ALS QCS3 requirement
Laboratory Control Samples (LCS)							
Ammonia as N - Ultra-Trace for Catchment Monitoring	EK255A-CM	1	4	25.0	5.0	✔	NEPM 1999 Schedule B(3) and ALS QCS3 requirement
Chloride by Discrete Analyser	ED045G	2	16	12.5	10.0	✔	NEPM 1999 Schedule B(3) and ALS QCS3 requirement
Dissolved Metals in Fresh Water -Suite A by ORC-ICPMS	EG094A-F	1	10	10.0	5.0	✔	NEPM 1999 Schedule B(3) and ALS QCS3 requirement
Dissolved Metals in Fresh Water -Suite B by ORC-ICPMS	EG094B-F	1	10	10.0	5.0	✔	NEPM 1999 Schedule B(3) and ALS QCS3 requirement
Fluoride by PC Titrator	EK040P	1	20	5.0	5.0	✔	NEPM 1999 Schedule B(3) and ALS QCS3 requirement
Nitrite and Nitrate as N (NO _x) by Discrete Analyser	EK059G	1	20	5.0	5.0	✔	NEPM 1999 Schedule B(3) and ALS QCS3 requirement
Nitrite as N by Discrete Analyser	EK057G	1	20	5.0	5.0	✔	NEPM 1999 Schedule B(3) and ALS QCS3 requirement
Suspended Solids (High Level)	EA025H	1	14	7.1	5.0	✔	NEPM 1999 Schedule B(3) and ALS QCS3 requirement
Total Mercury by FIMS	EG035T	1	20	5.0	5.0	✔	NEPM 1999 Schedule B(3) and ALS QCS3 requirement
Total Metals in Fresh Water -Suite A by ORC-ICPMS	EG094A-T	1	10	10.0	5.0	✔	NEPM 1999 Schedule B(3) and ALS QCS3 requirement
Total Metals in Fresh Water -Suite B by ORC-ICPMS	EG094B-T	1	10	10.0	5.0	✔	NEPM 1999 Schedule B(3) and ALS QCS3 requirement
Total Nitrogen as N (Persulfate digestion)-Ultra-Trace - CM	EK262PA-CM	1	4	25.0	10.0	✔	NEPM 1999 Schedule B(3) and ALS QCS3 requirement
Total Phosphorus(Persulfate Digestion) - Ultra-Trace for CM	EK267PA-CM	1	4	25.0	10.0	✔	NEPM 1999 Schedule B(3) and ALS QCS3 requirement
TPH - Semivolatile Fraction	EP071	1	20	5.0	5.0	✔	NEPM 1999 Schedule B(3) and ALS QCS3 requirement
TPH Volatiles/BTEX	EP080	1	16	6.3	5.0	✔	NEPM 1999 Schedule B(3) and ALS QCS3 requirement
Turbidity	EA045	1	6	16.7	5.0	✔	NEPM 1999 Schedule B(3) and ALS QCS3 requirement
Method Blanks (MB)							
Ammonia as N - Ultra-Trace for Catchment Monitoring	EK255A-CM	1	4	25.0	5.0	✔	NEPM 1999 Schedule B(3) and ALS QCS3 requirement
Chloride by Discrete Analyser	ED045G	1	16	6.3	5.0	✔	NEPM 1999 Schedule B(3) and ALS QCS3 requirement



Matrix: **WATER** Evaluation: * = Quality Control frequency not within specification ; ✓ = Quality Control frequency within specification.

Quality Control Sample Type	Method	Count		Rate (%)			Quality Control Specification
		QC	Regular	Actual	Expected	Evaluation	
Analytical Methods							
Method Blanks (MB) - Continued							
Dissolved Metals in Fresh Water -Suite A by ORC-ICPMS	EG094A-F	1	10	10.0	5.0	✓	NEPM 1999 Schedule B(3) and ALS QCS3 requirement
Dissolved Metals in Fresh Water -Suite B by ORC-ICPMS	EG094B-F	1	10	10.0	5.0	✓	NEPM 1999 Schedule B(3) and ALS QCS3 requirement
Fluoride by PC Titrator	EK040P	1	20	5.0	5.0	✓	NEPM 1999 Schedule B(3) and ALS QCS3 requirement
Major Anions - Dissolved	ED040F	1	20	5.0	5.0	✓	NEPM 1999 Schedule B(3) and ALS QCS3 requirement
Major Cations - Dissolved	ED093F	1	20	5.0	5.0	✓	NEPM 1999 Schedule B(3) and ALS QCS3 requirement
Nitrite and Nitrate as N (NOx) by Discrete Analyser	EK059G	1	20	5.0	5.0	✓	NEPM 1999 Schedule B(3) and ALS QCS3 requirement
Nitrite as N by Discrete Analyser	EK057G	1	20	5.0	5.0	✓	NEPM 1999 Schedule B(3) and ALS QCS3 requirement
Suspended Solids (High Level)	EA025H	1	14	7.1	5.0	✓	NEPM 1999 Schedule B(3) and ALS QCS3 requirement
Total Mercury by FIMS	EG035T	1	20	5.0	5.0	✓	NEPM 1999 Schedule B(3) and ALS QCS3 requirement
Total Metals in Fresh Water -Suite A by ORC-ICPMS	EG094A-T	1	10	10.0	5.0	✓	NEPM 1999 Schedule B(3) and ALS QCS3 requirement
Total Metals in Fresh Water -Suite B by ORC-ICPMS	EG094B-T	1	10	10.0	5.0	✓	NEPM 1999 Schedule B(3) and ALS QCS3 requirement
Total Nitrogen as N (Persulfate digestion)-Ultra-Trace - CM	EK262PA-CM	1	4	25.0	5.0	✓	NEPM 1999 Schedule B(3) and ALS QCS3 requirement
Total Phosphorus(Persulfate Digestion) - Ultra-Trace for CM	EK267PA-CM	1	4	25.0	5.0	✓	NEPM 1999 Schedule B(3) and ALS QCS3 requirement
TPH - Semivolatile Fraction	EP071	1	20	5.0	5.0	✓	NEPM 1999 Schedule B(3) and ALS QCS3 requirement
TPH Volatiles/BTEX	EP080	1	16	6.3	5.0	✓	NEPM 1999 Schedule B(3) and ALS QCS3 requirement
Turbidity	EA045	1	6	16.7	5.0	✓	NEPM 1999 Schedule B(3) and ALS QCS3 requirement
Matrix Spikes (MS)							
Ammonia as N - Ultra-Trace for Catchment Monitoring	EK255A-CM	1	4	25.0	5.0	✓	ALS QCS3 requirement
Chloride by Discrete Analyser	ED045G	1	16	6.3	5.0	✓	ALS QCS3 requirement
Dissolved Metals in Fresh Water -Suite A by ORC-ICPMS	EG094A-F	1	10	10.0	5.0	✓	ALS QCS3 requirement
Fluoride by PC Titrator	EK040P	1	20	5.0	5.0	✓	ALS QCS3 requirement
Nitrite and Nitrate as N (NOx) by Discrete Analyser	EK059G	1	20	5.0	5.0	✓	ALS QCS3 requirement
Nitrite as N by Discrete Analyser	EK057G	1	20	5.0	5.0	✓	ALS QCS3 requirement
Total Mercury by FIMS	EG035T	1	20	5.0	5.0	✓	ALS QCS3 requirement
Total Metals in Fresh Water -Suite A by ORC-ICPMS	EG094A-T	1	10	10.0	5.0	✓	ALS QCS3 requirement
Total Nitrogen as N (Persulfate digestion)-Ultra-Trace - CM	EK262PA-CM	1	4	25.0	5.0	✓	ALS QCS3 requirement
Total Phosphorus(Persulfate Digestion) - Ultra-Trace for CM	EK267PA-CM	1	4	25.0	5.0	✓	ALS QCS3 requirement
TPH - Semivolatile Fraction	EP071	1	20	5.0	5.0	✓	ALS QCS3 requirement
TPH Volatiles/BTEX	EP080	1	16	6.3	5.0	✓	ALS QCS3 requirement



Brief Method Summaries

The analytical procedures used by the Environmental Division have been developed from established internationally recognized procedures such as those published by the US EPA, APHA, AS and NEPM. In house developed procedures are employed in the absence of documented standards or by client request. The following report provides brief descriptions of the analytical procedures employed for results reported in the Certificate of Analysis. Sources from which ALS methods have been developed are provided within the Method Descriptions.

Analytical Methods	Method	Matrix	Method Descriptions
Sodium Adsorption Ratio	EA006	WATER	APHA 21st ed., 3120 Ca, Mg, Na. This method is compliant with NEPM (1999) Schedule B(3) (Appdx. 2)
Suspended Solids (High Level)	EA025H	WATER	APHA 21st ed., 2540D A gravimetric procedure employed to determine the amount of `non-filterable` residue in a aqueous sample. The prescribed GFC (1.2um) filter is rinsed with deionised water, oven dried and weighed prior to analysis. A well-mixed sample is filtered through a glass fibre filter (1.2um). The residue on the filter paper is dried at 104+/-2C . This method is compliant with NEPM (1999) Schedule B(3) (Appdx. 2)
Turbidity	EA045	WATER	APHA 21st ed., 2130 B. This method is compliant with NEPM (1999) Schedule B(3) (Appdx. 2)
Hardness as CaCO3	EA065	WATER	APHA 21st ed., 2340 B. This method is compliant with NEPM (1999) Schedule B(3) (Appdx. 2)
Major Anions - Dissolved	ED040F	WATER	APHA 21st ed., 3120. The 0.45um filtered samples are determined by ICP/AES for Sulfur and/or Silicon content and reported as Sulfate and/or Silica after conversion by gravimetric factor.
Chloride by Discrete Analyser	ED045G	WATER	APHA 21st ed., 4500 Cl - G.The thiocyanate ion is liberated from mercuric thiocyanate through sequestration of mercury by the chloride ion to form non-ionised mercuric chloride.in the presence of ferric ions the liberated thiocyanate forms highly-coloured ferric thiocyanate which is measured at 480 nm APHA 21st edition seal method 2 017-1-L april 2003
Major Cations - Dissolved	ED093F	WATER	Major Cations is determined based on APHA 21st ed., 3120; USEPA SW 846 - 6010 The ICPAES technique ionises the 0.45um filtered sample atoms emitting a characteristic spectrum. This spectrum is then compared against matrix matched standards for quantification. This method is compliant with NEPM (1999) Schedule B(3) (Appdx. 2) Sodium Absorption Ratio is calculated from Ca, Mg and Na which determined by ALS in house method QWI-EN/ED093F. This method is compliant with NEPM (1999) Schedule B(3) (Appdx. 2) Total Hardness is calculated based on APHA 21st ed., 2340 B. This method is compliant with NEPM (1999) Schedule B(3) (Appdx. 2)
Dissolved Mercury by FIMS	EG035F	WATER	AS 3550, APHA 21st ed. 3112 Hg - B (Flow-injection (SnCl2)(Cold Vapour generation) AAS) Samples are 0.45 um filtered prior to analysis. FIM-AAS is an automated flameless atomic absorption technique. A bromate/bromide reagent is used to oxidise any organic mercury compounds in the filtered sample. The ionic mercury is reduced online to atomic mercury vapour by SnCl2 which is then purged into a heated quartz cell. Quantification is by comparing absorbance against a calibration curve. This method is compliant with NEPM (1999) Schedule B(3) (Appdx. 2)
Total Mercury by FIMS	EG035T	WATER	AS 3550, APHA 21st ed. 3112 Hg - B (Flow-injection (SnCl2)(Cold Vapour generation) AAS) FIM-AAS is an automated flameless atomic absorption technique. A bromate/bromide reagent is used to oxidise any organic mercury compounds in the unfiltered sample. The ionic mercury is reduced online to atomic mercury vapour by SnCl2 which is then purged into a heated quartz cell. Quantification is by comparing absorbance against a calibration curve. This method is compliant with NEPM (1999) Schedule B(3) (Appdx. 2)
Dissolved Metals in Fresh Water -Suite A by ORC-ICPMS	EG094A-F	WATER	APHA 21st ed., 3125; USEPA SW846 - 6020 Samples are 0.45 um filtered prior to analysis. The ORC-ICPMS technique removes interfering species through a series of chemical reactions prior to ion detection. Ions are passed into a high vacuum mass spectrometer, which separates the analytes based on their distinct mass to charge ratios prior to measurement by a discrete dynode ion detector. This method is compliant with NEPM (1999) Schedule B(3) (Appdx. 2)



Analytical Methods	Method	Matrix	Method Descriptions
Total Metals in Fresh Water -Suite A by ORC-ICPMS	EG094A-T	WATER	APHA 21st ed., 3125; USEPA SW846 - 6020 Samples are 0.45 um filtered prior to analysis. The ORC-ICPMS technique removes interfering species through a series of chemical reactions prior to ion detection. Ions are passed into a high vacuum mass spectrometer, which separates the analytes based on their distinct mass to charge ratios prior to measurement by a discrete dynode ion detector. This method is compliant with NEPM (1999) Schedule B(3) (Appdx. 2)
Dissolved Metals in Fresh Water -Suite B by ORC-ICPMS	EG094B-F	WATER	APHA 21st ed., 3125; USEPA SW846 - 6020 Samples are 0.45 um filtered prior to analysis. The ORC-ICPMS technique removes interfering species through a series of chemical reactions prior to ion detection. Ions are passed into a high vacuum mass spectrometer, which separates the analytes based on their distinct mass to charge ratios prior to measurement by a discrete dynode ion detector. This method is compliant with NEPM (1999) Schedule B(3) (Appdx. 2)
Total Metals in Fresh Water -Suite B by ORC-ICPMS	EG094B-T	WATER	APHA 21st ed., 3125; USEPA SW846 - 6020 Samples are 0.45 um filtered prior to analysis. The ORC-ICPMS technique removes interfering species through a series of chemical reactions prior to ion detection. Ions are passed into a high vacuum mass spectrometer, which separates the analytes based on their distinct mass to charge ratios prior to measurement by a discrete dynode ion detector. This method is compliant with NEPM (1999) Schedule B(3) (Appdx. 2)
Fluoride by PC Titrator	EK040P	WATER	APHA 21st ed., 4500 F--C CDTA is added to the sample to provide a uniform ionic strength background, adjust pH, and break up complexes. Fluoride concentration is determined by either manual or automatic ISE measurement. This method is compliant with NEPM (1999) Schedule B(3) (Appdx. 2)
Nitrite as N by Discrete Analyser	EK057G	WATER	APHA 21st ed., 4500-NO2- B. Nitrite is determined by direct colourimetry by Discrete Analyser. This method is compliant with NEPM (1999) Schedule B(3) (Appdx. 2)
Nitrate as N by Discrete Analyser	EK058G	WATER	APHA 21st ed., 4500-NO3- F. Nitrate is reduced to nitrite by way of a cadmium reduction column followed by quantification by Discrete Analyser. Nitrite is determined separately by direct colourimetry and result for Nitrate calculated as the difference between the two results. This method is compliant with NEPM (1999) Schedule B(3) (Appdx. 2)
Nitrite and Nitrate as N (NOx) by Discrete Analyser	EK059G	WATER	APHA 21st ed., 4500-NO3- F. Combined oxidised Nitrogen (NO2+NO3) is determined by Cadmium Reduction and direct colourimetry by Discrete Analyser. This method is compliant with NEPM (1999) Schedule B(3) (Appdx. 2)
Ammonia as N - Ultra-Trace for Catchment Monitoring	EK255A-CM	WATER	APHA 21st ed., 4500-NH3 H Ammonia is determined by direct colorimetry by FIA. This method is compliant with NEPM (1999) Schedule B(3) (Appdx. 2)
Total Nitrogen as N (Persulfate digestion) -Ultra-Trace - CM	EK262PA-CM	WATER	APHA 21st ed., 4500-P J. Persulfate Method for Simultaneous Determination of Total Nitrogen and Total Phosphorus. As sample is digested with persulfate under alkaline conditions yielding orthophosphate and nitrate. Following digestion, analytes are determined by flow injection analysis. This method is compliant with NEPM (1999) Schedule B(3) (Appdx. 2)
Total Phosphorus(Persulfate Digestion) - Ultra-Trace for CM	EK267PA-CM	WATER	APHA 21st ed., 4500-P J. Persulfate Method for Simultaneous Determination of Total Nitrogen and Total Phosphorus. As sample is digested with persulfate under alkaline conditions yielding orthophosphate and nitrate. Following digestion, analytes are determined by flow injection analysis. This method is compliant with NEPM (1999) Schedule B(3) (Appdx. 2)
TPH - Semivolatle Fraction	EP071	WATER	USEPA SW 846 - 8015A The sample extract is analysed by Capillary GC/FID and quantification is by comparison against an established 5 point calibration curve of n-Alkane standards. This method is compliant with NEPM (1999) Schedule B(3) (Appdx. 2)
TPH Volatiles/BTEX	EP080	WATER	USEPA SW 846 - 8260B Water samples are directly purged prior to analysis by Capillary GC/MS and quantification is by comparison against an established 5 point calibration curve. Alternatively, a sample is equilibrated in a headspace vial and a portion of the headspace determined by GCMS analysis. This method is compliant with NEPM (1999) Schedule B(3) (Appdx. 2)

Preparation Methods	Method	Matrix	Method Descriptions
---------------------	--------	--------	---------------------



<i>Preparation Methods</i>	<i>Method</i>	<i>Matrix</i>	<i>Method Descriptions</i>
Persulfate Digestion for UT TN and TP for FIA finish.	EK262/267-PA Prep	WATER	APHA 21st ed., 4500 P - J. This method is compliant with NEPM (1999) Schedule B(3) (Appdx. 2)
Digestion for Total Recoverable Metals - ORC	EN25-ORC	WATER	Modified USEPA SW846-3005. This is an Ultrapure Nitric acid digestion procedure used to prepare surface and ground water samples for analysis by ORC- ICPMS. This method is compliant with NEPM (1999) Schedule B(3) (Appdx. 2)
Separatory Funnel Extraction of Liquids	ORG14	WATER	USEPA SW 846 - 3510B 500 mL to 1L of sample is transferred to a separatory funnel and serially extracted three times using 60mL DCM for each extract. The resultant extracts are combined, dehydrated and concentrated for analysis. This method is compliant with NEPM (1999) Schedule B(3) (Appdx. 2). ALS default excludes sediment which may be resident in the container.



Summary of Outliers

Outliers : Quality Control Samples

The following report highlights outliers flagged in the Quality Control (QC) Report. Surrogate recovery limits are static and based on USEPA SW846 or ALS-QWI/EN/38 (in the absence of specific USEPA limits). This report displays QC Outliers (breaches) only.

Duplicates, Method Blanks, Laboratory Control Samples and Matrix Spikes

Matrix: **WATER**

Compound Group Name	Laboratory Sample ID	Client Sample ID	Analyte	CAS Number	Data	Limits	Comment
Laboratory Control Spike (LCS) Recoveries							
ED045G: Chloride Discrete analyser	1350394-010	----	Chloride	16887-00-6	86.8 %	90-110%	Recovery less than lower control limit

- For all matrices, no Method Blank value outliers occur.
- For all matrices, no Duplicate outliers occur.
- For all matrices, no Matrix Spike outliers occur.

Regular Sample Surrogates

- For all regular sample matrices, no surrogate recovery outliers occur.

Outliers : Analysis Holding Time Compliance

This report displays Holding Time breaches only. Only the respective Extraction / Preparation and/or Analysis component is/are displayed.

Matrix: **WATER**

Method Container / Client Sample ID(s)	Extraction / Preparation			Analysis		
	Date extracted	Due for extraction	Days overdue	Date analysed	Due for analysis	Days overdue
EA045: Turbidity						
Clear Plastic Bottle - Natural 17	----	----	----	20-NOV-2009	19-NOV-2009	1
EK057G: Nitrite as N by Discrete Analyser						
Clear Plastic Bottle - Natural 17,	16	----	----	20-NOV-2009	19-NOV-2009	1

Outliers : Frequency of Quality Control Samples

The following report highlights breaches in the Frequency of Quality Control Samples.

Matrix: **WATER**

Quality Control Sample Type Method	Count		Rate (%)		Quality Control Specification
	QC	Regular	Actual	Expected	
Laboratory Duplicates (DUP)					
TPH - Semivolatile Fraction	1	20	5.0	10.0	NEPM 1999 Schedule B(3) and ALS QCS3 requirement

CERTIFICATE OF ANALYSIS

Work Order	: EB0918288	Page	: 1 of 5
Amendment	: 1		
Client	: ALLUVIUM CONSULTING	Laboratory	: Environmental Division Brisbane
Contact	: MS MARTINE ADRIAANSEN	Contact	: Greg Vogel
Address	: PO BOX 1581 TOWNSVILLE QLD, AUSTRALIA 4810	Address	: 32 Shand Street Stafford QLD Australia 4053
E-mail	: martine@natres.com.au	E-mail	: Services.Brisbane@alsenviro.com
Telephone	: +61 07 47242170	Telephone	: +61 7 3243 7222
Facsimile	: ----	Facsimile	: +61 7 3243 7218
Project	: Surat Gas Project EIS	QC Level	: NEPM 1999 Schedule B(3) and ALS QCS3 requirement
Order number	: ----		
C-O-C number	: ----	Date Samples Received	: 19-NOV-2009
Sampler	: A.C & M.A	Issue Date	: 05-DEC-2011
Site	: Surat Gas Project		
Quote number	: BN/637/09	No. of samples received	: 4
		No. of samples analysed	: 4

This report supersedes any previous report(s) with this reference. Results apply to the sample(s) as submitted. All pages of this report have been checked and approved for release.

This Certificate of Analysis contains the following information:

- General Comments
- Analytical Results
- Surrogate Control Limits



NATA Accredited Laboratory 825

This document is issued in accordance with NATA accreditation requirements.

Accredited for compliance with ISO/IEC 17025.

Signatories

This document has been electronically signed by the authorized signatories indicated below. Electronic signing has been carried out in compliance with procedures specified in 21 CFR Part 11.

<i>Signatories</i>	<i>Position</i>	<i>Accreditation Category</i>
Celine Conceicao	Senior Spectroscopist	Sydney Inorganics
Hoa Nguyen	Inorganic Chemist	Sydney Inorganics
Kim McCabe	Senior Inorganic Chemist	Brisbane Inorganics
Matt Frost	Senior Organic Chemist	Brisbane Organics
Stephen Hislop	Senior Inorganic Chemist	Brisbane Inorganics



General Comments

The analytical procedures used by the Environmental Division have been developed from established internationally recognized procedures such as those published by the USEPA, APHA, AS and NEPM. In house developed procedures are employed in the absence of documented standards or by client request.

Where moisture determination has been performed, results are reported on a dry weight basis.

Where a reported less than (<) result is higher than the LOR, this may be due to primary sample extract/digestate dilution and/or insufficient sample for analysis.

Where the LOR of a reported result differs from standard LOR, this may be due to high moisture content, insufficient sample (reduced weight employed) or matrix interference.

When sampling time information is not provided by the client, sampling dates are shown without a time component. In these instances, the time component has been assumed by the laboratory for processing purposes.

Key : CAS Number = CAS registry number from database maintained by Chemical Abstracts Services. The Chemical Abstracts Service is a division of the American Chemical Society.

LOR = Limit of reporting

^ = This result is computed from individual analyte detections at or above the level of reporting

- **ED045G (Chloride): LCS recovery fell outside Dynamic Control Limits. However it is within ALS Static Control Limits and hence deemed acceptable.**
- **EG094: It is recognised that total concentration is less than dissolved for some metal analytes. However, the difference is within experimental variation of the methods.**
- **EP075: 'Sum of PAH' is the sum of the USEPA 16 priority PAHs**
- **This report has been amended to alter the site details, project reference code or order number. All analysis results are as per the previous report.**



Analytical Results

Sub-Matrix: **WATER**

				Client sample ID	17	16	8	A5	----
				Client sampling date / time	17-NOV-2009 15:30	17-NOV-2009 15:00	18-NOV-2009 15:00	18-NOV-2009 15:00	----
Compound	CAS Number	LOR	Unit	EB0918288-001	EB0918288-002	EB0918288-003	EB0918288-004	----	
EG094T: Total metals in Fresh water by ORC-ICPMS - Continued									
Cobalt	7440-48-4	0.1	µg/L	14.0	12.1	1.2	35.4	----	
Copper	7440-50-8	0.5	µg/L	17.4	14.6	2.2	11.2	----	
Lead	7439-92-1	0.1	µg/L	7.4	5.1	1.5	49.0	----	
Nickel	7440-02-0	0.5	µg/L	30.4	25.6	2.6	21.8	----	
Vanadium	7440-62-2	0.2	µg/L	43.9	33.8	4.1	124	----	
Zinc	7440-66-6	1	µg/L	52	39	29	81	----	
EK040P: Fluoride by PC Titrator									
Fluoride	16984-48-8	0.1	mg/L	0.2	0.2	0.4	<0.1	----	
EK057G: Nitrite as N by Discrete Analyser									
Nitrite as N	----	0.01	mg/L	0.08	0.03	0.06	<0.01	----	
EK058G: Nitrate as N by Discrete Analyser									
Nitrate as N	14797-55-8	0.01	mg/L	1.76	0.54	<0.01	0.10	----	
EK059G: NOX as N by Discrete Analyser									
Nitrite + Nitrate as N	----	0.01	mg/L	1.84	0.57	0.04	0.10	----	
EP080/071: Total Petroleum Hydrocarbons									
C6 - C9 Fraction	----	20	µg/L	<20	<20	<20	<20	----	
C10 - C14 Fraction	----	50	µg/L	50	<50	60	<50	----	
C15 - C28 Fraction	----	100	µg/L	140	160	330	150	----	
C29 - C36 Fraction	----	50	µg/L	60	90	120	80	----	
^ C10 - C36 Fraction (sum)	----	50	µg/L	250	250	510	230	----	
Ultra-Trace Nutrients									
Ammonia as N	7664-41-7	0.005	mg/L	0.070	0.061	0.069	0.113	----	
Total Nitrogen as N	----	0.05	mg/L	2.40	1.76	0.89	2.70	----	
Total Phosphorus as P	----	0.005	mg/L	0.353	0.354	0.402	1.08	----	
EP080S: TPH(V)/BTEX Surrogates									
1,2-Dichloroethane-D4	17060-07-0	0.1	%	98.4	100	111	104	----	
Toluene-D8	2037-26-5	0.1	%	99.7	99.7	109	102	----	
4-Bromofluorobenzene	460-00-4	0.1	%	98.5	100	105	102	----	



Surrogate Control Limits

Sub-Matrix: WATER		Recovery Limits (%)	
Compound	CAS Number	Low	High
EP080S: TPH(V)/BTEX Surrogates			
1,2-Dichloroethane-D4	17060-07-0	80	120
Toluene-D8	2037-26-5	88	110
4-Bromofluorobenzene	460-00-4	86	115

SAMPLE RECEIPT NOTIFICATION (SRN)

Comprehensive Report

Work Order	: EB0918367		
Amendment	: 3		
Client	: ALLUVIUM CONSULTING	Laboratory	: Environmental Division Brisbane
Contact	: MS MARTINE ADRIAANSEN	Contact	: Greg Vogel
Address	: PO BOX 1581 TOWNSVILLE QLD, AUSTRALIA 4810	Address	: 32 Shand Street Stafford QLD Australia 4053
E-mail	: martine@natres.com.au	E-mail	: Services.Brisbane@alsenviro.com
Telephone	: +61 07 47242170	Telephone	: +61 7 3243 7222
Facsimile	: ----	Facsimile	: +61 7 3243 7218
Project	: Surat Gas Project EIS	Page	: 1 of 3
Order number	: ----		
C-O-C number	: ----	Quote number	: EB2009ALLUVI0051 (BN/637/09)
Site	: Surat Gas Project		
Sampler	: A.C, M.A	QC Level	: NEPM 1999 Schedule B(3) and ALS QCS3 requirement

Dates

Date Samples Received	: 20-NOV-2009	Issue Date	: 05-DEC-2011 15:26
Client Requested Due Date	: 01-DEC-2009	Scheduled Reporting Date	: 26-FEB-2010

Delivery Details

Mode of Delivery	: Client Drop off	Temperature	: 3.1, 2.5,0.6,1.9°C - Ice present
No. of coolers/boxes	: 4 MEDIUM	No. of samples received	: 9
Security Seal	: Not intact.	No. of samples analysed	: 9

General Comments

- This report contains the following information:
 - Sample Container(s)/Preservation Non-Compliances
 - Summary of Sample(s) and Requested Analysis
 - Proactive Holding Time Report
 - Requested Deliverables
- **Samples received in appropriately pretreated and preserved containers.**
- **Please refer to the Proactive Holding Time Report table below which summarises breaches of recommended holding times that have occurred prior to samples/instructions being received at the laboratory. The absence of this summary table indicates that all samples have been received within the recommended holding times for the analysis requested.**
- **Tri-Ethylene Glycol have been subcontracted to ACS Laboratories..**
- **Analysis instructions for sample "137" were received from Anne-Marie Calvi on 23/11/09 at 16:33.**
- Please direct any turn around / technical queries to the laboratory contact designated above.
- Please direct any queries related to sample condition / numbering / breakages to Maggie Kahi.
- Analytical work for this work order will be conducted at ALS Brisbane.
- Sample Disposal - Aqueous (14 days), Solid (90 days) from date of completion of work order.



Matrix: **WATER**

Laboratory sample ID	Client sampling date / time	Client sample ID	WATER - EPI30-CM Organophosphorus Super Ultra-trace for Catchment Monitoring	WATER - EPI31A-CM Super Ultra Trace Organochlorine Pesticides	WATER - EPI32-LL Super Ultra Trace PAH	WATER - NT-04 Nitrite and Nitrate	WATER - TPH TPH (fractions)	WATER - UTN-1 Ultratrace Nitrogen (Total) and Phosphorus (Total)
EB0918367-001	19-NOV-2009 07:30	4				✓	✓	✓
EB0918367-002	19-NOV-2009 08:00	79				✓	✓	✓
EB0918367-003	19-NOV-2009 06:30	78				✓	✓	✓
EB0918367-004	19-NOV-2009 10:30	88	✓	✓	✓	✓	✓	✓
EB0918367-005	19-NOV-2009 12:00	109				✓	✓	✓
EB0918367-006	19-NOV-2009 13:30	119	✓	✓	✓	✓	✓	✓
EB0918367-007	19-NOV-2009 14:45	120				✓	✓	✓
EB0918367-008	19-NOV-2009 16:00	127	✓	✓	✓	✓	✓	✓
EB0918367-009	19-NOV-2009 15:15	137				✓	✓	✓

Proactive Holding Time Report

Sample(s) have been received within the recommended holding times for the requested analysis.

Requested Deliverables

MR TYSON SMALLEY

- *AU Certificate of Analysis - NATA (COA) Email tyson.smalley@alluvium.com.au
- *AU Interpretive QC Report - DEFAULT (Anon QCI Rep) (QCI) Email tyson.smalley@alluvium.com.au
- *AU QC Report - DEFAULT (Anon QC Rep) - NATA (QC) Email tyson.smalley@alluvium.com.au
- Default - Chain of Custody (COC) Email tyson.smalley@alluvium.com.au
- EDI Format - ENMRG (ENMRG) Email tyson.smalley@alluvium.com.au
- Trigger - Subcontract Report (SUBCO) Email tyson.smalley@alluvium.com.au

MS MARTINE ADRIAANSEN

- *AU Certificate of Analysis - NATA (COA) Email martine@nates.com.au
- *AU Interpretive QC Report - DEFAULT (Anon QCI Rep) (QCI) Email martine@nates.com.au
- *AU QC Report - DEFAULT (Anon QC Rep) - NATA (QC) Email martine@nates.com.au
- A4 - AU Sample Receipt Notification - Environmental HT (SRN) Email martine@nates.com.au
- A4 - AU Tax Invoice (INV) Email martine@nates.com.au
- Chain of Custody (CoC) (COC) Email martine@nates.com.au
- EDI Format - ENMRG (ENMRG) Email martine@nates.com.au
- EDI Format - XTab (XTAB) Email martine@nates.com.au

QUALITY CONTROL REPORT

Work Order	: EB0918367	Page	: 1 of 12
Amendment	: 3		
Client	: ALLUVIUM CONSULTING	Laboratory	: Environmental Division Brisbane
Contact	: MS MARTINE ADRIAANSEN	Contact	: Greg Vogel
Address	: PO BOX 1581 TOWNSVILLE QLD, AUSTRALIA 4810	Address	: 32 Shand Street Stafford QLD Australia 4053
E-mail	: martine@natres.com.au	E-mail	: Services.Brisbane@alsenviro.com
Telephone	: +61 07 47242170	Telephone	: +61 7 3243 7222
Facsimile	: ----	Facsimile	: +61 7 3243 7218
Project	: Surat Gas Project EIS	QC Level	: NEPM 1999 Schedule B(3) and ALS QCS3 requirement
Site	: Surat Gas Project		
C-O-C number	: ----	Date Samples Received	: 20-NOV-2009
Sampler	: A.C, M.A	Issue Date	: 05-DEC-2011
Order number	: ----		
Quote number	: BN/637/09	No. of samples received	: 9
		No. of samples analysed	: 9

This report supersedes any previous report(s) with this reference. Results apply to the sample(s) as submitted. All pages of this report have been checked and approved for release.

This Quality Control Report contains the following information:

- Laboratory Duplicate (DUP) Report; Relative Percentage Difference (RPD) and Acceptance Limits
- Method Blank (MB) and Laboratory Control Spike (LCS) Report; Recovery and Acceptance Limits
- Matrix Spike (MS) Report; Recovery and Acceptance Limits



NATA Accredited Laboratory 825

This document is issued in accordance with NATA accreditation requirements.

Accredited for compliance with ISO/IEC 17025.

Signatories

This document has been electronically signed by the authorized signatories indicated below. Electronic signing has been carried out in compliance with procedures specified in 21 CFR Part 11.

<i>Signatories</i>	<i>Position</i>	<i>Accreditation Category</i>
Celine Conceicao	Senior Spectroscopist	Sydney Inorganics
Edwandy Fadjar	Organic Coordinator	Sydney Organics
Hoa Nguyen	Inorganic Chemist	Sydney Inorganics
Kim McCabe	Senior Inorganic Chemist	Brisbane Inorganics
Matt Frost	Senior Organic Chemist	Brisbane Organics
Sarah Ashworth	Assistant Laboratory Manager	Brisbane Organics
Stephen Hislop	Senior Inorganic Chemist	Brisbane Inorganics



General Comments

The analytical procedures used by the Environmental Division have been developed from established internationally recognized procedures such as those published by the USEPA, APHA, AS and NEPM. In house developed procedures are employed in the absence of documented standards or by client request.

Where moisture determination has been performed, results are reported on a dry weight basis.

Where a reported less than (<) result is higher than the LOR, this may be due to primary sample extract/digestate dilution and/or insufficient sample for analysis.

Where the LOR of a reported result differs from standard LOR, this may be due to high moisture content, insufficient sample (reduced weight employed) or matrix interference.

Key :
Anonymous = Refers to samples which are not specifically part of this work order but formed part of the QC process lot
CAS Number = CAS registry number from database maintained by Chemical Abstracts Services. The Chemical Abstracts Service is a division of the American Chemical Society.
LOR = Limit of reporting
RPD = Relative Percentage Difference
= Indicates failed QC



Laboratory Duplicate (DUP) Report

The quality control term Laboratory Duplicate refers to a randomly selected intralaboratory split. Laboratory duplicates provide information regarding method precision and sample heterogeneity. The permitted ranges for the Relative Percent Deviation (RPD) of Laboratory Duplicates are specified in ALS Method QWI-EN/38 and are dependent on the magnitude of results in comparison to the level of reporting: Result < 10 times LOR:- No Limit; Result between 10 and 20 times LOR:- 0% - 50%; Result > 20 times LOR:- 0% - 20%.

Sub-Matrix: **WATER**

				Laboratory Duplicate (DUP) Report					
Laboratory sample ID	Client sample ID	Method: Compound	CAS Number	LOR	Unit	Original Result	Duplicate Result	RPD (%)	Recovery Limits (%)
EB0918310-001	Anonymous	EA025H: Suspended Solids (SS)	----	5	mg/L	71	71	0.0	0% - 50%
EB0918367-008	127	EA025H: Suspended Solids (SS)	----	5	mg/L	628	616	1.9	0% - 20%
EB0918363-001	Anonymous	ED040F: Sulfate as SO4 2-	14808-79-8	1	mg/L	1090	1090	0.2	0% - 20%
EB0918367-002	79	ED040F: Sulfate as SO4 2-	14808-79-8	1	mg/L	6	6	0.0	No Limit
EB0918363-008	Anonymous	ED045G: Chloride	16887-00-6	----	mg/L	----	831	# Not Determined	0% - 20%
EB0918367-002	79	ED045G: Chloride	16887-00-6	1	mg/L	46	47	3.0	0% - 20%
EB0918363-001	Anonymous	ED093F: Calcium	7440-70-2	1	mg/L	52	52	0.0	0% - 20%
		ED093F: Magnesium	7439-95-4	1	mg/L	178	176	1.1	0% - 20%
		ED093F: Sodium	7440-23-5	1	mg/L	1340	1330	1.0	0% - 20%
EB0918367-002	79	ED093F: Calcium	7440-70-2	1	mg/L	28	28	0.0	0% - 20%
		ED093F: Magnesium	7439-95-4	1	mg/L	18	18	0.0	0% - 50%
		ED093F: Sodium	7440-23-5	1	mg/L	38	38	0.0	0% - 20%
EB0918367-001	4	EG035F: Mercury	7439-97-6	0.0001	mg/L	<0.0001	<0.0001	0.0	No Limit
EB0918367-001	4	EG035T: Mercury	7439-97-6	0.0001	mg/L	<0.0001	<0.0001	0.0	No Limit
EB0918492-002	Anonymous	EG035T: Mercury	7439-97-6	0.0001	mg/L	<0.0001	<0.0001	0.0	No Limit
EB0918367-001	4	EG094A-F: Cadmium	7440-43-9	0.05	µg/L	<0.05	<0.05	0.0	No Limit
		EG094A-F: Cobalt	7440-48-4	0.1	µg/L	0.5	0.5	0.0	No Limit
		EG094A-F: Lead	7439-92-1	0.1	µg/L	<0.1	<0.1	0.0	No Limit
		EG094A-F: Arsenic	7440-38-2	0.2	µg/L	0.9	0.9	0.0	No Limit
		EG094A-F: Vanadium	7440-62-2	0.2	µg/L	4.8	4.8	0.0	0% - 20%
		EG094A-F: Copper	7440-50-8	0.5	µg/L	0.6	0.6	0.0	No Limit
		EG094A-F: Nickel	7440-02-0	0.5	µg/L	3.5	3.5	0.0	No Limit
		EG094A-F: Zinc	7440-66-6	1	µg/L	4	4	0.0	No Limit
		EG094A-F: Boron	7440-42-8	5	µg/L	18	17	0.0	No Limit
EB0918367-001	4	EG094B-F: Selenium	7782-49-2	0.2	µg/L	<0.2	<0.2	0.0	No Limit



Sub-Matrix: **WATER**

				Laboratory Duplicate (DUP) Report						
Laboratory sample ID	Client sample ID	Method: Compound	CAS Number	LOR	Unit	Original Result	Duplicate Result	RPD (%)	Recovery Limits (%)	
EB0918367-001	4	EG094A-T: Cadmium	7440-43-9	0.05	µg/L	<0.05	<0.05	0.0	No Limit	
		EG094A-T: Cobalt	7440-48-4	0.1	µg/L	1.2	1.2	0.0	0% - 50%	
		EG094A-T: Lead	7439-92-1	0.1	µg/L	0.4	0.4	0.0	No Limit	
		EG094A-T: Arsenic	7440-38-2	0.2	µg/L	1.0	1.1	0.0	No Limit	
		EG094A-T: Vanadium	7440-62-2	0.2	µg/L	6.4	6.4	0.0	0% - 20%	
		EG094A-T: Copper	7440-50-8	0.5	µg/L	1.2	1.2	0.0	No Limit	
		EG094A-T: Nickel	7440-02-0	0.5	µg/L	4.7	4.9	3.3	No Limit	
		EG094A-T: Zinc	7440-66-6	1	µg/L	2	2	0.0	No Limit	
		EG094A-T: Boron	7440-42-8	5	µg/L	16	16	0.0	No Limit	
EB0918367-001	4	EG094B-T: Selenium	7782-49-2	0.2	µg/L	<0.2	<0.2	0.0	No Limit	
EB0918359-012	Anonymous	EK040P: Fluoride	16984-48-8	0.1	mg/L	0.7	0.6	0.0	No Limit	
EB0918367-008	127	EK040P: Fluoride	16984-48-8	0.1	mg/L	0.1	0.1	0.0	No Limit	
EB0918363-008	Anonymous	EK057G: Nitrite as N	----	0.01	mg/L	<0.01	<0.01	0.0	No Limit	
EB0918367-002	79	EK057G: Nitrite as N	----	0.01	mg/L	<0.01	<0.01	0.0	No Limit	
EB0918367-001	4	EK059G: Nitrite + Nitrate as N	----	0.01	mg/L	0.02	0.02	0.0	No Limit	
EB0918451-003	Anonymous	EK059G: Nitrite + Nitrate as N	----	0.01	mg/L	0.82	0.79	3.1	0% - 20%	
EB0918367-004	88	EP074: Benzene	71-43-2	1	µg/L	<1	<1	0.0	No Limit	
		EP074: Toluene	108-88-3	2	µg/L	<2	<2	0.0	No Limit	
		EP074: Ethylbenzene	100-41-4	2	µg/L	<2	<2	0.0	No Limit	
		EP074: meta- & para-Xylene	108-38-3	2	µg/L	<2	<2	0.0	No Limit	
			106-42-3							
		EP074: ortho-Xylene	95-47-6	2	µg/L	<2	<2	0.0	No Limit	
		EP074: Styrene	100-42-5	5	µg/L	<5	<5	0.0	No Limit	
		EP074: Isopropylbenzene	98-82-8	5	µg/L	<5	<5	0.0	No Limit	
		EP074: n-Propylbenzene	103-65-1	5	µg/L	<5	<5	0.0	No Limit	
		EP074: 1,3,5-Trimethylbenzene	108-67-8	5	µg/L	<5	<5	0.0	No Limit	
		EP074: sec-Butylbenzene	135-98-8	5	µg/L	<5	<5	0.0	No Limit	
		EP074: 1,2,4-Trimethylbenzene	95-63-6	5	µg/L	<5	<5	0.0	No Limit	
		EP074: tert-Butylbenzene	98-06-6	5	µg/L	<5	<5	0.0	No Limit	
		EP074: p-Isopropyltoluene	99-87-6	5	µg/L	<5	<5	0.0	No Limit	
EP074: n-Butylbenzene	104-51-8	5	µg/L	<5	<5	0.0	No Limit			
ES0917863-003	Anonymous	EP132-LL: Benzo(a)pyrene	50-32-8	0.005	µg/L	<0.005	<0.005	0.0	No Limit	
		EP132-LL: Total PAH	----	0.005	µg/L	<0.005	<0.005	0.0	No Limit	



Sub-Matrix: **WATER**

				Laboratory Duplicate (DUP) Report					
Laboratory sample ID	Client sample ID	Method: Compound	CAS Number	LOR	Unit	Original Result	Duplicate Result	RPD (%)	Recovery Limits (%)
ES0917863-003	Anonymous	EP132-LL: Naphthalene	91-20-3	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP132-LL: Acenaphthylene	208-96-8	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP132-LL: Acenaphthene	83-32-9	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP132-LL: Fluorene	86-73-7	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP132-LL: Phenanthrene	85-01-8	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP132-LL: Anthracene	120-12-7	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP132-LL: Fluoranthene	206-44-0	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP132-LL: Pyrene	129-00-0	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP132-LL: Benz(a)anthracene	56-55-3	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP132-LL: Chrysene	218-01-9	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP132-LL: Benzo(b)fluoranthene	205-99-2	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP132-LL: Benzo(k)fluoranthene	207-08-9	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP132-LL: Indeno(1.2.3.cd)pyrene	193-39-5	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP132-LL: Dibenz(a,h)anthracene	53-70-3	0.02	µg/L	<0.02	<0.02	0.0	No Limit
EP132-LL: Benzo(g,h,i)perylene	191-24-2	0.02	µg/L	<0.02	<0.02	0.0	No Limit		
EB0918367-004	88	EP080: C6 - C9 Fraction	----	20	µg/L	<20	<20	0.0	No Limit
EB0918367-001	4	EP080: C6 - C9 Fraction	----	20	µg/L	<20	<20	0.0	No Limit
EB0918428-003	Anonymous	EP080: C6 - C9 Fraction	----	20	µg/L	<20	<20	0.0	No Limit
ES0918006-003	Anonymous	EK267PA-CM: Total Phosphorus as P	----	0.005	mg/L	<0.005	<0.005	0.0	No Limit
EB0918367-002	79	EK267PA-CM: Total Phosphorus as P	----	0.005	mg/L	0.357	0.404	12.2	0% - 20%
ES0918006-003	Anonymous	EK262PA-CM: Total Nitrogen as N	----	0.01	mg/L	0.24	0.24	0.0	0% - 20%
EB0918367-002	79	EK262PA-CM: Total Nitrogen as N	----	0.05	mg/L	2.54	2.55	0.0	0% - 20%
ES0917991-001	Anonymous	EK255A-CM: Ammonia as N	7664-41-7	0.005	mg/L	<0.005	<0.005	0.0	No Limit
ES0918006-003	Anonymous	EK255A-CM: Ammonia as N	7664-41-7	0.005	mg/L	<0.005	<0.005	0.0	No Limit
ES0918006-009	Anonymous	EK255A-CM: Ammonia as N	7664-41-7	0.005	mg/L	<0.005	<0.005	0.0	No Limit



Method Blank (MB) and Laboratory Control Spike (LCS) Report

The quality control term Method / Laboratory Blank refers to an analyte free matrix to which all reagents are added in the same volumes or proportions as used in standard sample preparation. The purpose of this QC parameter is to monitor potential laboratory contamination. The quality control term Laboratory Control Sample (LCS) refers to a certified reference material, or a known interference free matrix spiked with target analytes. The purpose of this QC parameter is to monitor method precision and accuracy independent of sample matrix. Dynamic Recovery Limits are based on statistical evaluation of processed LCS.

Sub-Matrix: **WATER**

				Method Blank (MB) Report	Laboratory Control Spike (LCS) Report			
Method: Compound	CAS Number	LOR	Unit	Result	Spike Concentration	Spike Recovery (%) LCS	Recovery Limits (%) Low High	
EA025: Suspended Solids (QCLot: 1173891)								
EA025H: Suspended Solids (SS)	----	5	mg/L	<5	150 mg/L	107	86	108
ED040F: Dissolved Major Anions (QCLot: 1171731)								
ED040F: Sulfate as SO4 2-	14808-79-8	1	mg/L	<1	----	----	----	----
ED045G: Chloride Discrete analyser (QCLot: 1171733)								
ED045G: Chloride	16887-00-6	1	mg/L	<1	1000 mg/L	95.3	90	130
ED093F: Dissolved Major Cations (QCLot: 1171730)								
ED093F: Calcium	7440-70-2	1	mg/L	<1	----	----	----	----
ED093F: Magnesium	7439-95-4	1	mg/L	<1	----	----	----	----
ED093F: Sodium	7440-23-5	1	mg/L	<1	----	----	----	----
EG035F: Dissolved Mercury by FIMS (QCLot: 1173872)								
EG035F: Mercury	7439-97-6	0.0001	mg/L	<0.0001	0.010 mg/L	101	86	116
EG035T: Total Recoverable Mercury by FIMS (QCLot: 1175335)								
EG035T: Mercury	7439-97-6	0.0001	mg/L	<0.0001	0.010 mg/L	102	81	119
EG094F: Dissolved Metals in Fresh Water by ORC-ICPMS (QCLot: 1173937)								
EG094A-F: Arsenic	7440-38-2	0.2	µg/L	<0.2	10 µg/L	110	81	121
EG094A-F: Boron	7440-42-8	5	µg/L	<5	----	----	----	----
EG094A-F: Cadmium	7440-43-9	0.05	µg/L	<0.05	10 µg/L	98.4	70	130
EG094A-F: Cobalt	7440-48-4	0.1	µg/L	<0.1	10 µg/L	105	70	130
EG094A-F: Copper	7440-50-8	0.5	µg/L	<0.5	10 µg/L	109	70	130
EG094A-F: Lead	7439-92-1	0.1	µg/L	<0.1	10 µg/L	89.8	70	130
EG094A-F: Nickel	7440-02-0	0.5	µg/L	<0.5	10 µg/L	109	70	130
EG094A-F: Vanadium	7440-62-2	0.2	µg/L	<0.2	10 µg/L	106	70	130
EG094A-F: Zinc	7440-66-6	1	µg/L	<1	10 µg/L	110	70	130
EG094F: Dissolved Metals in Fresh Water by ORC-ICPMS (QCLot: 1173938)								
EG094B-F: Selenium	7782-49-2	0.2	µg/L	<0.2	10 µg/L	110	74	122
EG094T: Total metals in Fresh water by ORC-ICPMS (QCLot: 1173935)								
EG094A-T: Arsenic	7440-38-2	0.2	µg/L	<0.2	10 µg/L	108	70	130
EG094A-T: Boron	7440-42-8	5	µg/L	<5	----	----	----	----
EG094A-T: Cadmium	7440-43-9	0.05	µg/L	<0.05	10 µg/L	92.2	70	130
EG094A-T: Cobalt	7440-48-4	0.1	µg/L	<0.1	10 µg/L	104	70	130
EG094A-T: Copper	7440-50-8	0.5	µg/L	<0.5	10 µg/L	108	70	130
EG094A-T: Lead	7439-92-1	0.1	µg/L	<0.1	10 µg/L	92.4	70	130
EG094A-T: Nickel	7440-02-0	0.5	µg/L	<0.5	10 µg/L	107	70	130



Sub-Matrix: **WATER**

Method: Compound	CAS Number	LOR	Unit	Method Blank (MB) Report	Laboratory Control Spike (LCS) Report				
				Result	Spike Concentration	Spike Recovery (%)		Recovery Limits (%)	
						LCS	Low	High	
EG094T: Total metals in Fresh water by ORC-ICPMS (QCLot: 1173935) - continued									
EG094A-T: Vanadium	7440-62-2	0.2	µg/L	<0.2	10 µg/L	101	70	130	
EG094A-T: Zinc	7440-66-6	1	µg/L	<1	10 µg/L	106	70	130	
EG094T: Total metals in Fresh water by ORC-ICPMS (QCLot: 1173936)									
EG094B-T: Selenium	7782-49-2	0.2	µg/L	<0.2	10 µg/L	98.6	70	130	
EK040P: Fluoride by PC Titrator (QCLot: 1172419)									
EK040P: Fluoride	16984-48-8	0.1	mg/L	<0.1	10 mg/L	93.1	75	123	
EK057G: Nitrite as N by Discrete Analyser (QCLot: 1171732)									
EK057G: Nitrite as N	----	0.01	mg/L	<0.01	0.5 mg/L	104	74	128	
EK059G: NOX as N by Discrete Analyser (QCLot: 1175429)									
EK059G: Nitrite + Nitrate as N	----	0.01	mg/L	<0.01	0.5 mg/L	110	70	130	
EP074A: Monocyclic Aromatic Hydrocarbons (QCLot: 1172074)									
EP074: Benzene	71-43-2	1	µg/L	<1	10 µg/L	92.9	75	122	
EP074: Toluene	108-88-3	2	µg/L	<2	10 µg/L	86.9	71.2	124	
EP074: Ethylbenzene	100-41-4	2	µg/L	<2	10 µg/L	83.0	76	120	
EP074: meta- & para-Xylene	108-38-3 106-42-3	2	µg/L	<2	20 µg/L	86.4	68	132	
EP074: Styrene	100-42-5	5	µg/L	<5	10 µg/L	90.1	68	127	
EP074: ortho-Xylene	95-47-6	2	µg/L	<2	10 µg/L	87.2	76	122	
EP074: Isopropylbenzene	98-82-8	5	µg/L	<5	10 µg/L	85.9	74	123	
EP074: n-Propylbenzene	103-65-1	5	µg/L	<5	10 µg/L	81.8	69	125	
EP074: 1,3,5-Trimethylbenzene	108-67-8	5	µg/L	<5	10 µg/L	84.1	74	121	
EP074: sec-Butylbenzene	135-98-8	5	µg/L	<5	10 µg/L	80.8	72	124	
EP074: 1,2,4-Trimethylbenzene	95-63-6	5	µg/L	<5	10 µg/L	86.9	73.5	124	
EP074: tert-Butylbenzene	98-06-6	5	µg/L	<5	10 µg/L	80.2	71.6	128	
EP074: p-Isopropyltoluene	99-87-6	5	µg/L	<5	10 µg/L	# 65.7	68.3	130	
EP074: n-Butylbenzene	104-51-8	5	µg/L	<5	10 µg/L	78.2	67	126	
EP075(SIM)A: Phenolic Compounds (QCLot: 1172417)									
EP075(SIM): Phenol	108-95-2	1	µg/L	<1.0	5 µg/L	33.6	24	70	
EP075(SIM): 2-Chlorophenol	95-57-8	1	µg/L	<1.0	5 µg/L	70.5	57	105	
EP075(SIM): 2-Methylphenol	95-48-7	1	µg/L	<1.0	5 µg/L	60.9	51	98	
EP075(SIM): 3- & 4-Methylphenol	1319-77-3	2	µg/L	<2.0	10 µg/L	61.1	45	97	
EP075(SIM): 2-Nitrophenol	88-75-5	1	µg/L	<1.0	5 µg/L	92.4	48	132	
EP075(SIM): 2,4-Dimethylphenol	105-67-9	1	µg/L	<1.0	5 µg/L	75.9	44	112	
EP075(SIM): 2,4-Dichlorophenol	120-83-2	1	µg/L	<1.0	5 µg/L	83.1	60	114	
EP075(SIM): 2,6-Dichlorophenol	87-65-0	1	µg/L	<1.0	5 µg/L	81.8	59	118	
EP075(SIM): 4-Chloro-3-Methylphenol	59-50-7	1	µg/L	<1.0	5 µg/L	78.7	60	120	
EP075(SIM): 2,4,6-Trichlorophenol	88-06-2	1	µg/L	<1.0	5 µg/L	80.2	59	127	
EP075(SIM): 2,4,5-Trichlorophenol	95-95-4	1	µg/L	<1.0	5 µg/L	88.0	59	123	



Sub-Matrix: **WATER**

Method: Compound	CAS Number	LOR	Unit	Method Blank (MB) Report	Laboratory Control Spike (LCS) Report				
				Result	Spike Concentration	Spike Recovery (%)		Recovery Limits (%)	
						LCS	Low	High	
EP075(SIM)A: Phenolic Compounds (QCLot: 1172417) - continued									
EP075(SIM): Pentachlorophenol	87-86-5	2	µg/L	<2.0	10 µg/L	106	22.1	130	
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons (QCLot: 1174264)									
EP132-LL: Naphthalene	91-20-3	0.02	µg/L	<0.02	0.025 µg/L	78.5	68.3	116	
EP132-LL: Acenaphthylene	208-96-8	0.02	µg/L	<0.02	0.025 µg/L	91.8	72.4	112	
EP132-LL: Acenaphthene	83-32-9	0.02	µg/L	<0.02	0.025 µg/L	96.4	73.2	111	
EP132-LL: Fluorene	86-73-7	0.02	µg/L	<0.02	0.025 µg/L	91.4	72.9	114	
EP132-LL: Phenanthrene	85-01-8	0.02	µg/L	<0.02	0.025 µg/L	98.7	74.8	112	
EP132-LL: Anthracene	120-12-7	0.02	µg/L	<0.02	0.025 µg/L	84.8	73.4	113	
EP132-LL: Fluoranthene	206-44-0	0.02	µg/L	<0.02	0.025 µg/L	84.7	74.8	117	
EP132-LL: Pyrene	129-00-0	0.02	µg/L	<0.02	0.025 µg/L	85.9	74.1	117	
EP132-LL: Benz(a)anthracene	56-55-3	0.02	µg/L	<0.02	0.025 µg/L	106	73.6	114	
EP132-LL: Chrysene	218-01-9	0.02	µg/L	<0.02	0.025 µg/L	93.4	69.6	120	
EP132-LL: Benzo(b)fluoranthene	205-99-2	0.02	µg/L	<0.02	0.025 µg/L	85.3	71.4	119	
EP132-LL: Benzo(k)fluoranthene	207-08-9	0.02	µg/L	<0.02	0.025 µg/L	113	74.8	118	
EP132-LL: Benzo(a)pyrene	50-32-8	0.005	µg/L	<0.005	0.025 µg/L	96.0	75.2	117	
EP132-LL: Indeno(1.2.3.cd)pyrene	193-39-5	0.02	µg/L	<0.02	0.025 µg/L	86.7	67.8	119	
EP132-LL: Dibenz(a,h)anthracene	53-70-3	0.02	µg/L	<0.02	0.025 µg/L	91.0	71.5	117	
EP132-LL: Benzo(g,h,i)perylene	191-24-2	0.02	µg/L	<0.02	0.025 µg/L	86.2	66.6	121	
EP132-LL: Total PAH	----	0.005	µg/L	<0.005	----	----	----	----	
EP080/071: Total Petroleum Hydrocarbons (QCLot: 1172075)									
EP080: C6 - C9 Fraction	----	20	µg/L	<20	160 µg/L	103	73	135	
EP080/071: Total Petroleum Hydrocarbons (QCLot: 1172078)									
EP080: C6 - C9 Fraction	----	20	µg/L	<20	160 µg/L	104	73	135	
EP080/071: Total Petroleum Hydrocarbons (QCLot: 1172416)									
EP071: C10 - C14 Fraction	----	50	µg/L	<50	1200 µg/L	92.6	49	125.5	
EP071: C15 - C28 Fraction	----	100	µg/L	<100	2040 µg/L	103	58	130	
EP071: C29 - C36 Fraction	----	50	µg/L	<50	----	----	----	----	
EP130A: Organophosphorus Pesticides (Ultra-trace) (QCLot: 1174510)									
EP130-CM: Bromophos-ethyl	4824-78-6	0.02	µg/L	<0.02	----	----	----	----	
		0.10	µg/L	----	1 µg/L	114	35.4	143	
EP130-CM: Carbophenothion	786-19-6	0.02	µg/L	<0.02	----	----	----	----	
		0.10	µg/L	----	1 µg/L	104	5.13	171	
EP130-CM: Chlorfenvinphos (E)	18708-86-6	0.02	µg/L	<0.02	----	----	----	----	
		0.10	µg/L	----	0.1 µg/L	86.6	41.7	138	
EP130-CM: Chlorfenvinphos (Z)	18708-87-7	0.02	µg/L	<0.02	----	----	----	----	
		0.10	µg/L	----	1 µg/L	112	44.6	155	
EP130-CM: Chlorpyrifos	2921-88-2	0.01	µg/L	<0.010	----	----	----	----	
		0.05	µg/L	----	1 µg/L	128	38.5	145	



Sub-Matrix: **WATER**

Method: Compound	CAS Number	LOR	Unit	Method Blank (MB) Report	Laboratory Control Spike (LCS) Report			
				Result	Spike Concentration	Spike Recovery (%)	Recovery Limits (%)	
					LCS	Low	High	
EP130A: Organophosphorus Pesticides (Ultra-trace) (QCLot: 1174510) - continued								
EP130-CM: Chlorpyrifos-methyl	5598-13-0	0.02 0.10	µg/L µg/L	<0.02 ----	---- 1 µg/L	---- 105	---- 40.3	---- 135
EP130-CM: Demeton-S-methyl	919-86-8	0.02 0.10	µg/L µg/L	<0.02 ----	---- 1 µg/L	---- 102	---- 20.7	---- 178
EP130-CM: Diazinon	333-41-5	0.02 0.10	µg/L µg/L	<0.02 ----	---- 1 µg/L	---- 123	---- 38.7	---- 146
EP130-CM: Dichlorvos	62-73-7	0.02 0.10	µg/L µg/L	<0.02 ----	---- 1 µg/L	---- 120	---- 18.4	---- 151
EP130-CM: Dimethoate	60-51-5	0.02 0.10	µg/L µg/L	<0.02 ----	---- 1 µg/L	---- 124	---- 27.4	---- 131
EP130-CM: Ethion	563-12-2	0.02 0.10	µg/L µg/L	<0.02 ----	---- 1 µg/L	---- 111	---- 36.1	---- 147
EP130-CM: Fenamiphos	22224-92-6	0.02 0.10	µg/L µg/L	<0.02 ----	---- 1 µg/L	---- 120	---- 4.43	---- 168
EP130-CM: Fenthion	55-38-9	0.02 0.10	µg/L µg/L	<0.02 ----	---- 1 µg/L	---- 119	---- 23.2	---- 145
EP130-CM: Malathion	121-75-5	0.02 0.10	µg/L µg/L	<0.02 ----	---- 1 µg/L	---- 130	---- 40.7	---- 136
EP130-CM: Azinphos Methyl	86-50-0	0.02 0.10	µg/L µg/L	<0.02 ----	---- 1 µg/L	---- 65.0	---- 1.35	---- 163
EP130-CM: Monocrotophos	6923-22-4	0.02 0.10	µg/L µg/L	<0.02 ----	---- 1 µg/L	---- 97.1	---- 10	---- 86.3
EP130-CM: Parathion	56-38-2	0.02 0.10	µg/L µg/L	<0.02 ----	---- 1 µg/L	---- 100	---- 35.5	---- 141
EP130-CM: Parathion-methyl	298-00-0	0.02 0.10	µg/L µg/L	<0.02 ----	---- 1 µg/L	---- 100	---- 31.1	---- 144
EP130-CM: Pirimphos-ethyl	23505-41-1	0.02 0.10	µg/L µg/L	<0.02 ----	---- 1 µg/L	---- 91.0	---- 38.9	---- 142
EP130-CM: Prothiofos	34643-46-4	0.02 0.10	µg/L µg/L	<0.02 ----	---- 1 µg/L	---- 125	---- 40	---- 138
EP131A: Organochlorine Pesticides (QCLot: 1174509)								
EP131A-CM: Aldrin	309-00-2	0.01	µg/L	<0.010	0.1 µg/L	104	35.8	139
EP131A-CM: alpha-BHC	319-84-6	0.01	µg/L	<0.010	0.1 µg/L	92.0	19.7	153
EP131A-CM: beta-BHC	319-85-7	0.01	µg/L	<0.010	0.1 µg/L	89.0	43.8	136
EP131A-CM: delta-BHC	319-86-8	0.01	µg/L	<0.010	0.1 µg/L	107	37.4	144
EP131A-CM: 4,4'-DDD	72-54-8	0.01	µg/L	<0.010	0.1 µg/L	94.0	37.5	145
EP131A-CM: 4,4'-DDE	72-55-9	0.01	µg/L	<0.010	0.1 µg/L	77.0	30.5	146
EP131A-CM: 4,4'-DDT	50-29-3	0.01	µg/L	<0.010	0.1 µg/L	110	31	151
EP131A-CM: Dieldrin	60-57-1	0.01	µg/L	<0.010	0.1 µg/L	114	34.4	145
EP131A-CM: alpha-Endosulfan	959-98-8	0.01	µg/L	<0.010	0.1 µg/L	99.0	30.2	141



Sub-Matrix: **WATER**

Method: Compound	CAS Number	LOR	Unit	Method Blank (MB) Report	Laboratory Control Spike (LCS) Report			
				Result	Spike Concentration	Spike Recovery (%)	Recovery Limits (%)	
						LCS	Low	High
EP131A: Organochlorine Pesticides (QCLot: 1174509) - continued								
EP131A-CM: beta-Endosulfan	33213-65-9	0.01	µg/L	<0.010	0.1 µg/L	110	30.3	148
EP131A-CM: Endosulfan sulfate	1031-07-8	0.01	µg/L	<0.010	0.1 µg/L	117	19.1	150
EP131A-CM: Endrin	72-20-8	0.01	µg/L	<0.010	0.1 µg/L	122	13	165
EP131A-CM: Endrin aldehyde	7421-93-4	0.01	µg/L	<0.010	0.1 µg/L	72.0	28.3	134
EP131A-CM: Endrin ketone	53494-70-5	0.01	µg/L	<0.010	0.1 µg/L	95.0	15.1	146
EP131A-CM: Heptachlor	76-44-8	0.005	µg/L	<0.005	0.1 µg/L	101	33.2	148
EP131A-CM: Heptachlor epoxide	1024-57-3	0.01	µg/L	<0.010	0.1 µg/L	106	36	143
EP131A-CM: Hexachlorobenzene (HCB)	118-74-1	0.01	µg/L	<0.010	0.1 µg/L	76.0	14	146
EP131A-CM: gamma-BHC	58-89-9	0.01	µg/L	<0.010	0.1 µg/L	85.0	27.2	147
EP131A-CM: Methoxychlor	72-43-5	0.01	µg/L	<0.010	0.1 µg/L	80.0	34.4	150
EP131A-CM: cis-Chlordane	5103-71-9	0.01	µg/L	<0.010	0.1 µg/L	94.0	15.4	152
EP131A-CM: trans-Chlordane	5103-74-2	0.01	µg/L	<0.010	0.1 µg/L	98.0	45.1	140
Ultra-Trace Nutrients (QCLot: 1174878)								
EK267PA-CM: Total Phosphorus as P	----	0.005	mg/L	<0.005	0.44 mg/L	87.0	72	114
Ultra-Trace Nutrients (QCLot: 1174879)								
EK262PA-CM: Total Nitrogen as N	----	0.01	mg/L	<0.01	----	----	----	----
		0.05	mg/L	----	1.0 mg/L	89.4	70	117
Ultra-Trace Nutrients (QCLot: 1174898)								
EK255A-CM: Ammonia as N	7664-41-7	0.005	mg/L	<0.005	0.1 mg/L	104	75	121
Ultra-Trace Nutrients (QCLot: 1174901)								
EK255A-CM: Ammonia as N	7664-41-7	0.005	mg/L	<0.005	0.1 mg/L	104	75	121



Matrix Spike (MS) Report

The quality control term Matrix Spike (MS) refers to an intralaboratory split sample spiked with a representative set of target analytes. The purpose of this QC parameter is to monitor potential matrix effects on analyte recoveries. Static Recovery Limits as per laboratory Data Quality Objectives (DQOs). Ideal recovery ranges stated may be waived in the event of sample matrix interference.

Sub-Matrix: **WATER**

Laboratory sample ID	Client sample ID	Method: Compound	CAS Number	Matrix Spike (MS) Report			
				Spike Concentration	Spike Recovery (%)	Recovery Limits (%)	
					MS	Low	High
ED045G: Chloride Discrete analyser (QCLot: 1171733)							
EB0918367-001	4	ED045G: Chloride	16887-00-6	400 mg/L	105	70	130
EG035F: Dissolved Mercury by FIMS (QCLot: 1173872)							
EB0918367-001	4	EG035F: Mercury	7439-97-6	0.0100 mg/L	96.6	70	130
EG035T: Total Recoverable Mercury by FIMS (QCLot: 1175335)							
ES0917945-006	Anonymous	EG035T: Mercury	7439-97-6	0.010 mg/L	111	70	130
EG094F: Dissolved Metals in Fresh Water by ORC-ICPMS (QCLot: 1173937)							
EB0918367-001	4	EG094A-F: Arsenic	7440-38-2	50 µg/L	119	70	130
		EG094A-F: Cadmium	7440-43-9	12.5 µg/L	103	70	130
		EG094A-F: Cobalt	7440-48-4	50 µg/L	110	70	130
		EG094A-F: Copper	7440-50-8	50 µg/L	116	70	130
		EG094A-F: Lead	7439-92-1	50 µg/L	106	70	130
		EG094A-F: Nickel	7440-02-0	50 µg/L	112	70	130
		EG094A-F: Vanadium	7440-62-2	50 µg/L	110	70	130
		EG094A-F: Zinc	7440-66-6	50 µg/L	118	70	130
EG094T: Total metals in Fresh water by ORC-ICPMS (QCLot: 1173935)							
EB0918367-001	4	EG094A-T: Arsenic	7440-38-2	50 µg/L	111	70	130
		EG094A-T: Cadmium	7440-43-9	12.5 µg/L	93.1	70	130
		EG094A-T: Cobalt	7440-48-4	50 µg/L	103	70	130
		EG094A-T: Copper	7440-50-8	50 µg/L	107	70	130
		EG094A-T: Lead	7439-92-1	50 µg/L	88.8	70	130
		EG094A-T: Nickel	7440-02-0	50 µg/L	105	70	130
		EG094A-T: Vanadium	7440-62-2	50 µg/L	99.2	70	130
		EG094A-T: Zinc	7440-66-6	50 µg/L	107	70	130
EK040P: Fluoride by PC Titrator (QCLot: 1172419)							
EB0918359-011	Anonymous	EK040P: Fluoride	16984-48-8	4.9 mg/L	105	70	130
EK057G: Nitrite as N by Discrete Analyser (QCLot: 1171732)							
EB0918367-001	4	EK057G: Nitrite as N	----	0.4 mg/L	116	70	130
EK059G: NOX as N by Discrete Analyser (QCLot: 1175429)							
EB0918367-002	79	EK059G: Nitrite + Nitrate as N	----	0.4 mg/L	121	70	130
EP074A: Monocyclic Aromatic Hydrocarbons (QCLot: 1172074)							
EB0918367-006	119	EP074: Benzene	71-43-2	10 µg/L	109	70	130
		EP074: Toluene	108-88-3	10 µg/L	104	70	130
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons (QCLot: 1174264)							
ES0917863-004	Anonymous	EP132-LL: Naphthalene	91-20-3	0.025 µg/L	94.2	70	130



Sub-Matrix: WATER

				Matrix Spike (MS) Report			
Laboratory sample ID	Client sample ID	Method: Compound	CAS Number	Spike	Spike Recovery (%)	Recovery Limits (%)	
				Concentration	MS	Low	High
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons (QCLot: 1174264) - continued							
ES0917863-004	Anonymous	EP132-LL: Acenaphthylene	208-96-8	0.025 µg/L	80.7	70	130
		EP132-LL: Acenaphthene	83-32-9	0.025 µg/L	81.6	70	130
		EP132-LL: Fluorene	86-73-7	0.025 µg/L	83.8	70	130
		EP132-LL: Phenanthrene	85-01-8	0.025 µg/L	88.2	70	130
		EP132-LL: Anthracene	120-12-7	0.025 µg/L	93.5	70	130
		EP132-LL: Fluoranthene	206-44-0	0.025 µg/L	95.4	70	130
		EP132-LL: Pyrene	129-00-0	0.025 µg/L	95.9	70	130
		EP132-LL: Benz(a)anthracene	56-55-3	0.025 µg/L	92.1	70	130
		EP132-LL: Chrysene	218-01-9	0.025 µg/L	88.4	70	130
		EP132-LL: Benzo(b)fluoranthene	205-99-2	0.025 µg/L	85.8	70	130
		EP132-LL: Benzo(k)fluoranthene	207-08-9	0.025 µg/L	96.1	70	130
		EP132-LL: Benzo(a)pyrene	50-32-8	0.025 µg/L	90.8	70	130
		EP132-LL: Indeno(1.2.3.cd)pyrene	193-39-5	0.025 µg/L	86.2	70	130
		EP132-LL: Dibenz(a,h)anthracene	53-70-3	0.025 µg/L	91.4	70	130
EP132-LL: Benzo(g,h,i)perylene	191-24-2	0.025 µg/L	87.2	70	130		
EP080/071: Total Petroleum Hydrocarbons (QCLot: 1172075)							
EB0918367-006	119	EP080: C6 - C9 Fraction	----	140 µg/L	82.9	70	130
EP080/071: Total Petroleum Hydrocarbons (QCLot: 1172078)							
EB0918367-002	79	EP080: C6 - C9 Fraction	----	140 µg/L	73.3	70	130
Ultra-Trace Nutrients (QCLot: 1174878)							
ES0918006-003	Anonymous	EK267PA-CM: Total Phosphorus as P	----	0.5 mg/L	88.1	70	130
Ultra-Trace Nutrients (QCLot: 1174879)							
ES0918006-003	Anonymous	EK262PA-CM: Total Nitrogen as N	----	0.5 mg/L	83.1	70	130
Ultra-Trace Nutrients (QCLot: 1174898)							
ES0917991-001	Anonymous	EK255A-CM: Ammonia as N	7664-41-7	0.1 mg/L	75.8	70	130
Ultra-Trace Nutrients (QCLot: 1174901)							
ES0918006-009	Anonymous	EK255A-CM: Ammonia as N	7664-41-7	0.1 mg/L	82.4	70	130

INTERPRETIVE QUALITY CONTROL REPORT

Work Order	: EB0918367	Page	: 1 of 13
Amendment	: 3		
Client	: ALLUVIUM CONSULTING	Laboratory	: Environmental Division Brisbane
Contact	: MS MARTINE ADRIAANSEN	Contact	: Greg Vogel
Address	: PO BOX 1581 TOWNSVILLE QLD, AUSTRALIA 4810	Address	: 32 Shand Street Stafford QLD Australia 4053
E-mail	: martine@natres.com.au	E-mail	: Services.Brisbane@alsenviro.com
Telephone	: +61 07 47242170	Telephone	: +61 7 3243 7222
Facsimile	: ----	Facsimile	: +61 7 3243 7218
Project	: Surat Gas Project EIS	QC Level	: NEPM 1999 Schedule B(3) and ALS QCS3 requirement
Site	: Surat Gas Project	Date Samples Received	: 20-NOV-2009
C-O-C number	: ----	Issue Date	: 05-DEC-2011
Sampler	: A.C, M.A	No. of samples received	: 9
Order number	: ----	No. of samples analysed	: 9
Quote number	: BN/637/09		

This report supersedes any previous report(s) with this reference. Results apply to the sample(s) as submitted. All pages of this report have been checked and approved for release.

This Interpretive Quality Control Report contains the following information:

- Analysis Holding Time Compliance
- Quality Control Parameter Frequency Compliance
- Brief Method Summaries
- Summary of Outliers



Analysis Holding Time Compliance

The following report summarises extraction / preparation and analysis times and compares with recommended holding times. Dates reported represent first date of extraction or analysis and precludes subsequent dilutions and reruns. Information is also provided re the sample container (preservative) from which the analysis aliquot was taken. Elapsed period to analysis represents number of days from sampling where no extraction / digestion is involved or period from extraction / digestion where this is present. For composite samples, sampling date is assumed to be that of the oldest sample contributing to the composite. Sample date for laboratory produced leachates is assumed as the completion date of the leaching process. Outliers for holding time are based on USEPA SW 846, APHA, AS and NEPM (1999). A listing of breaches is provided in the Summary of Outliers.

Holding times for leachate methods (excluding elutriates) vary according to the analytes being determined on the resulting solution. For non-volatile analytes, the holding time compliance assessment compares the leach date with the shortest analyte holding time for the equivalent soil method. These soil holding times are: Organics (14 days); Mercury (28 days) & other metals (180 days). A recorded breach therefore does not guarantee a breach for all non-volatile parameters.

Matrix: **WATER**

Evaluation: * = Holding time breach ; ✓ = Within holding time.

Method Container / Client Sample ID(s)	Sample Date	Extraction / Preparation			Analysis		
		Date extracted	Due for extraction	Evaluation	Date analysed	Due for analysis	Evaluation
EA025: Suspended Solids							
Clear Plastic Bottle - Natural (EA025H) 4, 79, 78, 88, 109, 119, 120, 127, 137	19-NOV-2009	----	----	----	25-NOV-2009	26-NOV-2009	✓
ED040F: Dissolved Major Anions							
Clear Plastic Bottle - Natural (ED040F) 4, 79, 78, 88, 109, 119, 120, 127, 137	19-NOV-2009	---	17-DEC-2009	----	23-NOV-2009	17-DEC-2009	✓
ED045G: Chloride Discrete analyser							
Clear Plastic Bottle - Natural (ED045G) 4, 79, 78, 88, 109, 119, 120, 127, 137	19-NOV-2009	---	17-DEC-2009	----	23-NOV-2009	17-DEC-2009	✓
ED093F: Dissolved Major Cations							
Clear Plastic Bottle - Natural (ED093F) 4, 79, 78, 88, 109, 119, 120, 127, 137	19-NOV-2009	---	17-DEC-2009	----	23-NOV-2009	17-DEC-2009	✓
EG035F: Dissolved Mercury by FIMS							
Clear HDPE (U-T ORC) - Filtered; Lab-acidified (EG035F) 4, 79, 78, 88, 109, 119, 120, 127, 137	19-NOV-2009	---	17-DEC-2009	----	27-NOV-2009	17-DEC-2009	✓



Matrix: **WATER**

Evaluation: * = Holding time breach ; ✓ = Within holding time.

Method Container / Client Sample ID(s)	Sample Date	Extraction / Preparation			Analysis		
		Date extracted	Due for extraction	Evaluation	Date analysed	Due for analysis	Evaluation
EG035T: Total Mercury by FIMS							
Clear HDPE (U-T ORC) - Unfiltered; Lab-acidified (EG035T) 4, 79, 78, 88, 109, 119, 120, 127, 137	19-NOV-2009	----	----	----	30-NOV-2009	03-DEC-2009	✓
EG094F: Dissolved Metals in Fresh Water by ORC-ICPMS							
Clear HDPE (U-T ORC) - Filtered; Lab-acidified (EG094A-F) 4, 79, 78, 88, 109, 119, 120, 127, 137	19-NOV-2009	25-NOV-2009	18-MAY-2010	✓	25-NOV-2009	18-MAY-2010	✓
EG094T: Total metals in Fresh water by ORC-ICPMS							
Clear HDPE (U-T ORC) - Unfiltered; Lab-acidified (EG094A-T) 4, 79, 78, 88, 109, 119, 120, 127, 137	19-NOV-2009	25-NOV-2009	18-MAY-2010	✓	25-NOV-2009	18-MAY-2010	✓
EG094F: Dissolved Metals in Fresh Water by ORC-ICPMS							
Clear HDPE (U-T ORC) - Filtered; Lab-acidified (EG094B-F) 4, 79, 78, 88, 109, 119, 120, 127, 137	19-NOV-2009	25-NOV-2009	18-MAY-2010	✓	25-NOV-2009	18-MAY-2010	✓
EG094T: Total metals in Fresh water by ORC-ICPMS							
Clear HDPE (U-T ORC) - Unfiltered; Lab-acidified (EG094B-T) 4, 79, 78, 88, 109, 119, 120, 127, 137	19-NOV-2009	25-NOV-2009	18-MAY-2010	✓	25-NOV-2009	18-MAY-2010	✓
EK040P: Fluoride by PC Titrator							
Clear Plastic Bottle - Natural (EK040P) 4, 79, 78, 88, 109, 119, 120, 127, 137	19-NOV-2009	---	17-DEC-2009	----	24-NOV-2009	17-DEC-2009	✓



Matrix: WATER

Evaluation: ✘ = Holding time breach ; ✔ = Within holding time.

Method Container / Client Sample ID(s)	Sample Date	Extraction / Preparation			Analysis			
		Date extracted	Due for extraction	Evaluation	Date analysed	Due for analysis	Evaluation	
EK057G: Nitrite as N by Discrete Analyser								
Clear Plastic Bottle - Natural (EK057G) 4, 78, 109, 120, 137	79, 88, 119, 127,	19-NOV-2009	---	21-NOV-2009	----	23-NOV-2009	21-NOV-2009	✘
EK059G: NOX as N by Discrete Analyser								
Clear Plastic Bottle - Sulphuric Acid (EK059G) 4, 78, 109, 120, 137	79, 88, 119, 127,	19-NOV-2009	---	17-DEC-2009	----	26-NOV-2009	17-DEC-2009	✔
Ultra-Trace Nutrients								
Clear Plastic Bottle - Filtered (AS) (EK255A-CM) 4, 78, 109, 120, 137	79, 88, 119, 127,	19-NOV-2009	---	20-NOV-2009	----	24-NOV-2009	20-NOV-2009	✘
Ultra-Trace Nutrients								
Clear Plastic Bottle - Frozen (AS) (EK262PA-CM) 4, 78, 109, 120, 137	79, 88, 119, 127,	19-NOV-2009	24-NOV-2009	17-DEC-2009	✔	24-NOV-2009	17-DEC-2009	✔
Ultra-Trace Nutrients								
Clear Plastic Bottle - Frozen (AS) (EK267PA-CM) 4, 78, 109, 120, 137	79, 88, 119, 127,	19-NOV-2009	24-NOV-2009	17-DEC-2009	✔	24-NOV-2009	17-DEC-2009	✔
EP071/080: Total Petroleum Hydrocarbons								
Amber Glass Bottle - Unpreserved (EP071) 4, 78, 109, 120, 137	79, 88, 119, 127,	19-NOV-2009	24-NOV-2009	26-NOV-2009	✔	26-NOV-2009	03-JAN-2010	✔
EP074A: Monocyclic Aromatic Hydrocarbons								
Amber VOC Vial - HCl (EP074) 88, 127	119,	19-NOV-2009	---	03-DEC-2009	----	26-NOV-2009	03-DEC-2009	✔



Matrix: **WATER**

Evaluation: * = Holding time breach ; ✓ = Within holding time.

Method Container / Client Sample ID(s)	Sample Date	Extraction / Preparation			Analysis			
		Date extracted	Due for extraction	Evaluation	Date analysed	Due for analysis	Evaluation	
EP075(SIM)A: Phenolic Compounds								
Amber Glass Bottle - Unpreserved (EP075(SIM)) 88, 127	119,	19-NOV-2009	24-NOV-2009	26-NOV-2009	✓	26-NOV-2009	03-JAN-2010	✓
EP071/080: Total Petroleum Hydrocarbons								
Amber VOC Vial - HCl (EP080) 4, 78, 120,	79, 109, 137	19-NOV-2009	---	03-DEC-2009	----	25-NOV-2009	03-DEC-2009	✓
Amber VOC Vial - HCl (EP080) 88, 127	119,	19-NOV-2009	---	03-DEC-2009	----	26-NOV-2009	03-DEC-2009	✓
EP130A: Organophosphorus Pesticides (Ultra-trace)								
Amber Glass Bottle - Unpreserved (EP130-CM) 88, 127	119,	19-NOV-2009	25-NOV-2009	26-NOV-2009	✓	27-NOV-2009	05-JAN-2010	✓
EP131A: Organochlorine Pesticides								
Amber Glass Bottle - Unpreserved (EP131A-CM) 88, 127	119,	19-NOV-2009	25-NOV-2009	26-NOV-2009	✓	27-NOV-2009	05-JAN-2010	✓
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons								
Amber Glass Bottle - Unpreserved (EP132-LL) 88, 127	119,	19-NOV-2009	26-NOV-2009	26-NOV-2009	✓	26-NOV-2009	05-JAN-2010	✓



Quality Control Parameter Frequency Compliance

The following report summarises the frequency of laboratory QC samples analysed within the analytical lot(s) in which the submitted sample(s) was(where) processed. Actual rate should be greater than or equal to the expected rate. A listing of breaches is provided in the Summary of Outliers.

Matrix: **WATER** Evaluation: * = Quality Control frequency not within specification ; ✓ = Quality Control frequency within specification.

Quality Control Sample Type	Method	Count		Rate (%)			Quality Control Specification
		QC	Regular	Actual	Expected	Evaluation	
Laboratory Duplicates (DUP)							
Ammonia as N - Ultra-Trace for Catchment Monitoring	EK255A-CM	3	27	11.1	10.0	✓	NEPM 1999 Schedule B(3) and ALS QCS3 requirement
Chloride by Discrete Analyser	ED045G	2	15	13.3	10.0	✓	NEPM 1999 Schedule B(3) and ALS QCS3 requirement
Dissolved Mercury by FIMS	EG035F	1	9	11.1	10.0	✓	NEPM 1999 Schedule B(3) and ALS QCS3 requirement
Dissolved Metals in Fresh Water -Suite A by ORC-ICPMS	EG094A-F	1	9	11.1	10.0	✓	NEPM 1999 Schedule B(3) and ALS QCS3 requirement
Dissolved Metals in Fresh Water -Suite B by ORC-ICPMS	EG094B-F	1	9	11.1	10.0	✓	NEPM 1999 Schedule B(3) and ALS QCS3 requirement
Fluoride by PC Titrator	EK040P	2	12	16.7	10.0	✓	NEPM 1999 Schedule B(3) and ALS QCS3 requirement
Major Anions - Dissolved	ED040F	2	16	12.5	10.0	✓	NEPM 1999 Schedule B(3) and ALS QCS3 requirement
Major Cations - Dissolved	ED093F	2	20	10.0	10.0	✓	NEPM 1999 Schedule B(3) and ALS QCS3 requirement
Nitrite and Nitrate as N (NOx) by Discrete Analyser	EK059G	2	20	10.0	10.0	✓	NEPM 1999 Schedule B(3) and ALS QCS3 requirement
Nitrite as N by Discrete Analyser	EK057G	2	17	11.8	10.0	✓	NEPM 1999 Schedule B(3) and ALS QCS3 requirement
PAH Compounds in Water	EP132-LL	1	7	14.3	10.0	✓	NEPM 1999 Schedule B(3) and ALS QCS3 requirement
Suspended Solids (High Level)	EA025H	2	18	11.1	10.0	✓	NEPM 1999 Schedule B(3) and ALS QCS3 requirement
Total Mercury by FIMS	EG035T	2	20	10.0	10.0	✓	NEPM 1999 Schedule B(3) and ALS QCS3 requirement
Total Metals in Fresh Water -Suite A by ORC-ICPMS	EG094A-T	1	9	11.1	10.0	✓	NEPM 1999 Schedule B(3) and ALS QCS3 requirement
Total Metals in Fresh Water -Suite B by ORC-ICPMS	EG094B-T	1	9	11.1	10.0	✓	NEPM 1999 Schedule B(3) and ALS QCS3 requirement
Total Nitrogen as N (Persulfate digestion)-Ultra-Trace - CM	EK262PA-CM	4	28	14.3	10.0	✓	NEPM 1999 Schedule B(3) and ALS QCS3 requirement
Total Phosphorus(Persulfate Digestion) - Ultra-Trace for CM	EK267PA-CM	4	28	14.3	10.0	✓	NEPM 1999 Schedule B(3) and ALS QCS3 requirement
TPH Volatiles/BTEX	EP080	3	19	15.8	10.0	✓	NEPM 1999 Schedule B(3) and ALS QCS3 requirement
Volatile Organic Compounds	EP074	1	9	11.1	10.0	✓	NEPM 1999 Schedule B(3) and ALS QCS3 requirement
Laboratory Control Samples (LCS)							
Ammonia as N - Ultra-Trace for Catchment Monitoring	EK255A-CM	2	27	7.4	5.0	✓	NEPM 1999 Schedule B(3) and ALS QCS3 requirement
Chloride by Discrete Analyser	ED045G	2	15	13.3	10.0	✓	NEPM 1999 Schedule B(3) and ALS QCS3 requirement
Dissolved Mercury by FIMS	EG035F	1	9	11.1	5.0	✓	NEPM 1999 Schedule B(3) and ALS QCS3 requirement
Dissolved Metals in Fresh Water -Suite A by ORC-ICPMS	EG094A-F	1	9	11.1	5.0	✓	NEPM 1999 Schedule B(3) and ALS QCS3 requirement
Dissolved Metals in Fresh Water -Suite B by ORC-ICPMS	EG094B-F	1	9	11.1	5.0	✓	NEPM 1999 Schedule B(3) and ALS QCS3 requirement
Fluoride by PC Titrator	EK040P	1	12	8.3	5.0	✓	NEPM 1999 Schedule B(3) and ALS QCS3 requirement
Nitrite and Nitrate as N (NOx) by Discrete Analyser	EK059G	1	20	5.0	5.0	✓	NEPM 1999 Schedule B(3) and ALS QCS3 requirement
Nitrite as N by Discrete Analyser	EK057G	1	17	5.9	5.0	✓	NEPM 1999 Schedule B(3) and ALS QCS3 requirement
Organochlorine Pesticides (Super Ultra-trace) for CM	EP131A-CM	1	3	33.3	5.0	✓	NEPM 1999 Schedule B(3) and ALS QCS3 requirement
Organophosphorus Pesticides (Ultra-trace) for Catchment M	EP130-CM	1	3	33.3	5.0	✓	NEPM 1999 Schedule B(3) and ALS QCS3 requirement
PAH Compounds in Water	EP132-LL	1	7	14.3	5.0	✓	NEPM 1999 Schedule B(3) and ALS QCS3 requirement
PAH/Phenols (GC/MS - SIM)	EP075(SIM)	1	6	16.7	5.0	✓	NEPM 1999 Schedule B(3) and ALS QCS3 requirement
Suspended Solids (High Level)	EA025H	1	18	5.6	5.0	✓	NEPM 1999 Schedule B(3) and ALS QCS3 requirement
Total Mercury by FIMS	EG035T	1	20	5.0	5.0	✓	NEPM 1999 Schedule B(3) and ALS QCS3 requirement
Total Metals in Fresh Water -Suite A by ORC-ICPMS	EG094A-T	1	9	11.1	5.0	✓	NEPM 1999 Schedule B(3) and ALS QCS3 requirement
Total Metals in Fresh Water -Suite B by ORC-ICPMS	EG094B-T	1	9	11.1	5.0	✓	NEPM 1999 Schedule B(3) and ALS QCS3 requirement
Total Nitrogen as N (Persulfate digestion)-Ultra-Trace - CM	EK262PA-CM	2	28	7.1	10.0	*	NEPM 1999 Schedule B(3) and ALS QCS3 requirement



Matrix: **WATER** Evaluation: ✘ = Quality Control frequency not within specification ; ✔ = Quality Control frequency within specification.

Quality Control Sample Type	Method	Count		Rate (%)			Quality Control Specification
		QC	Regular	Actual	Expected	Evaluation	
Analytical Methods							
Laboratory Control Samples (LCS) - Continued							
Total Phosphorus(Persulfate Digestion) - Ultra-Trace for CM	EK267PA-CM	2	28	7.1	10.0	✘	NEPM 1999 Schedule B(3) and ALS QCS3 requirement
TPH - Semivolatile Fraction	EP071	1	18	5.6	5.0	✔	NEPM 1999 Schedule B(3) and ALS QCS3 requirement
TPH Volatiles/BTEX	EP080	2	19	10.5	5.0	✔	NEPM 1999 Schedule B(3) and ALS QCS3 requirement
Volatile Organic Compounds	EP074	1	9	11.1	5.0	✔	NEPM 1999 Schedule B(3) and ALS QCS3 requirement
Method Blanks (MB)							
Ammonia as N - Ultra-Trace for Catchment Monitoring	EK255A-CM	2	27	7.4	5.0	✔	NEPM 1999 Schedule B(3) and ALS QCS3 requirement
Chloride by Discrete Analyser	ED045G	1	15	6.7	5.0	✔	NEPM 1999 Schedule B(3) and ALS QCS3 requirement
Dissolved Mercury by FIMS	EG035F	1	9	11.1	5.0	✔	NEPM 1999 Schedule B(3) and ALS QCS3 requirement
Dissolved Metals in Fresh Water -Suite A by ORC-ICPMS	EG094A-F	1	9	11.1	5.0	✔	NEPM 1999 Schedule B(3) and ALS QCS3 requirement
Dissolved Metals in Fresh Water -Suite B by ORC-ICPMS	EG094B-F	1	9	11.1	5.0	✔	NEPM 1999 Schedule B(3) and ALS QCS3 requirement
Fluoride by PC Titrator	EK040P	1	12	8.3	5.0	✔	NEPM 1999 Schedule B(3) and ALS QCS3 requirement
Major Anions - Dissolved	ED040F	1	16	6.3	5.0	✔	NEPM 1999 Schedule B(3) and ALS QCS3 requirement
Major Cations - Dissolved	ED093F	1	20	5.0	5.0	✔	NEPM 1999 Schedule B(3) and ALS QCS3 requirement
Nitrite and Nitrate as N (NOx) by Discrete Analyser	EK059G	1	20	5.0	5.0	✔	NEPM 1999 Schedule B(3) and ALS QCS3 requirement
Nitrite as N by Discrete Analyser	EK057G	1	17	5.9	5.0	✔	NEPM 1999 Schedule B(3) and ALS QCS3 requirement
Organochlorine Pesticides (Super Ultra-trace) for CM	EP131A-CM	1	3	33.3	5.0	✔	NEPM 1999 Schedule B(3) and ALS QCS3 requirement
Organophosphorus Pesticides (Ultra-trace) for Catchment M	EP130-CM	1	3	33.3	5.0	✔	NEPM 1999 Schedule B(3) and ALS QCS3 requirement
PAH Compounds in Water	EP132-LL	1	7	14.3	5.0	✔	NEPM 1999 Schedule B(3) and ALS QCS3 requirement
PAH/Phenols (GC/MS - SIM)	EP075(SIM)	1	6	16.7	5.0	✔	NEPM 1999 Schedule B(3) and ALS QCS3 requirement
Suspended Solids (High Level)	EA025H	1	18	5.6	5.0	✔	NEPM 1999 Schedule B(3) and ALS QCS3 requirement
Total Mercury by FIMS	EG035T	1	20	5.0	5.0	✔	NEPM 1999 Schedule B(3) and ALS QCS3 requirement
Total Metals in Fresh Water -Suite A by ORC-ICPMS	EG094A-T	1	9	11.1	5.0	✔	NEPM 1999 Schedule B(3) and ALS QCS3 requirement
Total Metals in Fresh Water -Suite B by ORC-ICPMS	EG094B-T	1	9	11.1	5.0	✔	NEPM 1999 Schedule B(3) and ALS QCS3 requirement
Total Nitrogen as N (Persulfate digestion)-Ultra-Trace - CM	EK262PA-CM	2	28	7.1	5.0	✔	NEPM 1999 Schedule B(3) and ALS QCS3 requirement
Total Phosphorus(Persulfate Digestion) - Ultra-Trace for CM	EK267PA-CM	2	28	7.1	5.0	✔	NEPM 1999 Schedule B(3) and ALS QCS3 requirement
TPH - Semivolatile Fraction	EP071	1	18	5.6	5.0	✔	NEPM 1999 Schedule B(3) and ALS QCS3 requirement
TPH Volatiles/BTEX	EP080	2	19	10.5	5.0	✔	NEPM 1999 Schedule B(3) and ALS QCS3 requirement
Volatile Organic Compounds	EP074	1	9	11.1	5.0	✔	NEPM 1999 Schedule B(3) and ALS QCS3 requirement
Matrix Spikes (MS)							
Ammonia as N - Ultra-Trace for Catchment Monitoring	EK255A-CM	2	27	7.4	5.0	✔	ALS QCS3 requirement
Chloride by Discrete Analyser	ED045G	1	15	6.7	5.0	✔	ALS QCS3 requirement
Dissolved Mercury by FIMS	EG035F	1	9	11.1	5.0	✔	ALS QCS3 requirement
Dissolved Metals in Fresh Water -Suite A by ORC-ICPMS	EG094A-F	1	9	11.1	5.0	✔	ALS QCS3 requirement
Fluoride by PC Titrator	EK040P	1	12	8.3	5.0	✔	ALS QCS3 requirement
Nitrite and Nitrate as N (NOx) by Discrete Analyser	EK059G	1	20	5.0	5.0	✔	ALS QCS3 requirement
Nitrite as N by Discrete Analyser	EK057G	1	17	5.9	5.0	✔	ALS QCS3 requirement
PAH Compounds in Water	EP132-LL	1	7	14.3	5.0	✔	ALS QCS3 requirement
Total Mercury by FIMS	EG035T	1	20	5.0	5.0	✔	ALS QCS3 requirement
Total Metals in Fresh Water -Suite A by ORC-ICPMS	EG094A-T	1	9	11.1	5.0	✔	ALS QCS3 requirement
Total Nitrogen as N (Persulfate digestion)-Ultra-Trace - CM	EK262PA-CM	2	28	7.1	5.0	✔	ALS QCS3 requirement



Matrix: **WATER** Evaluation: * = Quality Control frequency not within specification ; ✓ = Quality Control frequency within specification.

Quality Control Sample Type	Method	Count		Rate (%)			Quality Control Specification
		QC	Regular	Actual	Expected	Evaluation	
Matrix Spikes (MS) - Continued							
Total Phosphorus(Persulfate Digestion) - Ultra-Trace for CM	EK267PA-CM	2	28	7.1	5.0	✓	ALS QCS3 requirement
TPH Volatiles/BTEX	EP080	2	19	10.5	5.0	✓	ALS QCS3 requirement
Volatile Organic Compounds	EP074	1	9	11.1	5.0	✓	ALS QCS3 requirement



Brief Method Summaries

The analytical procedures used by the Environmental Division have been developed from established internationally recognized procedures such as those published by the US EPA, APHA, AS and NEPM. In house developed procedures are employed in the absence of documented standards or by client request. The following report provides brief descriptions of the analytical procedures employed for results reported in the Certificate of Analysis. Sources from which ALS methods have been developed are provided within the Method Descriptions.

Analytical Methods	Method	Matrix	Method Descriptions
Sodium Adsorption Ratio	EA006	WATER	APHA 21st ed., 3120 Ca, Mg, Na. This method is compliant with NEPM (1999) Schedule B(3) (Appdx. 2)
Suspended Solids (High Level)	EA025H	WATER	APHA 21st ed., 2540D A gravimetric procedure employed to determine the amount of `non-filterable` residue in a aqueous sample. The prescribed GFC (1.2um) filter is rinsed with deionised water, oven dried and weighed prior to analysis. A well-mixed sample is filtered through a glass fibre filter (1.2um). The residue on the filter paper is dried at 104+/-2C . This method is compliant with NEPM (1999) Schedule B(3) (Appdx. 2)
Hardness as CaCO3	EA065	WATER	APHA 21st ed., 2340 B. This method is compliant with NEPM (1999) Schedule B(3) (Appdx. 2)
Major Anions - Dissolved	ED040F	WATER	APHA 21st ed., 3120. The 0.45um filtered samples are determined by ICP/AES for Sulfur and/or Silcon content and reported as Sulfate and/or Silica after conversion by gravimetric factor.
Chloride by Discrete Analyser	ED045G	WATER	APHA 21st ed., 4500 Cl - G.The thiocyanate ion is liberated from mercuric thiocyanate through sequestration of mercury by the chloride ion to form non-ionised mercuric chloride.in the presence of ferric ions the librated thiocynate forms highly-coloured ferric thiocynate which is measured at 480 nm APHA 21st edition seal method 2 017-1-L april 2003
Major Cations - Dissolved	ED093F	WATER	Major Cations is determined based on APHA 21st ed., 3120; USEPA SW 846 - 6010 The ICPAES technique ionises the 0.45um filtered sample atoms emitting a characteristic spectrum. This spectrum is then compared against matrix matched standards for quantification. This method is compliant with NEPM (1999) Schedule B(3) (Appdx. 2) Sodium Absorption Ratio is calculated from Ca, Mg and Na which determined by ALS in house method QWI-EN/ED093F. This method is compliant with NEPM (1999) Schedule B(3) (Appdx. 2) Total Hardness is calculated based on APHA 21st ed., 2340 B. This method is compliant with NEPM (1999) Schedule B(3) (Appdx. 2)
Dissolved Mercury by FIMS	EG035F	WATER	AS 3550, APHA 21st ed. 3112 Hg - B (Flow-injection (SnCl2)(Cold Vapour generation) AAS) Samples are 0.45 um filtered prior to analysis. FIM-AAS is an automated flameless atomic absorption technique. A bromate/bromide reagent is used to oxidise any organic mercury compounds in the filtered sample. The ionic mercury is reduced online to atomic mercury vapour by SnCl2 which is then purged into a heated quartz cell. Quantification is by comparing absorbance against a calibration curve. This method is compliant with NEPM (1999) Schedule B(3) (Appdx. 2)
Total Mercury by FIMS	EG035T	WATER	AS 3550, APHA 21st ed. 3112 Hg - B (Flow-injection (SnCl2)(Cold Vapour generation) AAS) FIM-AAS is an automated flameless atomic absorption technique. A bromate/bromide reagent is used to oxidise any organic mercury compounds in the unfiltered sample. The ionic mercury is reduced online to atomic mercury vapour by SnCl2 which is then purged into a heated quartz cell. Quantification is by comparing absorbance against a calibration curve. This method is compliant with NEPM (1999) Schedule B(3) (Appdx. 2)
Dissolved Metals in Fresh Water -Suite A by ORC-ICPMS	EG094A-F	WATER	APHA 21st ed., 3125; USEPA SW846 - 6020 Samples are 0.45 um filtered prior to analysis. The ORC-ICPMS technique removes interfering species through a series of chemical reactions prior to ion detection. Ions are passed into a high vacuum mass spectrometer, which separates the analytes based on their distinct mass to charge ratios prior to measurement by a discrete dynode ion detector. This method is compliant with NEPM (1999) Schedule B(3) (Appdx. 2)



Analytical Methods	Method	Matrix	Method Descriptions
Total Metals in Fresh Water -Suite A by ORC-ICPMS	EG094A-T	WATER	APHA 21st ed., 3125; USEPA SW846 - 6020 Samples are 0.45 um filtered prior to analysis. The ORC-ICPMS technique removes interfering species through a series of chemical reactions prior to ion detection. Ions are passed into a high vacuum mass spectrometer, which separates the analytes based on their distinct mass to charge ratios prior to measurement by a discrete dynode ion detector. This method is compliant with NEPM (1999) Schedule B(3) (Appdx. 2)
Dissolved Metals in Fresh Water -Suite B by ORC-ICPMS	EG094B-F	WATER	APHA 21st ed., 3125; USEPA SW846 - 6020 Samples are 0.45 um filtered prior to analysis. The ORC-ICPMS technique removes interfering species through a series of chemical reactions prior to ion detection. Ions are passed into a high vacuum mass spectrometer, which separates the analytes based on their distinct mass to charge ratios prior to measurement by a discrete dynode ion detector. This method is compliant with NEPM (1999) Schedule B(3) (Appdx. 2)
Total Metals in Fresh Water -Suite B by ORC-ICPMS	EG094B-T	WATER	APHA 21st ed., 3125; USEPA SW846 - 6020 Samples are 0.45 um filtered prior to analysis. The ORC-ICPMS technique removes interfering species through a series of chemical reactions prior to ion detection. Ions are passed into a high vacuum mass spectrometer, which separates the analytes based on their distinct mass to charge ratios prior to measurement by a discrete dynode ion detector. This method is compliant with NEPM (1999) Schedule B(3) (Appdx. 2)
Fluoride by PC Titrator	EK040P	WATER	APHA 21st ed., 4500 F--C CDTA is added to the sample to provide a uniform ionic strength background, adjust pH, and break up complexes. Fluoride concentration is determined by either manual or automatic ISE measurement. This method is compliant with NEPM (1999) Schedule B(3) (Appdx. 2)
Nitrite as N by Discrete Analyser	EK057G	WATER	APHA 21st ed., 4500-NO2- B. Nitrite is determined by direct colourimetry by Discrete Analyser. This method is compliant with NEPM (1999) Schedule B(3) (Appdx. 2)
Nitrate as N by Discrete Analyser	EK058G	WATER	APHA 21st ed., 4500-NO3- F. Nitrate is reduced to nitrite by way of a cadmium reduction column followed by quantification by Discrete Analyser. Nitrite is determined separately by direct colourimetry and result for Nitrate calculated as the difference between the two results. This method is compliant with NEPM (1999) Schedule B(3) (Appdx. 2)
Nitrite and Nitrate as N (NOx) by Discrete Analyser	EK059G	WATER	APHA 21st ed., 4500-NO3- F. Combined oxidised Nitrogen (NO2+NO3) is determined by Cadmium Reduction and direct colourimetry by Discrete Analyser. This method is compliant with NEPM (1999) Schedule B(3) (Appdx. 2)
Ammonia as N - Ultra-Trace for Catchment Monitoring	EK255A-CM	WATER	APHA 21st ed., 4500-NH3 H Ammonia is determined by direct colorimetry by FIA. This method is compliant with NEPM (1999) Schedule B(3) (Appdx. 2)
Total Nitrogen as N (Persulfate digestion) -Ultra-Trace - CM	EK262PA-CM	WATER	APHA 21st ed., 4500-P J. Persulfate Method for Simultaneous Determination of Total Nitrogen and Total Phosphorus. As sample is digested with persulfate under alkaline conditions yielding orthophosphate and nitrate. Following digestion, analytes are determined by flow injection analysis. This method is compliant with NEPM (1999) Schedule B(3) (Appdx. 2)
Total Phosphorus(Persulfate Digestion) - Ultra-Trace for CM	EK267PA-CM	WATER	APHA 21st ed., 4500-P J. Persulfate Method for Simultaneous Determination of Total Nitrogen and Total Phosphorus. As sample is digested with persulfate under alkaline conditions yielding orthophosphate and nitrate. Following digestion, analytes are determined by flow injection analysis. This method is compliant with NEPM (1999) Schedule B(3) (Appdx. 2)
TPH - Semivolatle Fraction	EP071	WATER	USEPA SW 846 - 8015A The sample extract is analysed by Capillary GC/FID and quantification is by comparison against an established 5 point calibration curve of n-Alkane standards. This method is compliant with NEPM (1999) Schedule B(3) (Appdx. 2)
Volatile Organic Compounds	EP074	WATER	USEPA SW 846 - 8260B Water samples are directly purged prior to analysis by Capillary GC/MS and quantification is by comparison against an established 5 point calibration curve. This method is compliant with NEPM (1999) Schedule B(3) (Appdx. 2)
PAH/Phenols (GC/MS - SIM)	EP075(SIM)	WATER	USEPA SW 846 - 8270D Sample extracts are analysed by Capillary GC/MS in SIM Mode and quantification is by comparison against an established 5 point calibration curve. This method is compliant with NEPM (1999) Schedule B(3) (Appdx. 2)



Analytical Methods	Method	Matrix	Method Descriptions
TPH Volatiles/BTEX	EP080	WATER	USEPA SW 846 - 8260B Water samples are directly purged prior to analysis by Capillary GC/MS and quantification is by comparison against an established 5 point calibration curve. Alternatively, a sample is equilibrated in a headspace vial and a portion of the headspace determined by GCMS analysis. This method is compliant with NEPM (1999) Schedule B(3) (Appdx. 2)
Organophosphorus Pesticides (Ultra-trace) for Catchment M	EP130-CM	WATER	USEPA Method 3640 (GPC cleanup), 8141 (GC/FPD - Capillary Column) This method is compliant with NEPM (1999) Schedule B(3) (Appdx. 2)
Organochlorine Pesticides (Super Ultra-trace) for CM	EP131A-CM	WATER	USEPA Method 3640 (GPC cleanup), 3620 (Florisil), 8081/8082 (GC/uECD/uECD). This method is compliant with NEPM (1999) Schedule B(3) (Appdx. 2)
PAH Compounds in Water	EP132-LL	WATER	8270 GCMS, LVI, Capillary column, SIM mode. This method is compliant with NEPM (1999) Schedule B(3) (Appdx. 2)
Glycol (Water)	GLY-WAT	WATER	Glycols in water matrices conducted by Subcontracting Laboratory.
Preparation Methods	Method	Matrix	Method Descriptions
Persulfate Digestion for UT TN and TP for FIA finish.	EK262/267-PA Prep	WATER	APHA 21st ed., 4500 P - J. This method is compliant with NEPM (1999) Schedule B(3) (Appdx. 2)
Digestion for Total Recoverable Metals - ORC	EN25-ORC	WATER	Modified USEPA SW846-3005. This is an Ultrapure Nitric acid digestion procedure used to prepare surface and ground water samples for analysis by ORC- ICPMS. This method is compliant with NEPM (1999) Schedule B(3) (Appdx. 2)
Separatory Funnel Extraction of Liquids	ORG14	WATER	USEPA SW 846 - 3510B 500 mL to 1L of sample is transferred to a separatory funnel and serially extracted three times using 60mL DCM for each extract. The resultant extracts are combined, dehydrated and concentrated for analysis. This method is compliant with NEPM (1999) Schedule B(3) (Appdx. 2). ALS default excludes sediment which may be resident in the container.
Sep. Funnel Extraction /Acetylation of Phenolic Compounds	ORG14-AC	WATER	USEPA 3510 (Extraction)/ In-house (Acetylation): A 1L sample is extracted into dichloromethane and concentrated to 1 mL with exchange into cyclohexane. Phenolic compounds are reacted with acetic anhydride to yield phenyl acetates suitable for ultra-trace analysis. This method is compliant with NEPM (1999) Schedule B(3) (Appdx. 2). ALS default excludes sediment which may be resident in the container.
Sep. Funnel Extraction of Liquids (Ultra-trace pesticides.)	ORG14-UTP	WATER	USEPA 3510 Samples are extracted into dichloromethane, concentrated and exchanged into an appropriate solvent for GPC and florisil cleanup as required. This method is compliant with NEPM (1999) Schedule B(3) (Appdx. 2). ALS default excludes sediment which may be resident in the container.



Summary of Outliers

Outliers : Quality Control Samples

The following report highlights outliers flagged in the Quality Control (QC) Report. Surrogate recovery limits are static and based on USEPA SW846 or ALS-QWI/EN/38 (in the absence of specific USEPA limits). This report displays QC Outliers (breaches) only.

Duplicates, Method Blanks, Laboratory Control Samples and Matrix Spikes

Matrix: **WATER**

Compound Group Name	Laboratory Sample ID	Client Sample ID	Analyte	CAS Number	Data	Limits	Comment
Duplicate (DUP) RPDs							
ED045G: Chloride Discrete analyser	EB0918363-008	Anonymous	Chloride	16887-00-6	Not Determined		Analyte not determined in allocated original sample.
ED045G: Chloride Discrete analyser	EB0918363-008	Anonymous	Chloride	16887-00-6	Not Determined		RPD exceeds LOR based limits
Laboratory Control Spike (LCS) Recoveries							
EP074A: Monocyclic Aromatic Hydrocarbons	1352960-002	----	p-Isopropyltoluene	99-87-6	65.7 %	68.3-130%	Recovery less than lower control limit

- For all matrices, no Method Blank value outliers occur.
- For all matrices, no Matrix Spike outliers occur.

Regular Sample Surrogates

- For all regular sample matrices, no surrogate recovery outliers occur.

Outliers : Analysis Holding Time Compliance

This report displays Holding Time breaches only. Only the respective Extraction / Preparation and/or Analysis component is/are displayed.

Matrix: **WATER**

Method	Container / Client Sample ID(s)	Extraction / Preparation			Analysis			
		Date extracted	Due for extraction	Days overdue	Date analysed	Due for analysis	Days overdue	
EK057G: Nitrite as N by Discrete Analyser								
Clear Plastic Bottle - Natural								
	4, 78, 109, 120, 137	79, 88, 119, 127,	----	----	----	23-NOV-2009	21-NOV-2009	2
Ultra-Trace Nutrients								
Clear Plastic Bottle - Filtered (AS)								
	4, 78, 109, 120, 137	79, 88, 119, 127,	----	----	----	24-NOV-2009	20-NOV-2009	4



Outliers : Frequency of Quality Control Samples

The following report highlights breaches in the Frequency of Quality Control Samples.

Matrix: **WATER**

Quality Control Sample Type Method	Count		Rate (%)		Quality Control Specification
	QC	Regular	Actual	Expected	
Laboratory Control Samples (LCS)					
Total Nitrogen as N (Persulfate digestion)-Ultra-Trace - CM	2	28	7.1	10.0	NEPM 1999 Schedule B(3) and ALS QCS3 requirement
Total Phosphorus(Persulfate Digestion) - Ultra-Trace for CM	2	28	7.1	10.0	NEPM 1999 Schedule B(3) and ALS QCS3 requirement

CERTIFICATE OF ANALYSIS

Work Order	: EB0918367	Page	: 1 of 13
Amendment	: 3		
Client	: ALLUVIUM CONSULTING	Laboratory	: Environmental Division Brisbane
Contact	: MS MARTINE ADRIAANSEN	Contact	: Greg Vogel
Address	: PO BOX 1581 TOWNSVILLE QLD, AUSTRALIA 4810	Address	: 32 Shand Street Stafford QLD Australia 4053
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Telephone	: +61 07 47242170	Telephone	: +61 7 3243 7222
Facsimile	: ----	Facsimile	: +61 7 3243 7218
Project	: Surat Gas Project EIS	QC Level	: NEPM 1999 Schedule B(3) and ALS QCS3 requirement
Order number	: ----		
C-O-C number	: ----	Date Samples Received	: 20-NOV-2009
Sampler	: A.C, M.A	Issue Date	: 05-DEC-2011
Site	: Surat Gas Project		
Quote number	: BN/637/09	No. of samples received	: 9
		No. of samples analysed	: 9

This report supersedes any previous report(s) with this reference. Results apply to the sample(s) as submitted. All pages of this report have been checked and approved for release.

This Certificate of Analysis contains the following information:

- General Comments
- Analytical Results
- Surrogate Control Limits



NATA Accredited Laboratory 825

This document is issued in accordance with NATA accreditation requirements.

Accredited for compliance with ISO/IEC 17025.

Signatories

This document has been electronically signed by the authorized signatories indicated below. Electronic signing has been carried out in compliance with procedures specified in 21 CFR Part 11.

<i>Signatories</i>	<i>Position</i>	<i>Accreditation Category</i>
Celine Conceicao	Senior Spectroscopist	Sydney Inorganics
Edwandy Fadjar	Organic Coordinator	Sydney Organics
Hoa Nguyen	Inorganic Chemist	Sydney Inorganics
Kim McCabe	Senior Inorganic Chemist	Brisbane Inorganics
Matt Frost	Senior Organic Chemist	Brisbane Organics
Sarah Ashworth	Assistant Laboratory Manager	Brisbane Organics
Stephen Hislop	Senior Inorganic Chemist	Brisbane Inorganics



General Comments

The analytical procedures used by the Environmental Division have been developed from established internationally recognized procedures such as those published by the USEPA, APHA, AS and NEPM. In house developed procedures are employed in the absence of documented standards or by client request.

Where moisture determination has been performed, results are reported on a dry weight basis.

Where a reported less than (<) result is higher than the LOR, this may be due to primary sample extract/digestate dilution and/or insufficient sample for analysis.

Where the LOR of a reported result differs from standard LOR, this may be due to high moisture content, insufficient sample (reduced weight employed) or matrix interference.

When sampling time information is not provided by the client, sampling dates are shown without a time component. In these instances, the time component has been assumed by the laboratory for processing purposes.

Key : CAS Number = CAS registry number from database maintained by Chemical Abstracts Services. The Chemical Abstracts Service is a division of the American Chemical Society.

LOR = Limit of reporting

^ = This result is computed from individual analyte detections at or above the level of reporting

- **ED045G (Chloride): LCS recovery falls outside Dynamic Control Limits. It is however within ALS Static Control Limits and hence deemed acceptable.**
- **EG094: It is recognised that total concentration is less than dissolved for some metal analytes. However, the difference is within experimental variation of the methods.**
- **EG094F: Filtered and total results for sample EB0918367 #3 for Zn have been confirmed by re-analysis**
- **This report has been amended to alter the site details, project reference code or order number. All analysis results are as per the previous report.**



Analytical Results

Sub-Matrix: WATER

				Client sample ID				
				4	79	78	88	109
				Client sampling date / time				
				19-NOV-2009 07:30	19-NOV-2009 08:00	19-NOV-2009 06:30	19-NOV-2009 10:30	19-NOV-2009 12:00
Compound	CAS Number	LOR	Unit	EB0918367-001	EB0918367-002	EB0918367-003	EB0918367-004	EB0918367-005
EA006: Sodium Absorption Ratio (SAR)								
Sodium Absorption Ratio	----	0.01	-	0.97	1.38	1.90	0.89	1.24
EA025: Suspended Solids								
Suspended Solids (SS)	----	5	mg/L	23	300	189	15	164
EA065: Total Hardness as CaCO3								
Total Hardness as CaCO3	----	1	mg/L	126	144	26	34	49
ED040F: Dissolved Major Anions								
Sulfate as SO4 2-	14808-79-8	1	mg/L	2	6	2	2	2
ED045G: Chloride Discrete analyser								
Chloride	16887-00-6	1	mg/L	30	46	18	8	4
ED093F: Dissolved Major Cations								
Calcium	7440-70-2	1	mg/L	27	28	4	8	14
Magnesium	7439-95-4	1	mg/L	14	18	4	3	4
Sodium	7440-23-5	1	mg/L	25	38	22	12	20
EG035F: Dissolved Mercury by FIMS								
Mercury	7439-97-6	0.0001	mg/L	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
EG035T: Total Mercury by FIMS								
Mercury	7439-97-6	0.0001	mg/L	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
EG094F: Dissolved Metals in Fresh Water by ORC-ICPMS								
Selenium	7782-49-2	0.2	µg/L	<0.2	<0.2	0.5	<0.2	0.3
Arsenic	7440-38-2	0.2	µg/L	0.9	1.7	1.6	1.1	1.5
Boron	7440-42-8	5	µg/L	18	44	26	16	26
Cadmium	7440-43-9	0.05	µg/L	<0.05	<0.05	<0.05	<0.05	<0.05
Cobalt	7440-48-4	0.1	µg/L	0.5	2.8	1.6	0.2	0.5
Copper	7440-50-8	0.5	µg/L	0.6	<0.5	0.7	1.5	2.2
Lead	7439-92-1	0.1	µg/L	<0.1	<0.1	1.0	0.2	<0.1
Nickel	7440-02-0	0.5	µg/L	3.5	8.5	1.7	2.4	2.0
Vanadium	7440-62-2	0.2	µg/L	4.8	6.0	1.5	1.6	1.9
Zinc	7440-66-6	1	µg/L	4	6	84	7	5
EG094T: Total metals in Fresh water by ORC-ICPMS								
Selenium	7782-49-2	0.2	µg/L	<0.2	0.3	1.0	<0.2	0.6
Arsenic	7440-38-2	0.2	µg/L	1.0	2.3	7.2	1.4	6.0
Boron	7440-42-8	5	µg/L	16	41	24	15	23
Cadmium	7440-43-9	0.05	µg/L	<0.05	<0.05	<0.05	<0.05	<0.05
Cobalt	7440-48-4	0.1	µg/L	1.2	10.3	11.7	0.7	8.1
Copper	7440-50-8	0.5	µg/L	1.2	9.2	3.6	1.8	11.2
Lead	7439-92-1	0.1	µg/L	0.4	3.1	13.4	0.8	15.3



Analytical Results

Sub-Matrix: WATER

Client sample ID

Client sampling date / time

Compound	CAS Number	LOR	Unit	4	79	78	88	109
				19-NOV-2009 07:30	19-NOV-2009 08:00	19-NOV-2009 06:30	19-NOV-2009 10:30	19-NOV-2009 12:00
				EB0918367-001	EB0918367-002	EB0918367-003	EB0918367-004	EB0918367-005
EG094T: Total metals in Fresh water by ORC-ICPMS - Continued								
Nickel	7440-02-0	0.5	µg/L	4.7	27.0	7.5	2.7	10.9
Vanadium	7440-62-2	0.2	µg/L	6.4	25.3	28.2	2.8	30.2
Zinc	7440-66-6	1	µg/L	2	29	11	4	40
EK040P: Fluoride by PC Titrator								
Fluoride	16984-48-8	0.1	mg/L	0.2	0.4	<0.1	0.1	0.2
EK057G: Nitrite as N by Discrete Analyser								
Nitrite as N	----	0.01	mg/L	<0.01	<0.01	<0.01	<0.01	<0.01
EK058G: Nitrate as N by Discrete Analyser								
Nitrate as N	14797-55-8	0.01	mg/L	0.02	0.02	<0.01	0.01	0.03
EK059G: NOX as N by Discrete Analyser								
Nitrite + Nitrate as N	----	0.01	mg/L	0.02	0.02	<0.01	0.01	0.03
EP071/080: Total Petroleum Hydrocarbons								
C6 - C9 Fraction	----	20	µg/L	<20	<20	<20	<20	<20
C10 - C14 Fraction	----	50	µg/L	<50	<50	<50	<50	<50
C15 - C28 Fraction	----	100	µg/L	<100	200	340	<100	150
C29 - C36 Fraction	----	50	µg/L	<50	80	130	<50	<50
EP074A: Monocyclic Aromatic Hydrocarbons								
Benzene	71-43-2	1	µg/L	----	----	----	<1	----
Toluene	108-88-3	2	µg/L	----	----	----	<2	----
Ethylbenzene	100-41-4	2	µg/L	----	----	----	<2	----
meta- & para-Xylene	108-38-3 106-42-3	2	µg/L	----	----	----	<2	----
Styrene	100-42-5	5	µg/L	----	----	----	<5	----
ortho-Xylene	95-47-6	2	µg/L	----	----	----	<2	----
Isopropylbenzene	98-82-8	5	µg/L	----	----	----	<5	----
n-Propylbenzene	103-65-1	5	µg/L	----	----	----	<5	----
1,3,5-Trimethylbenzene	108-67-8	5	µg/L	----	----	----	<5	----
sec-Butylbenzene	135-98-8	5	µg/L	----	----	----	<5	----
1,2,4-Trimethylbenzene	95-63-6	5	µg/L	----	----	----	<5	----
tert-Butylbenzene	98-06-6	5	µg/L	----	----	----	<5	----
p-Isopropyltoluene	99-87-6	5	µg/L	----	----	----	<5	----
n-Butylbenzene	104-51-8	5	µg/L	----	----	----	<5	----
EP075(SIM)A: Phenolic Compounds								
Phenol	108-95-2	1.0	µg/L	----	----	----	<1.0	----
2-Chlorophenol	95-57-8	1.0	µg/L	----	----	----	<1.0	----
2-Methylphenol	95-48-7	1.0	µg/L	----	----	----	<1.0	----
3- & 4-Methylphenol	1319-77-3	2.0	µg/L	----	----	----	<2.0	----



Analytical Results

Sub-Matrix: WATER

Client sample ID

Client sampling date / time

Compound	CAS Number	LOR	Unit	4	79	78	88	109
				19-NOV-2009 07:30	19-NOV-2009 08:00	19-NOV-2009 06:30	19-NOV-2009 10:30	19-NOV-2009 12:00
				EB0918367-001	EB0918367-002	EB0918367-003	EB0918367-004	EB0918367-005
EP075(SIM)A: Phenolic Compounds - Continued								
2-Nitrophenol	88-75-5	1.0	µg/L	----	----	----	<1.0	----
2,4-Dimethylphenol	105-67-9	1.0	µg/L	----	----	----	<1.0	----
2,4-Dichlorophenol	120-83-2	1.0	µg/L	----	----	----	<1.0	----
2,6-Dichlorophenol	87-65-0	1.0	µg/L	----	----	----	<1.0	----
4-Chloro-3-Methylphenol	59-50-7	1.0	µg/L	----	----	----	<1.0	----
2,4,6-Trichlorophenol	88-06-2	1.0	µg/L	----	----	----	<1.0	----
2,4,5-Trichlorophenol	95-95-4	1.0	µg/L	----	----	----	<1.0	----
Pentachlorophenol	87-86-5	2.0	µg/L	----	----	----	<2.0	----
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons								
Naphthalene	91-20-3	0.02	µg/L	----	----	----	<0.02	----
Acenaphthylene	208-96-8	0.02	µg/L	----	----	----	<0.02	----
Acenaphthene	83-32-9	0.02	µg/L	----	----	----	<0.02	----
Fluorene	86-73-7	0.02	µg/L	----	----	----	<0.02	----
Phenanthrene	85-01-8	0.02	µg/L	----	----	----	<0.02	----
Anthracene	120-12-7	0.02	µg/L	----	----	----	<0.02	----
Fluoranthene	206-44-0	0.02	µg/L	----	----	----	<0.02	----
Pyrene	129-00-0	0.02	µg/L	----	----	----	<0.02	----
Benz(a)anthracene	56-55-3	0.02	µg/L	----	----	----	<0.02	----
Chrysene	218-01-9	0.02	µg/L	----	----	----	<0.02	----
Benzo(b)fluoranthene	205-99-2	0.02	µg/L	----	----	----	<0.02	----
Benzo(k)fluoranthene	207-08-9	0.02	µg/L	----	----	----	<0.02	----
Benzo(a)pyrene	50-32-8	0.005	µg/L	----	----	----	<0.005	----
Indeno(1.2.3.cd)pyrene	193-39-5	0.02	µg/L	----	----	----	<0.02	----
Dibenz(a,h)anthracene	53-70-3	0.02	µg/L	----	----	----	<0.02	----
Benzo(g,h,i)perylene	191-24-2	0.02	µg/L	----	----	----	<0.02	----
^ Total PAH	----	0.005	µg/L	----	----	----	<0.005	----
EP080/071: Total Petroleum Hydrocarbons								
^ C10 - C36 Fraction (sum)	----	50	µg/L	<50	280	470	<50	150
EP130A: Organophosphorus Pesticides (Ultra-trace)								
Bromophos-ethyl	4824-78-6	0.02	µg/L	----	----	----	<0.02	----
Carbophenothion	786-19-6	0.02	µg/L	----	----	----	<0.02	----
Chlorfenvinphos (E)	18708-86-6	0.02	µg/L	----	----	----	<0.02	----
Chlorfenvinphos (Z)	18708-87-7	0.02	µg/L	----	----	----	<0.02	----
Chlorpyrifos	2921-88-2	0.010	µg/L	----	----	----	<0.010	----
Chlorpyrifos-methyl	5598-13-0	0.02	µg/L	----	----	----	<0.02	----
Demeton-S-methyl	919-86-8	0.02	µg/L	----	----	----	<0.02	----



Analytical Results

Sub-Matrix: WATER

Client sample ID
 Client sampling date / time

Compound	CAS Number	LOR	Unit	4	79	78	88	109
				19-NOV-2009 07:30	19-NOV-2009 08:00	19-NOV-2009 06:30	19-NOV-2009 10:30	19-NOV-2009 12:00
				EB0918367-001	EB0918367-002	EB0918367-003	EB0918367-004	EB0918367-005
EP130A: Organophosphorus Pesticides (Ultra-trace) - Continued								
Diazinon	333-41-5	0.02	µg/L	----	----	----	<0.02	----
Dichlorvos	62-73-7	0.02	µg/L	----	----	----	<0.02	----
Dimethoate	60-51-5	0.02	µg/L	----	----	----	<0.02	----
Ethion	563-12-2	0.02	µg/L	----	----	----	<0.02	----
Fenamiphos	22224-92-6	0.02	µg/L	----	----	----	<0.02	----
Fenthion	55-38-9	0.02	µg/L	----	----	----	<0.02	----
Malathion	121-75-5	0.02	µg/L	----	----	----	<0.02	----
Azinphos Methyl	86-50-0	0.02	µg/L	----	----	----	<0.02	----
Monocrotophos	6923-22-4	0.02	µg/L	----	----	----	<0.02	----
Parathion	56-38-2	0.02	µg/L	----	----	----	<0.02	----
Parathion-methyl	298-00-0	0.02	µg/L	----	----	----	<0.02	----
Pirimphos-ethyl	23505-41-1	0.02	µg/L	----	----	----	<0.02	----
Prothiofos	34643-46-4	0.02	µg/L	----	----	----	<0.02	----
EP131A: Organochlorine Pesticides								
Aldrin	309-00-2	0.002	µg/L	----	----	----	<0.002	----
alpha-BHC	319-84-6	0.002	µg/L	----	----	----	<0.002	----
beta-BHC	319-85-7	0.002	µg/L	----	----	----	<0.002	----
delta-BHC	319-86-8	0.002	µg/L	----	----	----	<0.002	----
4.4'-DDD	72-54-8	0.002	µg/L	----	----	----	<0.002	----
4.4'-DDE	72-55-9	0.002	µg/L	----	----	----	<0.002	----
4.4'-DDT	50-29-3	0.002	µg/L	----	----	----	<0.002	----
^ DDT (total)	----	0.002	µg/L	----	----	----	<0.002	----
Dieldrin	60-57-1	0.002	µg/L	----	----	----	<0.002	----
alpha-Endosulfan	959-98-8	0.002	µg/L	----	----	----	<0.002	----
beta-Endosulfan	33213-65-9	0.002	µg/L	----	----	----	<0.002	----
Endosulfan sulfate	1031-07-8	0.002	µg/L	----	----	----	<0.002	----
^ Endosulfan (sum)	115-29-7	0.002	µg/L	----	----	----	<0.002	----
Endrin	72-20-8	0.002	µg/L	----	----	----	<0.002	----
Endrin aldehyde	7421-93-4	0.002	µg/L	----	----	----	<0.002	----
Endrin ketone	53494-70-5	0.002	µg/L	----	----	----	<0.002	----
Heptachlor	76-44-8	0.001	µg/L	----	----	----	<0.001	----
Heptachlor epoxide	1024-57-3	0.002	µg/L	----	----	----	<0.002	----
Hexachlorobenzene (HCB)	118-74-1	0.002	µg/L	----	----	----	<0.002	----
gamma-BHC	58-89-9	0.002	µg/L	----	----	----	<0.002	----
Methoxychlor	72-43-5	0.002	µg/L	----	----	----	<0.002	----
cis-Chlordane	5103-71-9	0.002	µg/L	----	----	----	<0.002	----



Analytical Results

Sub-Matrix: WATER

Client sample ID
 Client sampling date / time

Compound	CAS Number	LOR	Unit	4	79	78	88	109
				19-NOV-2009 07:30	19-NOV-2009 08:00	19-NOV-2009 06:30	19-NOV-2009 10:30	19-NOV-2009 12:00
				EB0918367-001	EB0918367-002	EB0918367-003	EB0918367-004	EB0918367-005
EP131A: Organochlorine Pesticides - Continued								
trans-Chlordane	5103-74-2	0.002	µg/L	----	----	----	<0.002	----
^ Total Chlordane (sum)	----	0.002	µg/L	----	----	----	<0.002	----
^ Oxychlordane	27304-13-8	0.002	µg/L	----	----	----	<0.002	----
Ultra-Trace Nutrients								
Ammonia as N	7664-41-7	0.005	mg/L	0.046	0.017	0.244	0.243	0.011
Total Nitrogen as N	----	0.05	mg/L	0.57	2.54	2.57	0.56	0.60
Total Phosphorus as P	----	0.005	mg/L	0.066	0.357	1.04	0.058	0.199
EP074S: VOC Surrogates								
1,2-Dichloroethane-D4	17060-07-0	0.1	%	----	----	----	115	----
Toluene-D8	2037-26-5	0.1	%	----	----	----	102	----
4-Bromofluorobenzene	460-00-4	0.1	%	----	----	----	92.4	----
EP075(SIM)S: Phenolic Compound Surrogates								
Phenol-d6	13127-88-3	0.1	%	----	----	----	32.6	----
2-Chlorophenol-D4	93951-73-6	0.1	%	----	----	----	77.9	----
2,4,6-Tribromophenol	118-79-6	0.1	%	----	----	----	105	----
EP075(SIM)T: PAH Surrogates								
2-Fluorobiphenyl	321-60-8	0.1	%	----	----	----	82.3	----
Anthracene-d10	1719-06-8	0.1	%	----	----	----	87.8	----
4-Terphenyl-d14	1718-51-0	0.1	%	----	----	----	84.2	----
EP080S: TPH(V)/BTEX Surrogates								
1,2-Dichloroethane-D4	17060-07-0	0.1	%	94.3	99.0	112	98.1	108
Toluene-D8	2037-26-5	0.1	%	108	96.3	109	102	105
4-Bromofluorobenzene	460-00-4	0.1	%	98.3	94.2	108	99.1	104
EP130S: Organophosphorus Pesticide Surrogate								
DEF	78-48-8	0.1	%	----	----	----	87.8	----
EP131S: OC Pesticide Surrogate								
Dibromo-DDE	21655-73-2	0.1	%	----	----	----	75.0	----
EP132T: Base/Neutral Extractable Surrogates								
2-Fluorobiphenyl	321-60-8	0.1	%	----	----	----	85.7	----
Anthracene-d10	1719-06-8	0.1	%	----	----	----	84.9	----
4-Terphenyl-d14	1718-51-0	0.1	%	----	----	----	87.9	----



Analytical Results

Sub-Matrix: WATER

				Client sample ID	119	120	127	137	----
				Client sampling date / time	19-NOV-2009 13:30	19-NOV-2009 14:45	19-NOV-2009 16:00	19-NOV-2009 15:15	----
Compound	CAS Number	LOR	Unit	EB0918367-006	EB0918367-007	EB0918367-008	EB0918367-009	----	----
EA006: Sodium Absorption Ratio (SAR)									
Sodium Absorption Ratio	----	0.01	-	1.13	7.54	2.58	3.81	----	----
EA025: Suspended Solids									
Suspended Solids (SS)	----	5	mg/L	104	203	628	1320	----	----
EA065: Total Hardness as CaCO3									
Total Hardness as CaCO3	----	1	mg/L	26	11	22	11	----	----
ED040F: Dissolved Major Anions									
Sulfate as SO4 2-	14808-79-8	1	mg/L	2	8	7	2	----	----
ED045G: Chloride Discrete analyser									
Chloride	16887-00-6	1	mg/L	7	33	19	31	----	----
ED093F: Dissolved Major Cations									
Calcium	7440-70-2	1	mg/L	6	1	5	2	----	----
Magnesium	7439-95-4	1	mg/L	2	2	2	2	----	----
Sodium	7440-23-5	1	mg/L	13	57	28	29	----	----
EG035F: Dissolved Mercury by FIMS									
Mercury	7439-97-6	0.0001	mg/L	<0.0001	0.0001	<0.0001	<0.0001	----	----
EG035T: Total Mercury by FIMS									
Mercury	7439-97-6	0.0001	mg/L	<0.0001	<0.0001	<0.0001	<0.0001	----	----
EG094F: Dissolved Metals in Fresh Water by ORC-ICPMS									
Selenium	7782-49-2	0.2	µg/L	0.2	1.1	0.7	0.8	----	----
Arsenic	7440-38-2	0.2	µg/L	2.7	5.2	2.2	4.6	----	----
Boron	7440-42-8	5	µg/L	22	41	111	57	----	----
Cadmium	7440-43-9	0.05	µg/L	<0.05	<0.05	<0.05	<0.05	----	----
Cobalt	7440-48-4	0.1	µg/L	3.2	7.9	1.6	3.7	----	----
Copper	7440-50-8	0.5	µg/L	1.1	8.2	2.0	0.8	----	----
Lead	7439-92-1	0.1	µg/L	0.1	19.0	0.4	0.4	----	----
Nickel	7440-02-0	0.5	µg/L	3.2	14.0	2.7	3.9	----	----
Vanadium	7440-62-2	0.2	µg/L	3.0	60.1	10.1	2.6	----	----
Zinc	7440-66-6	1	µg/L	9	20	5	15	----	----
EG094T: Total metals in Fresh water by ORC-ICPMS									
Selenium	7782-49-2	0.2	µg/L	0.4	3.6	1.4	2.7	----	----
Arsenic	7440-38-2	0.2	µg/L	4.9	11.8	9.1	15.8	----	----
Boron	7440-42-8	5	µg/L	20	39	101	42	----	----
Cadmium	7440-43-9	0.05	µg/L	0.07	0.06	<0.05	<0.05	----	----
Cobalt	7440-48-4	0.1	µg/L	6.9	96.8	17.4	64.1	----	----
Copper	7440-50-8	0.5	µg/L	4.2	55.2	7.9	15.8	----	----
Lead	7439-92-1	0.1	µg/L	4.5	172	49.6	55.5	----	----



Analytical Results

Sub-Matrix: WATER

Client sample ID

Client sampling date / time

				119	120	127	137	----
				19-NOV-2009 13:30	19-NOV-2009 14:45	19-NOV-2009 16:00	19-NOV-2009 15:15	----
Compound	CAS Number	LOR	Unit	EB0918367-006	EB0918367-007	EB0918367-008	EB0918367-009	----
EG094T: Total metals in Fresh water by ORC-ICPMS - Continued								
Nickel	7440-02-0	0.5	µg/L	6.9	81.2	11.3	26.5	----
Vanadium	7440-62-2	0.2	µg/L	15.5	190	99.0	153	----
Zinc	7440-66-6	1	µg/L	48	144	20	54	----
EK040P: Fluoride by PC Titrator								
Fluoride	16984-48-8	0.1	mg/L	<0.1	0.1	0.1	<0.1	----
EK057G: Nitrite as N by Discrete Analyser								
Nitrite as N	----	0.01	mg/L	<0.01	0.05	<0.01	<0.01	----
EK058G: Nitrate as N by Discrete Analyser								
Nitrate as N	14797-55-8	0.01	mg/L	0.03	0.35	0.20	0.02	----
EK059G: NOX as N by Discrete Analyser								
Nitrite + Nitrate as N	----	0.01	mg/L	0.03	0.40	0.20	0.02	----
EP071/080: Total Petroleum Hydrocarbons								
C6 - C9 Fraction	----	20	µg/L	<20	<20	<20	<20	----
C10 - C14 Fraction	----	50	µg/L	<50	<50	<50	<50	----
C15 - C28 Fraction	----	100	µg/L	180	110	1060	580	----
C29 - C36 Fraction	----	50	µg/L	60	<50	430	200	----
EP074A: Monocyclic Aromatic Hydrocarbons								
Benzene	71-43-2	1	µg/L	<1	----	<1	----	----
Toluene	108-88-3	2	µg/L	<2	----	<2	----	----
Ethylbenzene	100-41-4	2	µg/L	<2	----	<2	----	----
meta- & para-Xylene	108-38-3 106-42-3	2	µg/L	<2	----	<2	----	----
Styrene	100-42-5	5	µg/L	<5	----	<5	----	----
ortho-Xylene	95-47-6	2	µg/L	<2	----	<2	----	----
Isopropylbenzene	98-82-8	5	µg/L	<5	----	<5	----	----
n-Propylbenzene	103-65-1	5	µg/L	<5	----	<5	----	----
1.3.5-Trimethylbenzene	108-67-8	5	µg/L	<5	----	<5	----	----
sec-Butylbenzene	135-98-8	5	µg/L	<5	----	<5	----	----
1.2.4-Trimethylbenzene	95-63-6	5	µg/L	<5	----	<5	----	----
tert-Butylbenzene	98-06-6	5	µg/L	<5	----	<5	----	----
p-Isopropyltoluene	99-87-6	5	µg/L	<5	----	<5	----	----
n-Butylbenzene	104-51-8	5	µg/L	<5	----	<5	----	----
EP075(SIM)A: Phenolic Compounds								
Phenol	108-95-2	1.0	µg/L	<1.0	----	<1.0	----	----
2-Chlorophenol	95-57-8	1.0	µg/L	<1.0	----	<1.0	----	----
2-Methylphenol	95-48-7	1.0	µg/L	<1.0	----	<1.0	----	----
3- & 4-Methylphenol	1319-77-3	2.0	µg/L	<2.0	----	<2.0	----	----



Analytical Results

Sub-Matrix: WATER

				Client sample ID	119	120	127	137	----
				Client sampling date / time	19-NOV-2009 13:30	19-NOV-2009 14:45	19-NOV-2009 16:00	19-NOV-2009 15:15	----
Compound	CAS Number	LOR	Unit	EB0918367-006	EB0918367-007	EB0918367-008	EB0918367-009	----	----
EP075(SIM)A: Phenolic Compounds - Continued									
2-Nitrophenol	88-75-5	1.0	µg/L	<1.0	----	<1.0	----	----	----
2,4-Dimethylphenol	105-67-9	1.0	µg/L	<1.0	----	<1.0	----	----	----
2,4-Dichlorophenol	120-83-2	1.0	µg/L	<1.0	----	<1.0	----	----	----
2,6-Dichlorophenol	87-65-0	1.0	µg/L	<1.0	----	<1.0	----	----	----
4-Chloro-3-Methylphenol	59-50-7	1.0	µg/L	<1.0	----	<1.0	----	----	----
2,4,6-Trichlorophenol	88-06-2	1.0	µg/L	<1.0	----	<1.0	----	----	----
2,4,5-Trichlorophenol	95-95-4	1.0	µg/L	<1.0	----	<1.0	----	----	----
Pentachlorophenol	87-86-5	2.0	µg/L	<2.0	----	<2.0	----	----	----
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons									
Naphthalene	91-20-3	0.02	µg/L	<0.02	----	0.03	----	----	----
Acenaphthylene	208-96-8	0.02	µg/L	<0.02	----	<0.02	----	----	----
Acenaphthene	83-32-9	0.02	µg/L	<0.02	----	<0.02	----	----	----
Fluorene	86-73-7	0.02	µg/L	<0.02	----	<0.02	----	----	----
Phenanthrene	85-01-8	0.02	µg/L	<0.02	----	<0.02	----	----	----
Anthracene	120-12-7	0.02	µg/L	<0.02	----	<0.02	----	----	----
Fluoranthene	206-44-0	0.02	µg/L	<0.02	----	<0.02	----	----	----
Pyrene	129-00-0	0.02	µg/L	<0.02	----	<0.02	----	----	----
Benz(a)anthracene	56-55-3	0.02	µg/L	<0.02	----	<0.02	----	----	----
Chrysene	218-01-9	0.02	µg/L	<0.02	----	<0.02	----	----	----
Benzo(b)fluoranthene	205-99-2	0.02	µg/L	<0.02	----	<0.02	----	----	----
Benzo(k)fluoranthene	207-08-9	0.02	µg/L	<0.02	----	<0.02	----	----	----
Benzo(a)pyrene	50-32-8	0.005	µg/L	<0.005	----	<0.005	----	----	----
Indeno(1.2.3.cd)pyrene	193-39-5	0.02	µg/L	<0.02	----	<0.02	----	----	----
Dibenz(a,h)anthracene	53-70-3	0.02	µg/L	<0.02	----	<0.02	----	----	----
Benzo(g,h,i)perylene	191-24-2	0.02	µg/L	<0.02	----	<0.02	----	----	----
^ Total PAH	----	0.005	µg/L	<0.005	----	<0.005	----	----	----
EP080/071: Total Petroleum Hydrocarbons									
^ C10 - C36 Fraction (sum)	----	50	µg/L	240	110	1490	780	----	----
EP130A: Organophosphorus Pesticides (Ultra-trace)									
Bromophos-ethyl	4824-78-6	0.02	µg/L	<0.02	----	<0.02	----	----	----
Carbophenothion	786-19-6	0.02	µg/L	<0.02	----	<0.02	----	----	----
Chlorfenvinphos (E)	18708-86-6	0.02	µg/L	<0.02	----	<0.02	----	----	----
Chlorfenvinphos (Z)	18708-87-7	0.02	µg/L	<0.02	----	<0.02	----	----	----
Chlorpyrifos	2921-88-2	0.010	µg/L	<0.010	----	<0.010	----	----	----
Chlorpyrifos-methyl	5598-13-0	0.02	µg/L	<0.02	----	<0.02	----	----	----
Demeton-S-methyl	919-86-8	0.02	µg/L	<0.02	----	<0.02	----	----	----



Analytical Results

Sub-Matrix: WATER

				Client sample ID	119	120	127	137	----
				Client sampling date / time	19-NOV-2009 13:30	19-NOV-2009 14:45	19-NOV-2009 16:00	19-NOV-2009 15:15	----
Compound	CAS Number	LOR	Unit		EB0918367-006	EB0918367-007	EB0918367-008	EB0918367-009	----
EP130A: Organophosphorus Pesticides (Ultra-trace) - Continued									
Diazinon	333-41-5	0.02	µg/L		<0.02	----	<0.02	----	----
Dichlorvos	62-73-7	0.02	µg/L		<0.02	----	<0.02	----	----
Dimethoate	60-51-5	0.02	µg/L		<0.02	----	<0.02	----	----
Ethion	563-12-2	0.02	µg/L		<0.02	----	<0.02	----	----
Fenamiphos	22224-92-6	0.02	µg/L		<0.02	----	<0.02	----	----
Fenthion	55-38-9	0.02	µg/L		<0.02	----	<0.02	----	----
Malathion	121-75-5	0.02	µg/L		<0.02	----	<0.02	----	----
Azinphos Methyl	86-50-0	0.02	µg/L		<0.02	----	<0.02	----	----
Monocrotophos	6923-22-4	0.02	µg/L		<0.02	----	<0.02	----	----
Parathion	56-38-2	0.02	µg/L		<0.02	----	<0.02	----	----
Parathion-methyl	298-00-0	0.02	µg/L		<0.02	----	<0.02	----	----
Pirimphos-ethyl	23505-41-1	0.02	µg/L		<0.02	----	<0.02	----	----
Prothiofos	34643-46-4	0.02	µg/L		<0.02	----	<0.02	----	----
EP131A: Organochlorine Pesticides									
Aldrin	309-00-2	0.002	µg/L		<0.002	----	<0.002	----	----
alpha-BHC	319-84-6	0.002	µg/L		<0.002	----	<0.002	----	----
beta-BHC	319-85-7	0.002	µg/L		<0.002	----	<0.002	----	----
delta-BHC	319-86-8	0.002	µg/L		<0.002	----	<0.002	----	----
4.4'-DDD	72-54-8	0.002	µg/L		<0.002	----	<0.002	----	----
4.4'-DDE	72-55-9	0.002	µg/L		<0.002	----	<0.002	----	----
4.4'-DDT	50-29-3	0.002	µg/L		<0.002	----	<0.002	----	----
^ DDT (total)	----	0.002	µg/L		<0.002	----	<0.002	----	----
Dieldrin	60-57-1	0.002	µg/L		<0.002	----	<0.002	----	----
alpha-Endosulfan	959-98-8	0.002	µg/L		<0.002	----	<0.002	----	----
beta-Endosulfan	33213-65-9	0.002	µg/L		<0.002	----	<0.002	----	----
Endosulfan sulfate	1031-07-8	0.002	µg/L		<0.002	----	<0.002	----	----
^ Endosulfan (sum)	115-29-7	0.002	µg/L		<0.002	----	<0.002	----	----
Endrin	72-20-8	0.002	µg/L		<0.002	----	<0.002	----	----
Endrin aldehyde	7421-93-4	0.002	µg/L		<0.002	----	<0.002	----	----
Endrin ketone	53494-70-5	0.002	µg/L		<0.002	----	<0.002	----	----
Heptachlor	76-44-8	0.001	µg/L		<0.001	----	<0.001	----	----
Heptachlor epoxide	1024-57-3	0.002	µg/L		<0.002	----	<0.002	----	----
Hexachlorobenzene (HCB)	118-74-1	0.002	µg/L		<0.002	----	<0.002	----	----
gamma-BHC	58-89-9	0.002	µg/L		<0.002	----	<0.002	----	----
Methoxychlor	72-43-5	0.002	µg/L		<0.002	----	<0.002	----	----
cis-Chlordane	5103-71-9	0.002	µg/L		<0.002	----	<0.002	----	----



Analytical Results

Sub-Matrix: WATER

				Client sample ID	119	120	127	137	----
				Client sampling date / time	19-NOV-2009 13:30	19-NOV-2009 14:45	19-NOV-2009 16:00	19-NOV-2009 15:15	----
Compound	CAS Number	LOR	Unit	EB0918367-006	EB0918367-007	EB0918367-008	EB0918367-009	----	----
EP131A: Organochlorine Pesticides - Continued									
trans-Chlordane	5103-74-2	0.002	µg/L	<0.002	----	<0.002	----	----	----
^ Total Chlordane (sum)	----	0.002	µg/L	<0.002	----	<0.002	----	----	----
^ Oxychlordane	27304-13-8	0.002	µg/L	<0.002	----	<0.002	----	----	----
Ultra-Trace Nutrients									
Ammonia as N	7664-41-7	0.005	mg/L	0.152	0.806	0.551	0.072	----	----
Total Nitrogen as N	----	0.05	mg/L	0.70	0.95	3.79	3.68	----	----
Total Phosphorus as P	----	0.005	mg/L	0.317	0.656	0.698	0.434	----	----
EP074S: VOC Surrogates									
1,2-Dichloroethane-D4	17060-07-0	0.1	%	112	----	117	----	----	----
Toluene-D8	2037-26-5	0.1	%	101	----	99.5	----	----	----
4-Bromofluorobenzene	460-00-4	0.1	%	89.8	----	88.4	----	----	----
EP075(SIM)S: Phenolic Compound Surrogates									
Phenol-d6	13127-88-3	0.1	%	27.1	----	25.7	----	----	----
2-Chlorophenol-D4	93951-73-6	0.1	%	71.6	----	59.1	----	----	----
2,4,6-Tribromophenol	118-79-6	0.1	%	104	----	96.7	----	----	----
EP075(SIM)T: PAH Surrogates									
2-Fluorobiphenyl	321-60-8	0.1	%	80.3	----	67.9	----	----	----
Anthracene-d10	1719-06-8	0.1	%	86.0	----	79.6	----	----	----
4-Terphenyl-d14	1718-51-0	0.1	%	81.1	----	73.4	----	----	----
EP080S: TPH(V)/BTEX Surrogates									
1,2-Dichloroethane-D4	17060-07-0	0.1	%	95.5	117	95.8	101	----	----
Toluene-D8	2037-26-5	0.1	%	102	99.2	99.7	101	----	----
4-Bromofluorobenzene	460-00-4	0.1	%	97.3	105	94.9	98.7	----	----
EP130S: Organophosphorus Pesticide Surrogate									
DEF	78-48-8	0.1	%	96.2	----	113	----	----	----
EP131S: OC Pesticide Surrogate									
Dibromo-DDE	21655-73-2	0.1	%	71.0	----	100	----	----	----
EP132T: Base/Neutral Extractable Surrogates									
2-Fluorobiphenyl	321-60-8	0.1	%	92.0	----	96.6	----	----	----
Anthracene-d10	1719-06-8	0.1	%	87.1	----	102	----	----	----
4-Terphenyl-d14	1718-51-0	0.1	%	83.7	----	87.8	----	----	----



Surrogate Control Limits

Sub-Matrix: WATER		Recovery Limits (%)	
Compound	CAS Number	Low	High
EP074S: VOC Surrogates			
1,2-Dichloroethane-D4	17060-07-0	80	120
Toluene-D8	2037-26-5	88	110
4-Bromofluorobenzene	460-00-4	86	115
EP075(SIM)S: Phenolic Compound Surrogates			
Phenol-d6	13127-88-3	10	94
2-Chlorophenol-D4	93951-73-6	23	134
2,4,6-Tribromophenol	118-79-6	10	123
EP075(SIM)T: PAH Surrogates			
2-Fluorobiphenyl	321-60-8	43	116
Anthracene-d10	1719-06-8	27	133
4-Terphenyl-d14	1718-51-0	33	141
EP080S: TPH(V)/BTEX Surrogates			
1,2-Dichloroethane-D4	17060-07-0	80	120
Toluene-D8	2037-26-5	88	110
4-Bromofluorobenzene	460-00-4	86	115
EP130S: Organophosphorus Pesticide Surrogate			
DEF	78-48-8	----	----
EP131S: OC Pesticide Surrogate			
Dibromo-DDE	21655-73-2	----	----
EP132T: Base/Neutral Extractable Surrogates			
2-Fluorobiphenyl	321-60-8	57.6	113
Anthracene-d10	1719-06-8	60.4	125
4-Terphenyl-d14	1718-51-0	58.2	128

23 February 2010

Report No.ACS093794R

ALS Environmental
32 Shand St
Stafford, OLD, 4053

Dear Michael,

Date of Sample Receipt: 24th November 2009
No. of Samples Received: 3

Results (mg/L)

Sample ID:	Reference No.	Lab No:	TEG
88	EB0918367-4	3794-1	<5
119	EB0918367-6	3794-2	<5
127	EB0918367-8	3794-3	<5

QC Data

Blank	-	-	< 5
Blank Spike	-	-	83%
Matrix Spike	EB0918276-1	3793-1	91%

Method: ACS-TM-AM-003

Yours faithfully,
ACS Laboratories (Australia)

Craig Hicks
Business Development Manager



CHAIN OF CUSTODY & ANALYSIS REQUEST
Job Reference Number: **066055**

(SGS use only)

Samples frozen for L-L Nutrients

Page 1 of 1

Laboratory ID	Client SAMPLE ID	Sample Date	Matrix			Preservation Method			Analysis Required:	Comments:
			SOIL	WATER	OTHER	NONE	ICE	ACID		
	B	16/3/10	/	/	/	/	/	PAH, phenol methylene glycol OP Pesticides OC Pesticides Solids, Fe, B, Cd, Co Cu, Pb, Hg, Ni, V Se, Zn Total As, B, Cd, Co Cr, Pb, Hg, Ni, V Zn, Se TPH, MAH Ammonia, nitrate, nitrite, total nitrogen Total Phosphorus Sulfate, chloride, fluoride, hardness SAR, TSS	TEC to be analysed at Singll and 0.33mg/L * Please note that samples sampled may have been lab tested as ISC they should be ISB. Please freeze Nutrient samples (25ml filtered)	
	27	16/3/10	/	/	/	/	/			
	15B*	16/3/10	/	/	/	/	/			
	O	16/3/10	/	/	/	/	/			
	QA	16/3/10	/	/	/	/	/			

Company Name: **ALLUVIUM (Sampling by NRA)**
 Address: **3/62 Walker St, PO Box 1581, Townsville**
 Contact Name: **Anne Marie Gibson, Metris, Addressed to Jason Carter**
 Email address: **jason.carter@alluvium.com.au, anne.marie.gibson@metris.com**
 Telephone: **4924 2170** Facsimile: **4924 5122**
 Client Order Number: **BOOK NR CA10-09**
 Project Name: **BOOK NR CA10-09**
 Project Number: **BOOK NR CA10-09**
 Laboratory Contact: **Not that all nutrient samples have been filtered (25ml)**
 Total Number of Containers/Bottles: **.....**
 Total Number of Samples/Sites: **.....**

Relinquished by: **[Signature]** Date: **16/3/10** Time: **1:40pm** Received by: **[Signature]** Date: **16/3/10** Time: **1:40AM**
 Relinquished by: **[Signature]** Date: **.....** Time: **.....** Received by: **[Signature]** Date: **19/3/10** Time: **.....**

Sample Cooler Sealed: **YES/NO*** Correct Sample Bottles Used: **YES/NO*** Temperature: **AMBIENT/CHILLED***
 Samples Intact: **YES/NO*** Comments including subcontracting details: **Invoice to be sent to Jason Carter from Alluvium**
 Please provide client with details
 Consent given for subcontracting

Client Details

Client : Alluvium
Contact : Jason Carter
Address : 3/ 62 Walker St
TOWNSVILLE QLD 4810

Email : jason.carter@alluvium.com.au
Telephone : 49422170
Facsimile :

Project : Alluvium Job - NRA
Order Number :
Samples : 5 Waters

Laboratory Details

Laboratory : SGS Environmental Services
Manager : Jon Dicker
Address : Unit 2, 58 Comport St
Portsmith QLD 4870

Email : Shey.Goddard@SGS.com
Telephone : 61 7 4035 5111
Facsimile : 61 7 4035 5122

Report No : **CE66955**
No. of Samples : 5
Due Date : 31/03/2010

Date Instructions Received : 18/03/2010
Sample Receipt Date : 19/03/2010
Requested By : Anne-Marie

Samples received in good order	: yes	Samples received in correct containers	: yes
Samples received without headspace	: Yes	Sufficient quantity supplied	: Yes
Upon receipt sample temperature	: 5 degrees C	Cooling Method	: ICE
Sample containers provided by	: sgs	Samples clearly Labelled	: Yes
Turnaround time requested	: Standard	Completed documentation received	: Yes

Samples will be held for 1 month for water samples and 3 months for soil samples from date of receipt of samples, unless otherwise instructed.

Comments

To the extent not inconsistent with the other provisions of this document and unless specifically agreed otherwise in writing by SGS, all SGS services are rendered in accordance with the applicable SGS General Conditions of Service accessible at http://www.sgs.com/terms_and_conditions.htm as at the date of this document. Attention is drawn to the limitations of liability and to the clauses of indemnification.

The signed chain of custody will be returned to you with the original report.

SAMPLE RECEIPT ADVICE (SRA) - continued

Client : Alluvium
Project : Alluvium Job - NRA

Report No : CE66955

Summary of Samples and Requested Analysis

The table below represents SGS Environmental Service's interpretation of the customer supplied Chain of Custody. Please indicate ASAP if your request differs from these details.

Testing shall commence immediately as per this table, unless the customer intervenes with a correction prior to testing. Note that a lowercase x in the table below indicates some testing has not been requested in the package.

Sample No.	Description	Misc Inorganics	HM 11 - Water - ANZECC
1	B	x	X
2	27	X	X
3	15B	X	X
4	O	X	X
5	QA	X	X

LABORATORY REPORT COVERSHEET

Date: 6 May 2011

To: Alluvium Consulting (Queensland)
3 / 62 Walker St
Townsville QLD 4810

Attention: Jason Carter

Your Reference: Alluvium Job - NRA
Laboratory Report No: CE66955R

Samples Received: 19/03/2010
Samples / Quantity: 5 Waters

The above samples were received intact and analysed according to your written instructions. Unless otherwise stated, solid samples are reported on a dry weight basis and liquid samples as received.

This report cancels and supersedes the final report issued 01/04/2010 by SGS Environmental Services, Cairns.



Jon Dicker
Manager
CAIRNS



Shey Goddard
Administration Manager
CAIRNS

CLIENT: Alluvium Consulting (Queensland)
PROJECT: Alluvium Job - NRA

Laboratory Report No: CE66955R

LABORATORY REPORT

----- Our Reference Your Reference Type of Sample Date Sampled	Units	CE66955R-1 B Water 16/03/2010	CE66955R-2 27 Water 16/03/2010	CE66955R-3 15B Water 16/03/2010
Date Extracted		19/03/2010	19/03/2010	19/03/2010
Date Analysed		19/03/2010	19/03/2010	19/03/2010
Total Suspended Solids	mg/L	<5	49	<5
Ammonia Nitrogen NH ₃ as N	mg/L	0.045	0.13	0.095
Total Oxidised Nitrogen as N (NO ₂ +NO ₃)	mg/L	0.021	0.085	0.066
Nitrite (NO ₂) (as N)	mg/L	<0.005	<0.005	<0.005
Nitrate (LIMS Calc)	mg/L	0.021	0.085	0.066
Total Kjeldahl Nitrogen (as N)	mg/L	<0.05	3.8	2.1
Total Nitrogen	mg/L	<0.05	3.9	2.2
Total Phosphorus	mg/L	<0.02	0.36	0.19
Sulphate, SO ₄	mg/L	<2	5	5
Chloride, Cl	mg/L	<2	22	43
Fluoride, F	mg/L	<0.05	<0.05	<0.05
Sodium, Na	mg/L	<0.5	30	39
Potassium, K	mg/L	<0.05	3.9	6.2
Calcium, Ca	mg/L	<0.05	3.3	2.4
Magnesium, Mg	mg/L	<0.05	8.0	2.8
Hardness (as CaCO ₃)	mg/L CaCO ₃	<5	41	17
Sodium Absorption Ratio		-	2	4
Triethylene Glycol ^^	mg/L	<5.0	<5.0	<5.0
Triethylene Glycol ^^#	mg/L	<0.01	<0.01	<0.01

CLIENT: Alluvium Consulting (Queensland)

PROJECT: Alluvium Job - NRA

Laboratory Report No: CE66955R

LABORATORY REPORT

----- Our Reference Your Reference Type of Sample Date Sampled	Units	CE66955R-4 O Water 16/03/2010	CE66955R-5 QA Water 16/03/2010
Date Extracted		19/03/2010	19/03/2010
Date Analysed		19/03/2010	19/03/2010
Total Suspended Solids	mg/L	6	12
Ammonia Nitrogen NH ₃ as N	mg/L	0.056	0.058
Total Oxidised Nitrogen as N (NO ₂ +NO ₃)	mg/L	0.037	0.036
Nitrite (NO ₂) (as N)	mg/L	<0.005	<0.005
Nitrate (LIMS Calc)	mg/L	0.037	0.036
Total Kjeldahl Nitrogen (as N)	mg/L	1.3	1.3
Total Nitrogen	mg/L	1.3	1.3
Total Phosphorus	mg/L	0.24	0.32
Sulphate, SO ₄	mg/L	5	5
Chloride, Cl	mg/L	27	22
Fluoride, F	mg/L	0.11	0.11
Sodium, Na	mg/L	28	28
Potassium, K	mg/L	12	12
Calcium, Ca	mg/L	24	24
Magnesium, Mg	mg/L	5.0	5.0
Hardness (as CaCO ₃)	mg/L CaCO ₃	80	80
Sodium Absorption Ratio		1	1
Triethylene Glycol ^^	mg/L	<5.0	<5.0
Triethylene Glycol ^^#	mg/L	<0.01	<0.01

CLIENT: Alluvium Consulting (Queensland)

PROJECT: Alluvium Job - NRA

Laboratory Report No: CE66955R

LABORATORY REPORT

Heavy Metals - Water ANZECC Our Reference Your Reference Type of Sample Date Sampled	Units	CE66955R-1 B Water 16/03/2010	CE66955R-2 27 Water 16/03/2010	CE66955R-3 15B Water 16/03/2010
Date Extracted		19/03/2010	19/03/2010	19/03/2010
Date Analysed		23/03/2010	23/03/2010	23/03/2010
Total Arsenic, As	mg/L	<0.003	0.005	0.003
Arsenic, As	mg/L	<0.003	[NA]	[NA]
Total Boron, B	mg/L	<0.002	0.064	0.060
Boron, B	mg/L	<0.002	[NA]	[NA]
Total Cadmium, Cd	mg/L	<0.0001	0.0005	<0.0001
Cadmium, Cd	mg/L	<0.0001	[NA]	[NA]
Total Cobalt, Co	mg/L	<0.0010	0.027	0.008
Cobalt, Co	mg/L	<0.001	[NA]	[NA]
Total Copper, Cu	mg/L	<0.001	0.011	0.003
Copper, Cu	mg/L	<0.001	[NA]	[NA]
Total Mercury, Hg	mg/L	<0.0001	<0.0001	<0.0001
Mercury, Hg (Filtered)	mg/L	<0.0001	[NA]	[NA]
Total Nickel, Ni	mg/L	<0.002	0.021	0.006
Nickel, Ni	mg/L	<0.002	[NA]	[NA]
Total Lead, Pb	mg/L	<0.001	0.018	0.004
Lead, Pb	mg/L	<0.001	[NA]	[NA]
Total Selenium, Se	mg/L	<0.003	0.004	<0.003
Selenium, Se	mg/L	<0.003	[NA]	[NA]
Total Vanadium, V	mg/L	<0.005	0.099	0.028
Vanadium, V	mg/L	<0.005	[NA]	[NA]
Total Zinc, Zn	mg/L	<0.005	0.043	0.024
Zinc, Zn	mg/L	<0.005	[NA]	[NA]

CLIENT: Alluvium Consulting (Queensland)

PROJECT: Alluvium Job - NRA

Laboratory Report No: CE66955R

LABORATORY REPORT

Heavy Metals - Water ANZECC Our Reference Your Reference Type of Sample Date Sampled	Units	CE66955R-4 O Water 16/03/2010	CE66955R-5 QA Water 16/03/2010
Date Extracted		19/03/2010	19/03/2010
Date Analysed		23/03/2010	23/03/2010
Total Arsenic, As	mg/L	<0.003	<0.003
Arsenic, As	mg/L	<0.003	<0.003
Total Boron, B	mg/L	0.041	0.040
Boron, B	mg/L	0.040	0.039
Total Cadmium, Cd	mg/L	<0.0001	<0.0001
Cadmium, Cd	mg/L	<0.0001	<0.0001
Total Cobalt, Co	mg/L	0.0010	0.0020
Cobalt, Co	mg/L	<0.001	<0.001
Total Copper, Cu	mg/L	0.003	0.003
Copper, Cu	mg/L	0.002	0.003
Total Mercury, Hg	mg/L	<0.0001	<0.0001
Mercury, Hg (Filtered)	mg/L	<0.0001	<0.0001
Total Nickel, Ni	mg/L	0.003	0.003
Nickel, Ni	mg/L	<0.002	<0.002
Total Lead, Pb	mg/L	0.003	0.001
Lead, Pb	mg/L	<0.001	<0.001
Total Selenium, Se	mg/L	<0.003	<0.003
Selenium, Se	mg/L	<0.003	<0.003
Total Vanadium, V	mg/L	0.010	0.010
Vanadium, V	mg/L	0.008	0.008
Total Zinc, Zn	mg/L	0.008	0.009
Zinc, Zn	mg/L	0.005	<0.005

CLIENT: Alluvium Consulting (Queensland)

PROJECT: Alluvium Job - NRA

Laboratory Report No: CE66955R

LABORATORY REPORT

TRH (waters) Our Reference Your Reference Type of Sample Date Sampled	Units	CE66955R-1 B Water 16/03/2010	CE66955R-2 27 Water 16/03/2010	CE66955R-3 15B Water 16/03/2010
Date Analysed		22/03/2010	22/03/2010	22/03/2010
Date Extracted		27/03/2010	27/03/2010	27/03/2010
TRH C ₆ - C ₉ P&T ^	µg/L	<20	<20	<20
TRH C ₁₀ - C ₁₄ ^	µg/L	<50	<50	<50
TRH C ₁₅ - C ₂₈ ^	µg/L	<100	<100	<100
TRH C ₂₉ - C ₃₆ ^	µg/L	<50	<50	<50

TRH (waters) Our Reference Your Reference Type of Sample Date Sampled	Units	CE66955R-4 O Water 16/03/2010	CE66955R-5 QA Water 16/03/2010
Date Analysed		22/03/2010	22/03/2010
Date Extracted		27/03/2010	27/03/2010
TRH C ₆ - C ₉ P&T ^	µg/L	<20	<20
TRH C ₁₀ - C ₁₄ ^	µg/L	<50	<50
TRH C ₁₅ - C ₂₈ ^	µg/L	<100	<100
TRH C ₂₉ - C ₃₆ ^	µg/L	<50	<50

CLIENT: Alluvium Consulting (Queensland)

PROJECT: Alluvium Job - NRA

Laboratory Report No: CE66955R

LABORATORY REPORT

VOC - MAH - PERTH Our Reference Your Reference Type of Sample Date Sampled	Units	CE66955R-1 B Water 16/03/2010	CE66955R-2 27 Water 16/03/2010	CE66955R-3 15B Water 16/03/2010
Date Extracted		24/03/2010	24/03/2010	24/03/2010
Date Analysed		24/03/2010	24/03/2010	24/03/2010
Benzene ^	µg/L	<0.5	<0.5	<0.5
Toluene ^	µg/L	<0.5	<0.5	<0.5
Ethyl Benzene ^	µg/L	<0.5	<0.5	<0.5
<i>m/p</i> -Xylenes ^	µg/L	<1.0	<1.0	<1.0
Styrene ^	µg/L	<0.5	<0.5	<0.5
<i>o</i> -Xylene ^	µg/L	<0.5	<0.5	<0.5
Isopropylbenzene ^	µg/L	<0.5	<0.5	<0.5
<i>n</i> -Propylbenzene ^	µg/L	<0.5	<0.5	<0.5
1,3,5-Trimethylbenzene ^	µg/L	<0.5	<0.5	<0.5
<i>tert</i> -Butylbenzene ^	µg/L	<0.5	<0.5	<0.5
1,2,4-Trimethylbenzene ^	µg/L	<0.5	<0.5	<0.5
<i>sec</i> -Butylbenzene ^	µg/L	<0.5	<0.5	<0.5
<i>p</i> -Isopropyltoluene ^	µg/L	<0.5	<0.5	<0.5
<i>n</i> -Butylbenzene ^	µg/L	<0.5	<0.5	<0.5
Dibromofluoromethane ^	%	80	85	93
Toluene- <i>d8</i> Surrogate 2 ^	%	86	86	92
4-Bromofluorobenzene Surrogate 3 ^	%	88	89	99

CLIENT: Alluvium Consulting (Queensland)

PROJECT: Alluvium Job - NRA

Laboratory Report No: CE66955R

LABORATORY REPORT

VOC - MAH - PERTH Our Reference Your Reference Type of Sample Date Sampled	Units	CE66955R-4 O Water 16/03/2010	CE66955R-5 QA Water 16/03/2010
Date Extracted		24/03/2010	24/03/2010
Date Analysed		24/03/2010	24/03/2010
Benzene ^	µg/L	<0.5	<0.5
Toluene ^	µg/L	<0.5	<0.5
Ethyl Benzene ^	µg/L	<0.5	<0.5
<i>m/p</i> -Xylenes ^	µg/L	<1.0	<1.0
Styrene ^	µg/L	<0.5	<0.5
<i>o</i> -Xylene ^	µg/L	<0.5	<0.5
Isopropylbenzene ^	µg/L	<0.5	<0.5
<i>n</i> -Propylbenzene ^	µg/L	<0.5	<0.5
1,3,5-Trimethylbenzene ^	µg/L	<0.5	<0.5
<i>tert</i> -Butylbenzene ^	µg/L	<0.5	<0.5
1,2,4-Trimethylbenzene ^	µg/L	<0.5	<0.5
<i>sec</i> -Butylbenzene ^	µg/L	<0.5	<0.5
<i>p</i> -Isopropyltoluene ^	µg/L	<0.5	<0.5
<i>n</i> -Butylbenzene ^	µg/L	<0.5	<0.5
Dibromofluoromethane ^	%	93	96
Toluene- <i>d8</i> Surrogate 2 ^	%	100	100
4-Bromofluorobenzene Surrogate 3 ^	%	103	105

CLIENT: Alluvium Consulting (Queensland)

PROJECT: Alluvium Job - NRA

Laboratory Report No: CE66955R

LABORATORY REPORT

PAHs Our Reference Your Reference Type of Sample Date Sampled	Units	CE66955R-1 B Water 16/03/2010	CE66955R-3 15B Water 16/03/2010	CE66955R-4 O Water 16/03/2010
Date Extracted		22/03/2010	22/03/2010	22/03/2010
Date Analysed		26/03/2010	26/03/2010	26/03/2010
Naphthalene	µg/L	<0.2	<0.2	<0.2
2-Methylnaphthalene	µg/L	<0.2	<0.2	<0.2
1-Methylnaphthalene	µg/L	<0.2	<0.2	<0.2
Acenaphthylene	µg/L	<0.2	<0.2	<0.2
Acenaphthene	µg/L	<0.2	<0.2	<0.2
Fluorene	µg/L	<0.2	<0.2	<0.2
Phenanthrene	µg/L	<0.2	<0.2	<0.2
Anthracene	µg/L	<0.2	<0.2	<0.2
Fluoranthene	µg/L	<0.2	<0.2	<0.2
Pyrene	µg/L	<0.2	<0.2	<0.2
Benzo[a]anthracene	µg/L	<0.2	<0.2	<0.2
Chrysene	µg/L	<0.2	<0.2	<0.2
Benzo[b,k]fluoranthene	µg/L	<0.4	<0.4	<0.4
Benzo[a]pyrene ^	µg/L	<0.005	<0.005	<0.005
Indeno[123-cd]pyrene	µg/L	<0.2	<0.2	<0.2
Dibenzo[ah]anthracene	µg/L	<0.2	<0.2	<0.2
Benzo[ghi]perylene	µg/L	<0.2	<0.2	<0.2
Total PAH ^	µg/L	<3.0	<3.0	<3.0
d14-p-terphenyl (Surrogate)	%	90	12	23

CLIENT: Alluvium Consulting (Queensland)

PROJECT: Alluvium Job - NRA

Laboratory Report No: CE66955R

LABORATORY REPORT

PAHs Our Reference Your Reference Type of Sample Date Sampled	Units	CE66955R-5 QA Water 16/03/2010
Date Extracted		22/03/2010
Date Analysed		26/03/2010
Naphthalene	µg/L	<0.2
2-Methylnaphthalene	µg/L	<0.2
1-Methylnaphthalene	µg/L	<0.2
Acenaphthylene	µg/L	<0.2
Acenaphthene	µg/L	<0.2
Fluorene	µg/L	<0.2
Phenanthrene	µg/L	<0.2
Anthracene	µg/L	<0.2
Fluoranthene	µg/L	<0.2
Pyrene	µg/L	<0.2
Benzo[a]anthracene	µg/L	<0.2
Chrysene	µg/L	<0.2
Benzo[b,k]fluoranthene	µg/L	<0.4
Benzo[a]pyrene ^	µg/L	<0.005
Indeno[123-cd]pyrene	µg/L	<0.2
Dibenzo[ah]anthracene	µg/L	<0.2
Benzo[ghi]perylene	µg/L	<0.2
Total PAH ^	µg/L	<3.0
d14-p-terphenyl (Surrogate)	%	19

CLIENT: Alluvium Consulting (Queensland)
PROJECT: Alluvium Job - NRA

Laboratory Report No: CE66955R

LABORATORY REPORT

Pesticides Our Reference Your Reference Type of Sample Date Sampled	Units	CE66955R-1 B Water 16/03/2010	CE66955R-2 27 Water 16/03/2010	CE66955R-3 15B Water 16/03/2010
Date Extracted		22/03/2010	22/03/2010	22/03/2010
Date Analysed		26/03/2010	26/03/2010	26/03/2010
alpha (cis-) Chlordane ^	µg/L	<0.002	<0.002	<0.002
gamma (trans-) Chlordane ^	µg/L	<0.002	<0.002	<0.002
p,p' - DDT ^	µg/L	<0.002	<0.002	<0.002
Endosulfan sulphate ^	µg/L	<0.005	<0.005	<0.005
Endrin ^	µg/L	<0.004	<0.004	<0.004
Heptachlor ^	µg/L	<0.01	<0.01	<0.01
Lindane ^	µg/L	<0.05	<0.05	<0.05
Aldrin ^	µg/L	<0.01	<0.01	<0.01
p,p' - DDE ^	µg/L	<0.01	<0.01	<0.01
p,p' - DDD ^	µg/L	<0.01	<0.01	<0.01
Dieldrin ^	µg/L	<0.002	<0.002	<0.002
alpha - Endosulfan ^	µg/L	<0.005	<0.005	<0.005
beta - Endosulfan ^	µg/L	<0.005	<0.005	<0.005
Methoxychlor ^	µg/L	<0.10	<0.10	<0.10
HCB ^	µg/L	<0.01	<0.01	<0.01
alpha - BHC ^	µg/L	<0.05	<0.05	<0.05
beta - BHC ^	µg/L	<0.05	<0.05	<0.05
delta - BHC ^	µg/L	<0.05	<0.05	<0.05
Endrin ketone ^	µg/L	<0.05	<0.05	<0.05
Dichlorvos ^	µg/L	<0.5	<0.5	<0.5
Bromophos ethyl ^	µg/L	<0.05	<0.05	<0.05
Methidathion ^	µg/L	<0.05	<0.05	<0.05
Ethion ^	µg/L	<0.05	<0.05	<0.05
Heptachlor epoxide ^	µg/L	<0.02	<0.02	<0.02
Dicofol	µg/L	<0.50	<0.50	<0.50
Diazinon	µg/L	<0.01	<0.01	<0.01

CLIENT: Alluvium Consulting (Queensland)

PROJECT: Alluvium Job - NRA

Laboratory Report No: CE66955R

LABORATORY REPORT

Pesticides Our Reference Your Reference Type of Sample Date Sampled	Units	CE66955R-1 B Water 16/03/2010	CE66955R-2 27 Water 16/03/2010	CE66955R-3 15B Water 16/03/2010
Chlorpyrifos ^	µg/L	<0.009	<0.009	<0.009
Malathion ^	µg/L	<0.05	<0.05	<0.05
Fenitrothion ^	µg/L	<0.2	<0.2	<0.2
Azinphos methyl (Guthion) ^	µg/L	<0.05	<0.05	<0.05
Parathion ethyl ^	µg/L	<0.01	<0.01	<0.01
Methyl Parathion	µg/L	<0.010	<0.010	<0.010
p-Terphenyl-d14 ^	% Recovery	90	15	12

Pesticides Our Reference Your Reference Type of Sample Date Sampled	Units	CE66955R-4 O Water 16/03/2010	CE66955R-5 QA Water 16/03/2010
Date Extracted		22/03/2010	22/03/2010
Date Analysed		26/03/2010	26/03/2010
alpha (cis-) Chlordane ^	µg/L	<0.002	<0.002
gamma (trans-) Chlordane ^	µg/L	<0.002	<0.002
p,p' - DDT ^	µg/L	<0.002	<0.002
Endosulfan sulphate ^	µg/L	<0.005	<0.005
Endrin ^	µg/L	<0.004	<0.004
Heptachlor ^	µg/L	<0.01	<0.01
Lindane ^	µg/L	<0.05	<0.05
Aldrin ^	µg/L	<0.01	<0.01
p,p' - DDE ^	µg/L	<0.01	<0.01
p,p' - DDD ^	µg/L	<0.01	<0.01
Dieldrin ^	µg/L	<0.002	<0.002
alpha - Endosulfan ^	µg/L	<0.005	<0.005
beta - Endosulfan ^	µg/L	<0.005	<0.005

CLIENT: Alluvium Consulting (Queensland)

PROJECT: Alluvium Job - NRA

Laboratory Report No: CE66955R

LABORATORY REPORT

Pesticides Our Reference Your Reference Type of Sample Date Sampled	Units	CE66955R-4 O Water 16/03/2010	CE66955R-5 QA Water 16/03/2010
Methoxychlor ^	µg/L	<0.10	<0.10
HCB ^	µg/L	<0.01	<0.01
alpha - BHC ^	µg/L	<0.05	<0.05
beta - BHC ^	µg/L	<0.05	<0.05
delta - BHC ^	µg/L	<0.05	<0.05
Endrin ketone ^	µg/L	<0.05	<0.05
Dichlorvos ^	µg/L	<0.5	<0.5
Bromophos ethyl ^	µg/L	<0.05	<0.05
Methidathion ^	µg/L	<0.05	<0.05
Ethion ^	µg/L	<0.05	<0.05
Heptachlor epoxide ^	µg/L	<0.02	<0.02
Dicofol	µg/L	<0.50	<0.50
Diazinon	µg/L	<0.01	<0.01
Chlorpyrifos ^	µg/L	<0.009	<0.009
Malathion ^	µg/L	<0.05	<0.05
Fenitrothion ^	µg/L	<0.2	<0.2
Azinphos methyl (Guthion) ^	µg/L	<0.05	<0.05
Parathion ethyl ^	µg/L	<0.01	<0.01
Methyl Parathion	µg/L	<0.010	<0.010
p-Terphenyl-d14 ^	% Recovery	23	19

CLIENT: Alluvium Consulting (Queensland)

PROJECT: Alluvium Job - NRA

Laboratory Report No: CE66955R

LABORATORY REPORT

----- Our Reference Your Reference Type of Sample Date Sampled	Units	CE66955R-1 B Water 16/03/2010	CE66955R-2 27 Water 16/03/2010	CE66955R-3 15B Water 16/03/2010
Date Extracted		24/03/2010	24/03/2010	24/03/2010
Date Analysed		24/03/2010	24/03/2010	24/03/2010
Total phenolics ^ (as phenol)	mg/L	0.006	[NA]	<0.005
Mirex	µg/L	<0.01	<0.01	<0.01
Toxaphene	µg/L	<1.0	<1.0	<1.0
Demeton S Methyl - LL	µg/L	<0.50	<0.50	<0.50
Dimethoate	µg/L	<0.15	<0.15	<0.15
Profenofos	µg/L	<0.020	<0.020	<0.020
Temephos	µg/L	<0.50	<0.50	<0.50

----- Our Reference Your Reference Type of Sample Date Sampled	Units	CE66955R-4 O Water 16/03/2010	CE66955R-5 QA Water 16/03/2010
Date Extracted		24/03/2010	24/03/2010
Date Analysed		24/03/2010	24/03/2010
Total phenolics ^ (as phenol)	mg/L	<0.005	0.006
Mirex	µg/L	<0.01	<0.01
Toxaphene	µg/L	<1.0	<1.0
Demeton S Methyl - LL	µg/L	<0.50	<0.50
Dimethoate	µg/L	<0.15	<0.15
Profenofos	µg/L	<0.020	<0.020
Temephos	µg/L	<0.50	<0.50

CLIENT: Alluvium Consulting (Queensland)

PROJECT: Alluvium Job - NRA

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LABORATORY REPORT

TEST PARAMETERS	UNITS	LOR	METHOD
Date Extracted			
Date Analysed			
Total Suspended Solids	mg/L	5	AN114
Ammonia Nitrogen NH ₃ as N	mg/L	0.005	AN280 CEA-022
Total Oxidised Nitrogen as N (NO ₂ +NO ₃)	mg/L	0.005	AN248 CEA-001
Nitrite (NO ₂) (as N)	mg/L	0.005	AN277
Nitrate (LIMS Calc)	mg/L	0.005	Calculation
Total Kjeldahl Nitrogen (as N)	mg/L	0.05	AN281 CEA-016
Total Nitrogen	mg/L	0.05	Calculation
Total Phosphorus	mg/L	0.02	AN279 CEA-015
Sulphate, SO ₄	mg/L	2	AN290
Chloride, Cl	mg/L	2	AN274
Fluoride, F	mg/L	0.05	AN141
Sodium, Na	mg/L	0.5	AN320
Potassium, K	mg/L	0.05	AN320
Calcium, Ca	mg/L	0.05	AN320
Magnesium, Mg	mg/L	0.05	AN320
Hardness (as CaCO ₃)	mg/L CaCO ₃	5	AN124
Sodium Absorption Ratio		1	R & H **
Triethylene Glycol ^	mg/L	5	Other
Triethylene Glycol ^#	mg/L	0.01	Other

CLIENT: Alluvium Consulting (Queensland)

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LABORATORY REPORT

TEST PARAMETERS	UNITS	LOR	METHOD
Date Extracted			
Date Analysed			
Total Arsenic, As	mg/L	0.003	AN320_USN
Arsenic, As	mg/L	0.003	AN320_USN
Total Boron, B	mg/L	0.002	AN320_USN
Boron, B	mg/L	0.002	AN320_USN
Total Cadmium, Cd	mg/L	0.0001	AN320_USN
Cadmium, Cd	mg/L	0.0001	AN320_USN
Total Cobalt, Co	mg/L	0.001	AN320_USN
Cobalt, Co	mg/L	0.001	AN320_USN
Total Copper, Cu	mg/L	0.001	AN320_USN
Copper, Cu	mg/L	0.001	AN320_USN
Total Mercury, Hg	mg/L	0.0001	AN312 CEI-202
Mercury, Hg (Filtered)	mg/L	0.0001	AN312 CEI-202
Total Nickel, Ni	mg/L	0.001	AN320_USN
Nickel, Ni	mg/L	0.001	AN320_USN
Total Lead, Pb	mg/L	0.001	AN320_USN
Lead, Pb	mg/L	0.001	AN320_USN
Total Selenium, Se	mg/L	0.003	AN320_USN
Selenium, Se	mg/L	0.003	AN320_USN
Total Vanadium, V	mg/L	0.005	AN318
Vanadium, V	mg/L	0.005	AN318
Total Zinc, Zn	mg/L	0.005	AN320
Zinc, Zn	mg/L	0.005	AN320

CLIENT: Alluvium Consulting (Queensland)

PROJECT: Alluvium Job - NRA

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LABORATORY REPORT

TEST PARAMETERS	UNITS	LOR	METHOD
Date Analysed			
Date Extracted			
TRH C ₆ - C ₉ P&T ^	µg/L	20	AN433
TRH C ₁₀ - C ₁₄ ^	µg/L	50	AN403
TRH C ₁₅ - C ₂₈ ^	µg/L	100	AN403
TRH C ₂₉ - C ₃₆ ^	µg/L	50	AN403
TRH Surrogate	%	0	AN403

CLIENT: Alluvium Consulting (Queensland)

PROJECT: Alluvium Job - NRA

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LABORATORY REPORT

TEST PARAMETERS	UNITS	LOR	METHOD
Date Extracted			
Date Analysed			
Benzene ^	µg/L	0.5	AN433
Toluene ^	µg/L	0.5	AN433
Ethyl Benzene ^	µg/L	0.5	AN433
<i>m/p</i> -Xylenes ^	µg/L	1	AN433
Styrene ^	µg/L	0.5	AN433
<i>o</i> -Xylene ^	µg/L	0.5	AN433
Isopropylbenzene ^	µg/L	0.5	AN433
<i>n</i> -Propylbenzene ^	µg/L	0.5	AN433
1,3,5-Trimethylbenzene ^	µg/L	0.5	AN433
<i>tert</i> -Butylbenzene ^	µg/L	0.5	AN433
1,2,4-Trimethylbenzene ^	µg/L	0.5	AN433
<i>sec</i> -Butylbenzene ^	µg/L	0.5	AN433
<i>p</i> -Isopropyltoluene ^	µg/L	0.5	AN433
<i>n</i> -Butylbenzene ^	µg/L	0.5	AN433
Dibromofluoromethane ^	%	0	AN433
Toluene- <i>d</i> 8 Surrogate 2 ^	%	0	AN433
4-Bromofluorobenzene Surrogate 3 ^	%	0	AN433

CLIENT: Alluvium Consulting (Queensland)

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LABORATORY REPORT

TEST PARAMETERS	UNITS	LOR	METHOD
Date Extracted			
Date Analysed			
Naphthalene	µg/L	0.2	AN420
2-Methylnaphthalene	µg/L	0.2	AN420
1-Methylnaphthalene	µg/L	0.2	AN420
Acenaphthylene	µg/L	0.2	AN420
Acenaphthene	µg/L	0.2	AN420
Fluorene	µg/L	0.2	AN420
Phenanthrene	µg/L	0.2	AN420
Anthracene	µg/L	0.2	AN420
Fluoranthene	µg/L	0.2	AN420
Pyrene	µg/L	0.2	AN420
Benzo[a]anthracene	µg/L	0.2	AN420
Chrysene	µg/L	0.2	AN420
Benzo[b,k]fluoranthene	µg/L	0.4	AN420
Benzo[a]pyrene ^	µg/L	0.005	AN420
Indeno[123-cd]pyrene	µg/L	0.2	AN420
Dibenzo[ah]anthracene	µg/L	0.2	AN420
Benzo[ghi]perylene	µg/L	0.2	AN420
Total PAH ^	µg/L	3	AN420
d14-p-terphenyl (Surrogate)	%		AN420

CLIENT: Alluvium Consulting (Queensland)

PROJECT: Alluvium Job - NRA

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LABORATORY REPORT

TEST PARAMETERS	UNITS	LOR	METHOD
Date Extracted			
Date Analysed			
alpha (cis-) Chlordane ^	µg/L	0.002	AN420
gamma (trans-) Chlordane ^	µg/L	0.002	AN420
p,p' - DDT ^	µg/L	0.002	AN420
Endosulfan sulphate ^	µg/L	0.005	AN420
Endrin ^	µg/L	0.004	AN420
Heptachlor ^	µg/L	0.01	AN420
Lindane ^	µg/L	0.05	AN420
Aldrin ^	µg/L	0.01	AN420
p,p' - DDE ^	µg/L	0.01	AN420
p,p' - DDD ^	µg/L	0.01	AN420
Dieldrin ^	µg/L	0.002	AN420
alpha - Endosulfan ^	µg/L	0.005	AN420
beta - Endosulfan ^	µg/L	0.005	AN420
Methoxychlor ^	µg/L	0.1	AN420
HCB ^	µg/L	0.01	AN420
alpha - BHC ^	µg/L	0.05	AN420
beta - BHC ^	µg/L	0.05	AN420
delta - BHC ^	µg/L	0.05	AN420
Endrin ketone ^	µg/L	0.05	AN420
Dichlorvos ^	µg/L	0.5	AN420
Bromophos ethyl ^	µg/L	0.05	AN420
Methidathion ^	µg/L	0.05	AN420
Ethion ^	µg/L	0.05	AN420
Heptachlor epoxide ^	µg/L	0.02	AN420
Dicofol	µg/L	0.5	AN420
Diazinon	µg/L	0.01	AN420
Chlorpyrifos ^	µg/L	0.009	AN420

CLIENT: Alluvium Consulting (Queensland)

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TEST PARAMETERS	UNITS	LOR	METHOD
Malathion ^	µg/L	0.05	AN420
Fenitrothion ^	µg/L	0.2	AN420
Azinphos methyl (Guthion) ^	µg/L	0.05	AN420
Parathion ethyl ^	µg/L	0.01	AN420
Methyl Parathion	µg/L	0.01	AN420
<i>p</i> -Terphenyl-d14 ^	% Recovery		AN420

CLIENT: Alluvium Consulting (Queensland)

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TEST PARAMETERS	UNITS	LOR	METHOD
Date Extracted			
Date Analysed			
Total phenolics ^ (as phenol)	mg/L	0.005	AN194
Mirex	µg/L	0.01	AN420
Toxaphene	µg/L	1	AN420
Demeton S Methyl - LL	µg/L	0.5	AN420
Dimethoate	µg/L	0.15	AN420
Profenofos	µg/L	0.02	AN420
Temephos	µg/L	0.5	AN420

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LABORATORY REPORT

QUALITY CONTROL	UNITS	Blank	Duplicate Sm#	Duplicate Sample Duplicate	Spike Sm#	Spike Recovery
Date Extracted		19/03/10	CE66955-1	19/03/2010 19/03/2010	Batch Spike	-
Date Analysed		19/03/10	CE66955-1	19/03/2010 19/03/2010	Batch Spike	-
Total Suspended Solids	mg/L	<5	CE66955-1	<5 [N/T]	Batch Spike	-
Ammonia Nitrogen NH ₃ as N	mg/L	<0.005	CE66955-1	0.045 [N/T]	Batch Spike	106%
Total Oxidised Nitrogen as N (NO ₂ +NO ₃)	mg/L	<0.005	CE66955-1	0.021 [N/T]	Batch Spike	-
Nitrite (NO ₂) (as N)	mg/L	<0.005	CE66955-1	<0.005 [N/T]	Batch Spike	100%
Nitrate (LIMS Calc)	mg/L	-	CE66955-1	0.021 [N/T]	Batch Spike	-
Total Kjeldahl Nitrogen (as N)	mg/L	<0.05	CE66955-1	<0.05 [N/T]	Batch Spike	106%
Total Nitrogen	mg/L	-	CE66955-1	<0.05 [N/T]	Batch Spike	-
Total Phosphorus	mg/L	<0.02	CE66955-1	<0.02 [N/T]	Batch Spike	98%
Sulphate, SO ₄	mg/L	<2	CE66955-1	<2 [N/T]	Batch Spike	100%
Chloride, Cl	mg/L	<2	CE66955-1	<2 [N/T]	Batch Spike	97%
Fluoride, F	mg/L	<0.05	CE66955-1	<0.05 <0.05	Batch Spike	-
Sodium, Na	mg/L	<0.5	CE66955-1	<0.5 <0.5	Batch Spike	96%
Potassium, K	mg/L	<0.05	CE66955-1	<0.05 <0.05	Batch Spike	103%
Calcium, Ca	mg/L	<0.05	CE66955-1	<0.05 <0.05	Batch Spike	102%
Magnesium, Mg	mg/L	<0.05	CE66955-1	<0.05 <0.05	Batch Spike	104%
Hardness (as CaCO ₃)	mg/L CaCO ₃	-	CE66955-1	<5 <5	Batch Spike	-
Sodium Absorption Ratio		-	CE66955-1	- -	Batch Spike	-
Triethylene Glycol ^^	mg/L	-	CE66955-1	<5.0 [N/T]	Batch Spike	-
Triethylene Glycol ^^#	mg/L	-	CE66955-1	<0.01 [N/T]	Batch Spike	-

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QUALITY CONTROL	UNITS	Blank	Duplicate Sm#	Duplicate Sample Duplicate	Spike Sm#	Spike Recovery
Date Extracted		19/03/10	CE66955-1	19/03/2010 19/03/2010	Batch Spike	-
Date Analysed		23/03/10	CE66955-1	23/03/2010 23/03/2010	Batch Spike	-
Total Arsenic, As	mg/L	<0.003	CE66955-1	<0.003 <0.003	Batch Spike	98%
Arsenic, As	mg/L	<0.003	CE66955-1	<0.003 <0.003	Batch Spike	98%
Total Boron, B	mg/L	<0.002	CE66955-1	<0.002 <0.002	Batch Spike	100%
Boron, B	mg/L	<0.002	CE66955-1	<0.002 <0.002	Batch Spike	100%
Total Cadmium, Cd	mg/L	<0.0001	CE66955-1	<0.0001 <0.0001	Batch Spike	102%
Cadmium, Cd	mg/L	<0.0001	CE66955-1	<0.0001 <0.0001	Batch Spike	102%
Total Cobalt, Co	mg/L	<0.0010	CE66955-1	<0.0010 <0.0010	Batch Spike	99%
Cobalt, Co	mg/L	<0.001	CE66955-1	<0.001 <0.001	Batch Spike	99%
Total Copper, Cu	mg/L	<0.001	CE66955-1	<0.001 <0.001	Batch Spike	103%
Copper, Cu	mg/L	<0.001	CE66955-1	<0.001 <0.001	Batch Spike	103%
Total Mercury, Hg	mg/L	<0.0001	CE66955-1	<0.0001 <0.0001	Batch Spike	95%
Mercury, Hg (Filtered)	mg/L	<0.0001	CE66955-1	<0.0001 <0.0001	Batch Spike	95%
Total Nickel, Ni	mg/L	<0.002	CE66955-1	<0.002 <0.002	Batch Spike	97%
Nickel, Ni	mg/L	<0.002	CE66955-1	<0.002 <0.002	Batch Spike	97%
Total Lead, Pb	mg/L	<0.001	CE66955-1	<0.001 <0.001	Batch Spike	99%
Lead, Pb	mg/L	<0.001	CE66955-1	<0.001 <0.001	Batch Spike	99%
Total Selenium, Se	mg/L	<0.003	CE66955-1	<0.003 <0.003	Batch Spike	110%
Selenium, Se	mg/L	<0.003	CE66955-1	<0.003 <0.003	Batch Spike	110%
Total Vanadium, V	mg/L	<0.005	CE66955-1	<0.005 <0.005	Batch Spike	102%
Vanadium, V	mg/L	<0.005	CE66955-1	<0.005 <0.005	Batch Spike	102%
Total Zinc, Zn	mg/L	<0.005	CE66955-1	<0.005 <0.005	Batch Spike	100%
Zinc, Zn	mg/L	<0.005	CE66955-1	<0.005 0.007	Batch Spike	100%

CLIENT: Alluvium Consulting (Queensland)

PROJECT: Alluvium Job - NRA

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LABORATORY REPORT

QUALITY CONTROL	UNITS	Blank	Duplicate Sm#	Duplicate Sample Duplicate	Spike Sm#	Spike Recovery
Date Analysed		-	[NT]	[NT]	Batch Spike	-
Date Extracted		-	[NT]	[NT]	Batch Spike	-
TRH C ₆ - C ₉ P&T ^	µg/L	<40	[NT]	[NT]	Batch Spike	91%
TRH C ₁₀ - C ₁₄ ^	µg/L	<50	[NT]	[NT]	Batch Spike	78%
TRH C ₁₅ - C ₂₈ ^	µg/L	<200	[NT]	[NT]	Batch Spike	81%
TRH C ₂₉ - C ₃₆ ^	µg/L	<200	[NT]	[NT]	Batch Spike	81%
TRH Surrogate	%	89	[NT]	[NT]	Batch Spike	81%
QUALITY CONTROL	UNITS	Blank	Duplicate Sm#	Duplicate Sample Duplicate	Spike Sm#	Spike Recovery
Date Extracted		-	[NT]	[NT]	Batch Spike	-
Date Analysed		-	[NT]	[NT]	Batch Spike	-
Benzene ^	µg/L	<0.5	[NT]	[NT]	Batch Spike	93%
Toluene ^	µg/L	<0.5	[NT]	[NT]	Batch Spike	92%
Ethyl Benzene ^	µg/L	<0.5	[NT]	[NT]	Batch Spike	115%
<i>m/p</i> -Xylenes ^	µg/L	<1.0	[NT]	[NT]	Batch Spike	-
Styrene ^	µg/L	<0.5	[NT]	[NT]	Batch Spike	-
<i>o</i> -Xylene ^	µg/L	<0.5	[NT]	[NT]	Batch Spike	-
Isopropylbenzene ^	µg/L	<0.5	[NT]	[NT]	Batch Spike	-
<i>n</i> -Propylbenzene ^	µg/L	<0.5	[NT]	[NT]	Batch Spike	-
1,3,5-Trimethylbenzene ^	µg/L	<0.5	[NT]	[NT]	Batch Spike	-
<i>tert</i> -Butylbenzene ^	µg/L	<0.5	[NT]	[NT]	Batch Spike	-
1,2,4-Trimethylbenzene ^	µg/L	<0.5	[NT]	[NT]	Batch Spike	-
<i>sec</i> -Butylbenzene ^	µg/L	<0.5	[NT]	[NT]	Batch Spike	-
<i>p</i> -Isopropyltoluene ^	µg/L	<0.5	[NT]	[NT]	Batch Spike	-
<i>n</i> -Butylbenzene ^	µg/L	<0.5	[NT]	[NT]	Batch Spike	-
Dibromofluoromethane ^	%	86	[NT]	[NT]	Batch Spike	90%
Toluene- <i>d</i> 8 Surrogate 2 ^	%	93	[NT]	[NT]	Batch Spike	95%

CLIENT: Alluvium Consulting (Queensland)

PROJECT: Alluvium Job - NRA

Laboratory Report No: CE66955R

LABORATORY REPORT

QUALITY CONTROL	UNITS	Blank	Duplicate Sm#	Duplicate Sample Duplicate	Spike Sm#	Spike Recovery
4-Bromofluorobenzene <i>Surrogate</i> 3 ^	%	93	[NT]	[NT]	Batch Spike	117%
QUALITY CONTROL	UNITS	Blank	Duplicate Sm#	Duplicate Sample Duplicate	Spike Sm#	Spike Recovery
Date Extracted		-	[NT]	[NT]	Batch Spike	-
Date Analysed		-	[NT]	[NT]	Batch Spike	-
Naphthalene	µg/L	<0.2	[NT]	[NT]	Batch Spike	98%
2-Methylnaphthalene	µg/L	<0.2	[NT]	[NT]	Batch Spike	-
1-Methylnaphthalene	µg/L	<0.2	[NT]	[NT]	Batch Spike	-
Acenaphthylene	µg/L	<0.2	[NT]	[NT]	Batch Spike	-
Acenaphthene	µg/L	<0.2	[NT]	[NT]	Batch Spike	-
Fluorene	µg/L	<0.2	[NT]	[NT]	Batch Spike	97%
Phenanthrene	µg/L	<0.2	[NT]	[NT]	Batch Spike	97%
Anthracene	µg/L	<0.2	[NT]	[NT]	Batch Spike	-
Fluoranthene	µg/L	<0.2	[NT]	[NT]	Batch Spike	-
Pyrene	µg/L	<0.2	[NT]	[NT]	Batch Spike	96%
Benzo[a]anthracene	µg/L	<0.2	[NT]	[NT]	Batch Spike	101%
Chrysene	µg/L	<0.2	[NT]	[NT]	Batch Spike	-
Benzo[b,k]fluoranthene	µg/L	<0.4	[NT]	[NT]	Batch Spike	-
Benzo[a]pyrene ^	µg/L	<0.2	[NT]	[NT]	Batch Spike	98%
Indeno[123-cd]pyrene	µg/L	<0.2	[NT]	[NT]	Batch Spike	-
Dibenzo[ah]anthracene	µg/L	<0.2	[NT]	[NT]	Batch Spike	-
Benzo[ghi]perylene	µg/L	<0.2	[NT]	[NT]	Batch Spike	-
Total PAH ^	µg/L	<3.0	[NT]	[NT]	Batch Spike	-
d14-p-terphenyl (<i>Surrogate</i>)	%	78	[NT]	[NT]	Batch Spike	84%

CLIENT: Alluvium Consulting (Queensland)

PROJECT: Alluvium Job - NRA

Laboratory Report No: CE66955R

LABORATORY REPORT

QUALITY CONTROL	UNITS	Blank	Duplicate Sm#	Duplicate Sample Duplicate	Spike Sm#	Spike Recovery
Date Extracted		-	[NT]	[NT]	Batch Spike	-
Date Analysed		-	[NT]	[NT]	Batch Spike	-
alpha (cis-) Chlordane ^	µg/L	<0.002	[NT]	[NT]	Batch Spike	98%
gamma (trans-) Chlordane ^	µg/L	<0.002	[NT]	[NT]	Batch Spike	98%
p,p' - DDT ^	µg/L	<0.002	[NT]	[NT]	Batch Spike	-
Endosulfan sulphate ^	µg/L	<0.005	[NT]	[NT]	Batch Spike	100%
Endrin ^	µg/L	<0.004	[NT]	[NT]	Batch Spike	85%
Heptachlor ^	µg/L	<0.01	[NT]	[NT]	Batch Spike	95%
Lindane ^	µg/L	<0.05	[NT]	[NT]	Batch Spike	93%
Aldrin ^	µg/L	<0.01	[NT]	[NT]	Batch Spike	94%
p,p' - DDE ^	µg/L	<0.01	[NT]	[NT]	Batch Spike	101%
p,p' - DDD ^	µg/L	<0.01	[NT]	[NT]	Batch Spike	-
Dieldrin ^	µg/L	<0.002	[NT]	[NT]	Batch Spike	93%
alpha - Endosulfan ^	µg/L	<0.005	[NT]	[NT]	Batch Spike	-
beta - Endosulfan ^	µg/L	<0.005	[NT]	[NT]	Batch Spike	-
Methoxychlor ^	µg/L	<0.10	[NT]	[NT]	Batch Spike	-
HCB ^	µg/L	<0.01	[NT]	[NT]	Batch Spike	96%
alpha - BHC ^	µg/L	<0.05	[NT]	[NT]	Batch Spike	-
beta - BHC ^	µg/L	<0.05	[NT]	[NT]	Batch Spike	-
delta - BHC ^	µg/L	<0.05	[NT]	[NT]	Batch Spike	-
Endrin ketone ^	µg/L	<0.05	[NT]	[NT]	Batch Spike	-
Dichlorvos ^	µg/L	<0.5	[NT]	[NT]	Batch Spike	-
Bromophos ethyl ^	µg/L	<0.05	[NT]	[NT]	Batch Spike	-
Methidathion ^	µg/L	<0.05	[NT]	[NT]	Batch Spike	-
Ethion ^	µg/L	<0.05	[NT]	[NT]	Batch Spike	-
Heptachlor epoxide ^	µg/L	<0.02	[NT]	[NT]	Batch Spike	95%
Dicofol	µg/L	<0.50	[NT]	[NT]	Batch Spike	-
Diazinon	µg/L	<0.01	[NT]	[NT]	Batch Spike	97%

CLIENT: Alluvium Consulting (Queensland)

PROJECT: Alluvium Job - NRA

Laboratory Report No: CE66955R

LABORATORY REPORT

QUALITY CONTROL	UNITS	Blank	Duplicate Sm#	Duplicate Sample Duplicate	Spike Sm#	Spike Recovery
Chlorpyrifos ^	µg/L	<0.009	[NT]	[NT]	Batch Spike	93%
Malathion ^	µg/L	<0.05	[NT]	[NT]	Batch Spike	-
Fenitrothion ^	µg/L	<0.2	[NT]	[NT]	Batch Spike	-
Azinphos methyl (Guthion) ^	µg/L	<0.05	[NT]	[NT]	Batch Spike	97%
Parathion ethyl ^	µg/L	<0.01	[NT]	[NT]	Batch Spike	95%
Methyl Parathion	µg/L	<0.010	[NT]	[NT]	Batch Spike	-
p-Terphenyl-d14 ^	% Recovery	78	[NT]	[NT]	Batch Spike	84%
QUALITY CONTROL	UNITS	Blank	Duplicate Sm#	Duplicate Sample Duplicate	Spike Sm#	Spike Recovery
Date Extracted		-	[NT]	[NT]	Batch Spike	-
Date Analysed		-	[NT]	[NT]	Batch Spike	-
Total phenolics ^ (as phenol)	mg/L	<0.005	[NT]	[NT]	Batch Spike	112%
Mirex	µg/L	<0.01	[NT]	[NT]	Batch Spike	-
Toxaphene	µg/L	<1.0	[NT]	[NT]	Batch Spike	-
Demeton S Methyl - LL	µg/L	<0.50	[NT]	[NT]	Batch Spike	-
Dimethoate	µg/L	<0.15	[NT]	[NT]	Batch Spike	-
Profenofos	µg/L	<0.020	[NT]	[NT]	Batch Spike	-
Temephos	µg/L	<0.50	[NT]	[NT]	Batch Spike	-

CLIENT: Alluvium Consulting (Queensland)
PROJECT: Alluvium Job - NRA

Laboratory Report No: CE66955R

LABORATORY REPORT

NOTES:

LOR - Limit of Reporting.

This test is not covered by our current NATA accreditation.

^^ This analysis was determined at our Coburg Laboratory, their reference ME102334.

Method from Rayment & Higginson - "Australian Laboratory Handbook of Soil and Water Chemical Methods".

^ This analysis was determined at our Perth Laboratory, their reference PE029341.

All samples except sample B had a low surrogate recovery because they emulsified during extraction.

Samples analysed as received.

Solid samples expressed on a dry weight basis.

Analysis Date: **Between** 17/03/10 **and** 6/05/11

SGS Terms and Conditions are available at www.au.sgs.com

Geneva Legal Comment

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ISO 17025

Unless otherwise stated the results shown in this test report only refer to the sample(s) tested and such sample(s) are only retained for 60 days only. This document cannot be reproduced except in full, without prior approval of the Company.

Laboratory ID	Client SAMPLE ID	Sample Date	Matrix			Preservation Method			Analysis Required:										Comments:			
			SOIL	WATER	OTHER	NONE	ICE	ACID	OTHER	PAH, phenol	Methylene glycol	OP Pesticides	OC Pesticides	Solids As, B, Cd, Co, Cr, Pb, Hg, Ni, V, Se, Zn	Total As, B, Cd, Co, Cr, Pb, Hg, Ni, V, Zn, Se	TPH, MAH	Ammonia, nitrate, nitrite, total nitrogen, Total Phosphorus	Sulfate, Chloride, Fluoride, hexads SS, SAR, TSS				
1	27	16/03/10	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	PEC to be analysed at 5mg/L and 0.33mg/L
2	15B	16/03/10	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	
3	9	17/03/10	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	
4	16	17/03/10	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	
5	14	17/03/10	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	
6	A7	17/03/10	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	
7	8	17/03/10	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	
8	20	16/03/10	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	
9	33	16/03/10	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	
10	17	16/03/10	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	see note that not all bottles for samples 5, 20, 33, 17 did not pass fully overnight

Company Name: **ALUMINIUM** (Sampling by NFA)
 Address: **3/62 Walker St**
P.O. Box 156, Tennantville
 Contact Name: **Anne Marie Cain, Martin Anderson, Jason Carter**
 Email address: **Jason.Carter@aluminium.com.au, anne.marie.cain@aluminium.com.au, martin.anderson@aluminium.com.au**
 Telephone: **Aluminium 4924 2170** Facsimile: _____
 NFA 4031 5124

Client Order Number: _____
 Project Name: _____
 Project Number: _____
 Laboratory Contact: _____
 Total Number of Containers/Bottles: _____
 Total Number of Samples/Sites: _____
Route NR CA10-09

Relinquished by: **[Signature]** Date: **17/03/10** Time: **12:47** Received by: **Shey Goddard** Date: **17/3/10** Time: **12:50**
 Relinquished by: _____ Date: _____ Time: _____ Received by: **[Signature]** Date: **19/3/10** Time: _____
 * Circle whichever is applicable

Sample Cooler Sealed: YES/NO* YES/NO* Correct Sample Bottles Used: YES/NO* Temperature: AMBIENT/CHILLED*
 Comments including subcontracting details: **Invoice to be sent to Jason Carter from Alluvium** Please provide client with details
 Consent given for subcontracting

Client Details

Client : Alluvium
Contact : Jason Carter
Address : 3/62 Walker St
TOWNSVILLE QLD 4870

Email : jason.carter@alluvium.com.au
Telephone : 4924 2170
Facsimile :

Project : Alluvium Job - NRA
Order Number :
Samples : 10 Waters

Laboratory Details

Laboratory : SGS Environmental Services
Manager : Jon Dicker
Address : Unit 2, 58 Comport St
Portsmouth QLD 4870

Email : Shey.Goddard@SGS.com
Telephone : 61 7 4035 5111
Facsimile : 61 7 4035 5122

Report No : **CE66983**
No. of Samples : 10
Due Date : 31/03/2010

Date Instructions Received : 19/03/2010
Sample Receipt Date : 19/03/2010
Requested By : Jason Carter

Samples received in good order	: yes	Samples received in correct containers	: yes
Samples received without headspace	: yes	Sufficient quantity supplied	: yes
Upon receipt sample temperature	: 5 degrees C	Cooling Method	: Ice
Sample containers provided by	: yes	Samples clearly Labelled	: yes
Turnaround time requested	: standard	Completed documentation received	: yes

Samples will be held for 1 month for water samples and 3 months for soil samples from date of receipt of samples, unless otherwise instructed.

Comments

To the extent not inconsistent with the other provisions of this document and unless specifically agreed otherwise in writing by SGS, all SGS services are rendered in accordance with the applicable SGS General Conditions of Service accessible at http://www.sgs.com/terms_and_conditions.htm as at the date of this document. Attention is drawn to the limitations of liability and to the clauses of indemnification.

The signed chain of custody will be returned to you with the original report.

SAMPLE RECEIPT ADVICE (SRA) - continued

Client : Alluvium
Project : Alluvium Job - NRA

Report No : CE66983

Summary of Samples and Requested Analysis

The table below represents SGS Environmental Service's interpretation of the customer supplied Chain of Custody. Please indicate ASAP if your request differs from these details.

Testing shall commence immediately as per this table, unless the customer intervenes with a correction prior to testing. Note that a lowercase x in the table below indicates some testing has not been requested in the package.

Sample No.	Description	Misc Inorganics	HM 11 - Water - ANZECC
1	27		x
2	15B		x
3	9	X	X
4	16	X	X
5	14	X	X
6	A7	X	X
7	8	X	X
8	20	X	X
9	33	X	X
10	17	X	X



LABORATORY REPORT COVERSHEET

Date: 16 April 2010

To: Alluvium Consulting (Queensland)
3 / 62 Walker St
Townsville QLD 4810

Attention: Jason Carter

Your Reference: Alluvium Job - NRA
Laboratory Report No: CE66983R

Samples Received: 19/03/2010
Samples / Quantity: 10 Waters

The above samples were received intact and analysed according to your written instructions. Unless otherwise stated, solid samples are reported on a dry weight basis and liquid samples as received.

This report cancels and supersedes the final report issued 01/04/2010 by SGS Environmental Services, Cairns.

Jon Dicker
Manager
CAIRNS

Shey Goddard
Administration Manager
CAIRNS



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CLIENT: Alluvium Consulting (Queensland)
PROJECT: Alluvium Job - NRA

Laboratory Report No: CE66983R

LABORATORY REPORT

----- Our Reference Your Reference Type of Sample Date Sampled	Units	CE66983R-3 9 Water 17/03/2010	CE66983R-4 16 Water 17/03/2010	CE66983R-5 14 Water 17/03/2010
Date Extracted		19/03/2010	19/03/2010	19/03/2010
Date Analysed		19/03/2010	19/03/2010	19/03/2010
Total Suspended Solids	mg/L	16	40	17
Chloride, Cl	mg/L	20	8	28
Sulphate, SO ₄	mg/L	10	5	9
Fluoride, F	mg/L	0.21	0.18	0.06
Ammonia Nitrogen NH ₃ as N	mg/L	0.040	0.077	0.14
Total Kjeldahl Nitrogen (as N)	mg/L	1.5	1.4	2.1
Total Oxidised Nitrogen (as N)	mg/L	0.029	0.11	0.088
Total Nitrogen	mg/L	1.5	1.5	2.2
Nitrite (NO ₂) (as N)	mg/L	<0.005	<0.005	<0.005
Nitrate (LIMS Calc)	mg/L	0.029	0.11	0.088
Total Phosphorus	mg/L	1.0	0.36	0.17
Sodium, Na	mg/L	22	23	27
Potassium, K	mg/L	9.1	5.7	5.9
Calcium, Ca	mg/L	23	9.1	2.6
Magnesium, Mg	mg/L	11	4.6	2.0
Hardness (as CaCO ₃)	mg/L CaCO ₃	100	42	15
Sodium Absorption Ratio		<1	2	3

CLIENT: Alluvium Consulting (Queensland)

PROJECT: Alluvium Job - NRA

Laboratory Report No: CE66983R

LABORATORY REPORT

----- Our Reference Your Reference Type of Sample Date Sampled	Units	CE66983R-6 A7 Water 17/03/2010	CE66983R-7 8 Water 17/03/2010	CE66983R-8 20 Water 16/03/2010
Date Extracted		19/03/2010	19/03/2010	19/03/2010
Date Analysed		19/03/2010	19/03/2010	19/03/2010
Total Suspended Solids	mg/L	15	75	17
Chloride, Cl	mg/L	24	26	22
Sulphate, SO ₄	mg/L	8	10	7
Fluoride, F	mg/L	<0.05	0.18	<0.05
Ammonia Nitrogen NH ₃ as N	mg/L	0.14	0.085	0.16
Total Kjeldahl Nitrogen (as N)	mg/L	1.8	1.3	1.4
Total Oxidised Nitrogen (as N)	mg/L	0.068	0.29	0.11
Total Nitrogen	mg/L	1.9	1.6	1.5
Nitrite (NO ₂) (as N)	mg/L	<0.005	0.018	<0.005
Nitrate (LIMS Calc)	mg/L	0.068	0.27	0.11
Total Phosphorus	mg/L	0.21	0.70	0.11
Sodium, Na	mg/L	19	19	21
Potassium, K	mg/L	5.6	8.6	3.9
Calcium, Ca	mg/L	6.1	17	2.9
Magnesium, Mg	mg/L	3.2	8.7	2.1
Hardness (as CaCO ₃)	mg/L CaCO ₃	28	78	16
Sodium Absorption Ratio		2	<1	2
Triethylene Glycol ^^	mg/L	[NA]	<5.0	<5.0
Triethylene Glycol ^^#	mg/L	[NA]	<0.01	<0.01

CLIENT: Alluvium Consulting (Queensland)

PROJECT: Alluvium Job - NRA

Laboratory Report No: CE66983R

LABORATORY REPORT

----- Our Reference Your Reference Type of Sample Date Sampled	Units	CE66983R-9 33 Water 16/03/2010	CE66983R-10 17 Water 16/03/2010
Date Extracted		19/03/2010	19/03/2010
Date Analysed		19/03/2010	19/03/2010
Total Suspended Solids	mg/L	15	160
Chloride, Cl	mg/L	14	16
Sulphate, SO ₄	mg/L	2	5
Fluoride, F	mg/L	0.07	0.09
Ammonia Nitrogen NH ₃ as N	mg/L	0.22	0.096
Total Kjeldahl Nitrogen (as N)	mg/L	1.5	1.0
Total Oxidised Nitrogen (as N)	mg/L	0.056	0.18
Total Nitrogen	mg/L	1.6	1.2
Nitrite (NO ₂) (as N)	mg/L	<0.005	<0.005
Nitrate (LIMS Calc)	mg/L	0.056	0.18
Total Phosphorus	mg/L	0.17	0.37
Sodium, Na	mg/L	17	19
Potassium, K	mg/L	7.1	4.7
Calcium, Ca	mg/L	10	11
Magnesium, Mg	mg/L	4.3	6.4
Hardness (as CaCO ₃)	mg/L CaCO ₃	43	54
Sodium Absorption Ratio		1	1
Triethylene Glycol ^	mg/L	[NA]	<5.0
Triethylene Glycol ^#	mg/L	[NA]	<0.01

CLIENT: Alluvium Consulting (Queensland)

PROJECT: Alluvium Job - NRA

Laboratory Report No: CE66983R

LABORATORY REPORT

Heavy Metals - Water ANZECC Our Reference Your Reference Type of Sample Date Sampled	Units	CE66983R-1 27 Water 16/03/2010	CE66983R-2 15B Water 16/03/2010	CE66983R-3 9 Water 17/03/2010
Date Extracted		19/03/2010	19/03/2010	19/03/2010
Date Analysed		23/03/2010	23/03/2010	23/03/2010
Total Arsenic, As	mg/L	[NA]	[NA]	<0.003
Arsenic, As	mg/L	<0.003	<0.003	<0.003
Total Boron, B	mg/L	[NA]	[NA]	0.070
Boron, B	mg/L	0.023	0.046	0.067
Total Cadmium, Cd	mg/L	[NA]	[NA]	<0.0001
Cadmium, Cd	mg/L	<0.0001	<0.0001	<0.0001
Total Cobalt, Co	mg/L	[NA]	[NA]	0.002
Cobalt, Co	mg/L	0.001	0.001	<0.001
Total Copper, Cu	mg/L	[NA]	[NA]	0.003
Copper, Cu	mg/L	0.001	0.001	0.002
Total Mercury, Hg	mg/L	[NA]	[NA]	<0.0001
Mercury, Hg (Filtered)	mg/L	<0.0001	<0.0001	<0.0001
Total Nickel, Ni	mg/L	[NA]	[NA]	0.009
Nickel, Ni	mg/L	<0.002	0.002	0.007
Total Lead, Pb	mg/L	[NA]	[NA]	0.003
Lead, Pb	mg/L	0.003	<0.001	<0.001
Total Selenium, Se	mg/L	[NA]	[NA]	<0.003
Selenium, Se	mg/L	<0.003	<0.003	<0.003
Total Vanadium, V	mg/L	[NA]	[NA]	0.012
Vanadium, V	mg/L	0.005	0.005	0.009
Total Zinc, Zn	mg/L	[NA]	[NA]	<0.005
Zinc, Zn	mg/L	0.006	0.006	<0.005

CLIENT: Alluvium Consulting (Queensland)

PROJECT: Alluvium Job - NRA

Laboratory Report No: CE66983R

LABORATORY REPORT

Heavy Metals - Water ANZECC Our Reference Your Reference Type of Sample Date Sampled	Units	CE66983R-4 16 Water 17/03/2010	CE66983R-5 14 Water 17/03/2010	CE66983R-6 A7 Water 17/03/2010
Date Extracted		19/03/2010	19/03/2010	19/03/2010
Date Analysed		23/03/2010	23/03/2010	23/03/2010
Total Arsenic, As	mg/L	<0.003	0.003	<0.003
Arsenic, As	mg/L	<0.003	<0.003	<0.003
Total Boron, B	mg/L	0.061	0.047	0.040
Boron, B	mg/L	0.057	0.042	0.035
Total Cadmium, Cd	mg/L	<0.0001	<0.0001	<0.0001
Cadmium, Cd	mg/L	<0.0001	<0.0001	<0.0001
Total Cobalt, Co	mg/L	0.005	0.008	0.004
Cobalt, Co	mg/L	<0.001	0.002	0.002
Total Copper, Cu	mg/L	0.006	0.003	0.001
Copper, Cu	mg/L	0.004	0.002	0.002
Total Mercury, Hg	mg/L	<0.0001	<0.0001	<0.0001
Mercury, Hg (Filtered)	mg/L	<0.0001	<0.0001	<0.0001
Total Nickel, Ni	mg/L	0.012	0.006	0.006
Nickel, Ni	mg/L	0.006	0.004	0.003
Total Lead, Pb	mg/L	0.001	0.004	0.001
Lead, Pb	mg/L	<0.001	0.003	<0.001
Total Selenium, Se	mg/L	<0.003	<0.003	<0.003
Selenium, Se	mg/L	<0.003	<0.003	<0.003
Total Vanadium, V	mg/L	0.017	0.013	0.012
Vanadium, V	mg/L	0.009	<0.005	0.005
Total Zinc, Zn	mg/L	0.012	0.013	0.013
Zinc, Zn	mg/L	<0.005	<0.005	<0.005

CLIENT: Alluvium Consulting (Queensland)

PROJECT: Alluvium Job - NRA

Laboratory Report No: CE66983R

LABORATORY REPORT

Heavy Metals - Water ANZECC Our Reference Your Reference Type of Sample Date Sampled	Units	CE66983R-7 8 Water 17/03/2010	CE66983R-8 20 Water 16/03/2010	CE66983R-9 33 Water 16/03/2010
Date Extracted		19/03/2010	19/03/2010	19/03/2010
Date Analysed		23/03/2010	23/03/2010	23/03/2010
Total Arsenic, As	mg/L	<0.003	0.003	<0.003
Arsenic, As	mg/L	<0.003	<0.003	<0.003
Total Boron, B	mg/L	0.056	0.048	0.044
Boron, B	mg/L	0.052	0.042	0.043
Total Cadmium, Cd	mg/L	0.0001	<0.0001	<0.0001
Cadmium, Cd	mg/L	<0.0001	<0.0001	<0.0001
Total Cobalt, Co	mg/L	0.003	0.006	0.003
Cobalt, Co	mg/L	<0.001	0.003	0.002
Total Copper, Cu	mg/L	0.004	0.001	0.001
Copper, Cu	mg/L	0.003	0.001	0.001
Total Mercury, Hg	mg/L	<0.0001	<0.0001	<0.0001
Mercury, Hg (Filtered)	mg/L	<0.0001	<0.0001	<0.0001
Total Nickel, Ni	mg/L	0.009	0.003	0.005
Nickel, Ni	mg/L	0.004	0.004	0.003
Total Lead, Pb	mg/L	0.002	0.002	0.002
Lead, Pb	mg/L	<0.001	0.002	<0.001
Total Selenium, Se	mg/L	<0.003	<0.003	<0.003
Selenium, Se	mg/L	<0.003	<0.003	<0.003
Total Vanadium, V	mg/L	0.016	0.018	0.008
Vanadium, V	mg/L	0.010	0.006	0.005
Total Zinc, Zn	mg/L	0.020	0.010	0.023
Zinc, Zn	mg/L	<0.005	<0.005	0.014

CLIENT: Alluvium Consulting (Queensland)

PROJECT: Alluvium Job - NRA

Laboratory Report No: CE66983R

LABORATORY REPORT

Heavy Metals - Water ANZECC Our Reference Your Reference Type of Sample Date Sampled	Units	CE66983R-10 17 Water 16/03/2010
Date Extracted		19/03/2010
Date Analysed		23/03/2010
Total Arsenic, As	mg/L	<0.003
Arsenic, As	mg/L	<0.003
Total Boron, B	mg/L	0.034
Boron, B	mg/L	0.025
Total Cadmium, Cd	mg/L	<0.0001
Cadmium, Cd	mg/L	<0.0001
Total Cobalt, Co	mg/L	0.005
Cobalt, Co	mg/L	<0.001
Total Copper, Cu	mg/L	0.006
Copper, Cu	mg/L	0.003
Total Mercury, Hg	mg/L	<0.0001
Mercury, Hg (Filtered)	mg/L	<0.0001
Total Nickel, Ni	mg/L	0.012
Nickel, Ni	mg/L	0.004
Total Lead, Pb	mg/L	<0.001
Lead, Pb	mg/L	<0.001
Total Selenium, Se	mg/L	<0.003
Selenium, Se	mg/L	<0.003
Total Vanadium, V	mg/L	0.023
Vanadium, V	mg/L	0.013
Total Zinc, Zn	mg/L	0.013
Zinc, Zn	mg/L	0.006

CLIENT: Alluvium Consulting (Queensland)

PROJECT: Alluvium Job - NRA

Laboratory Report No: CE66983R

LABORATORY REPORT

TRH (waters) Our Reference Your Reference Type of Sample Date Sampled	Units	CE66983R-3 9 Water 17/03/2010	CE66983R-4 16 Water 17/03/2010	CE66983R-5 14 Water 17/03/2010
Date Analysed ^		23/03/2010	23/03/2010	23/03/2010
Date Extracted ^		24/03/2010	24/03/2010	24/03/2010
TRH C ₆ - C ₉ ^	µg/L	<20	<20	<20
TRH C ₁₀ - C ₁₄ ^	µg/L	<50	<50	<50
TRH C ₁₅ - C ₂₈ ^	µg/L	<100	<100	<100
TRH C ₂₉ - C ₃₆ ^	µg/L	<50	<50	<50

TRH (waters) Our Reference Your Reference Type of Sample Date Sampled	Units	CE66983R-6 A7 Water 17/03/2010	CE66983R-7 8 Water 17/03/2010	CE66983R-8 20 Water 16/03/2010
Date Analysed ^		23/03/2010	23/03/2010	23/03/2010
Date Extracted ^		24/03/2010	24/03/2010	24/03/2010
TRH C ₆ - C ₉ ^	µg/L	<20	<20	<20
TRH C ₁₀ - C ₁₄ ^	µg/L	<50	<50	<50
TRH C ₁₅ - C ₂₈ ^	µg/L	<100	<100	<100
TRH C ₂₉ - C ₃₆ ^	µg/L	<50	<50	<50

CLIENT: Alluvium Consulting (Queensland)

PROJECT: Alluvium Job - NRA

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LABORATORY REPORT

TRH (waters) Our Reference Your Reference Type of Sample Date Sampled	Units	CE66983R-9 33 Water 16/03/2010	CE66983R-10 17 Water 16/03/2010
Date Analysed ^		23/03/2010	23/03/2010
Date Extracted ^		24/03/2010	24/03/2010
TRH C ₆ - C ₉ ^	µg/L	<20	<20
TRH C ₁₀ - C ₁₄ ^	µg/L	<50	<50
TRH C ₁₅ - C ₂₈ ^	µg/L	<100	<100
TRH C ₂₉ - C ₃₆ ^	µg/L	<50	<50

CLIENT: Alluvium Consulting (Queensland)

PROJECT: Alluvium Job - NRA

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LABORATORY REPORT

VOC - MAH - PERTH Our Reference Your Reference Type of Sample Date Sampled	Units	CE66983R-3 9 Water 17/03/2010	CE66983R-4 16 Water 17/03/2010	CE66983R-5 14 Water 17/03/2010
Date Extracted (BTEX) ^		25/03/2010	25/03/2010	25/03/2010
Date Analysed (BTEX) ^		25/03/2010	25/03/2010	25/03/2010
Benzene ^	µg/L	<0.5	<0.5	<0.5
Toluene ^	µg/L	<0.5	<0.5	<0.5
Ethyl Benzene ^	µg/L	<0.5	<0.5	<0.5
<i>m/p</i> -Xylenes ^	µg/L	<1.0	<1.0	<1.0
Styrene ^	µg/L	<0.5	<0.5	<0.5
<i>o</i> -Xylene ^	µg/L	<0.5	<0.5	<0.5
Isopropylbenzene ^	µg/L	<0.5	<0.5	<0.5
<i>n</i> -Propylbenzene ^	µg/L	<0.5	<0.5	<0.5
1,3,5-Trimethylbenzene ^	µg/L	<0.5	<0.5	<0.5
<i>tert</i> -Butylbenzene ^	µg/L	<0.5	<0.5	<0.5
1,2,4-Trimethylbenzene ^	µg/L	<0.5	<0.5	<0.5
<i>sec</i> -Butylbenzene ^	µg/L	<0.5	<0.5	<0.5
<i>p</i> -Isopropyltoluene ^	µg/L	<0.5	<0.5	<0.5
<i>n</i> -Butylbenzene ^	µg/L	<0.5	<0.5	<0.5
Dibromofluoromethane ^	%	85	85	84
Toluene- <i>d8</i> Surrogate 2 ^	%	92	86	89
4-Bromofluorobenzene Surrogate 3 ^	%	95	97	91

CLIENT: Alluvium Consulting (Queensland)

PROJECT: Alluvium Job - NRA

Laboratory Report No: CE66983R

LABORATORY REPORT

VOC - MAH - PERTH Our Reference Your Reference Type of Sample Date Sampled	Units	CE66983R-6 A7 Water 17/03/2010	CE66983R-7 8 Water 17/03/2010	CE66983R-8 20 Water 16/03/2010
Date Extracted (BTEX) ^		25/03/2010	25/03/2010	25/03/2010
Date Analysed (BTEX) ^		25/03/2010	25/03/2010	25/03/2010
Benzene ^	µg/L	<0.5	<0.5	<0.5
Toluene ^	µg/L	<0.5	<0.5	<0.5
Ethyl Benzene ^	µg/L	<0.5	<0.5	<0.5
<i>m/p</i> -Xylenes ^	µg/L	<1.0	<1.0	<1.0
Styrene ^	µg/L	<0.5	<0.5	<0.5
<i>o</i> -Xylene ^	µg/L	<0.5	<0.5	<0.5
Isopropylbenzene ^	µg/L	<0.5	<0.5	<0.5
<i>n</i> -Propylbenzene ^	µg/L	<0.5	<0.5	<0.5
1,3,5-Trimethylbenzene ^	µg/L	<0.5	<0.5	<0.5
<i>tert</i> -Butylbenzene ^	µg/L	<0.5	<0.5	<0.5
1,2,4-Trimethylbenzene ^	µg/L	<0.5	<0.5	<0.5
<i>sec</i> -Butylbenzene ^	µg/L	<0.5	<0.5	<0.5
<i>p</i> -Isopropyltoluene ^	µg/L	<0.5	<0.5	<0.5
<i>n</i> -Butylbenzene ^	µg/L	<0.5	<0.5	<0.5
Dibromofluoromethane ^	%	82	96	78
Toluene- <i>d8</i> Surrogate 2 ^	%	85	97	83
4-Bromofluorobenzene Surrogate 3 ^	%	89	103	90

CLIENT: Alluvium Consulting (Queensland)

PROJECT: Alluvium Job - NRA

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LABORATORY REPORT

VOC - MAH - PERTH Our Reference Your Reference Type of Sample Date Sampled	Units	CE66983R-9 33 Water 16/03/2010	CE66983R-10 17 Water 16/03/2010
Date Extracted (BTEX) ^		25/03/2010	25/03/2010
Date Analysed (BTEX) ^		25/03/2010	25/03/2010
Benzene ^	µg/L	<0.5	<0.5
Toluene ^	µg/L	<0.5	<0.5
Ethyl Benzene ^	µg/L	<0.5	<0.5
<i>m/p</i> -Xylenes ^	µg/L	<1.0	<1.0
Styrene ^	µg/L	<0.5	<0.5
<i>o</i> -Xylene ^	µg/L	<0.5	<0.5
Isopropylbenzene ^	µg/L	<0.5	<0.5
<i>n</i> -Propylbenzene ^	µg/L	<0.5	<0.5
1,3,5-Trimethylbenzene ^	µg/L	<0.5	<0.5
<i>tert</i> -Butylbenzene ^	µg/L	<0.5	<0.5
1,2,4-Trimethylbenzene ^	µg/L	<0.5	<0.5
<i>sec</i> -Butylbenzene ^	µg/L	<0.5	<0.5
<i>p</i> -Isopropyltoluene ^	µg/L	<0.5	<0.5
<i>n</i> -Butylbenzene ^	µg/L	<0.5	<0.5
Dibromofluoromethane ^	%	91	87
Toluene- <i>d8</i> Surrogate 2 ^	%	97	89
4-Bromofluorobenzene Surrogate 3 ^	%	100	95

CLIENT: Alluvium Consulting (Queensland)

PROJECT: Alluvium Job - NRA

Laboratory Report No: CE66983R

LABORATORY REPORT

Organochlorine Pest LL - Perth Our Reference Your Reference Type of Sample Date Sampled	Units	CE66983R-7 8 Water 17/03/2010	CE66983R-8 20 Water 16/03/2010	CE66983R-10 17 Water 16/03/2010
Date Extracted ^		23/03/2010	23/03/2010	23/03/2010
Date Analysed ^		26/03/2010	26/03/2010	26/03/2010
alpha (cis-) Chlordane ^	µg/L	<0.002	<0.002	<0.002
gamma (trans-) Chlordane ^	µg/L	<0.002	<0.002	<0.002
p,p' - DDT ^	µg/L	<0.002	<0.002	<0.002
Endosulfan sulphate ^	µg/L	<0.005	<0.005	<0.005
Endrin ^	µg/L	<0.004	<0.004	<0.004
Heptachlor ^	µg/L	<0.01	<0.01	<0.01
Lindane ^	µg/L	<0.05	<0.05	<0.05
Aldrin ^	µg/L	<0.01	<0.01	<0.01
p,p' - DDE ^	µg/L	<0.01	<0.01	<0.01
p,p' - DDD ^	µg/L	<0.01	<0.01	<0.01
Dieldrin ^	µg/L	<0.002	<0.002	<0.002
alpha - Endosulfan ^	µg/L	<0.005	<0.005	<0.005
beta - Endosulfan ^	µg/L	<0.005	<0.005	<0.005
Methoxychlor ^	µg/L	<0.10	<0.10	<0.10
HCB ^	µg/L	<0.01	<0.01	<0.01
alpha - BHC ^	µg/L	<0.05	<0.05	<0.05
beta - BHC ^	µg/L	<0.05	<0.05	<0.05
delta - BHC ^	µg/L	<0.05	<0.05	<0.05
Endrin ketone ^	µg/L	<0.05	<0.05	<0.05
Dichlorvos ^	µg/L	<0.5	<0.5	<0.5
Bromophos ethyl ^	µg/L	<0.05	<0.05	<0.05
Methidathion ^	µg/L	<0.05	<0.05	<0.05
Ethion ^	µg/L	<0.05	<0.05	<0.05
Heptachlor epoxide ^	µg/L	<0.02	<0.02	<0.02
Dicofol ^	µg/L	<0.50	<0.50	<0.50
Diazinon ^	µg/L	<0.01	<0.01	<0.01

CLIENT: Alluvium Consulting (Queensland)

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LABORATORY REPORT

Organochlorine Pest LL - Perth Our Reference Your Reference Type of Sample Date Sampled	Units	CE66983R-7 8 Water 17/03/2010	CE66983R-8 20 Water 16/03/2010	CE66983R-10 17 Water 16/03/2010
Chlorpyrifos ^	µg/L	<0.009	<0.009	<0.009
Malathion ^	µg/L	<0.05	<0.05	<0.05
Fenitrothion ^	µg/L	<0.2	<0.2	<0.2
Azinphos methyl (Guthion) ^	µg/L	<0.05	<0.05	<0.05
Parathion ethyl ^	µg/L	<0.01	<0.01	<0.01
Methyl Parathion ^	µg/L	<0.01	<0.01	<0.01
p-Terphenyl-d14 ^	% Recovery	16	5.0	8.0

CLIENT: Alluvium Consulting (Queensland)

PROJECT: Alluvium Job - NRA

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LABORATORY REPORT

PAHs Our Reference Your Reference Type of Sample Date Sampled	Units	CE66983R-7 8 Water 17/03/2010	CE66983R-10 17 Water 16/03/2010
Date Extracted ^		23/03/2010	23/03/2010
Date Analysed ^		26/03/2010	26/03/2010
Naphthalene ^	µg/L	<0.2	<0.2
2-Methylnaphthalene ^	µg/L	<0.2	<0.2
1-Methylnaphthalene ^	µg/L	<0.2	<0.2
Acenaphthylene ^	µg/L	<0.2	<0.2
Acenaphthene ^	µg/L	<0.2	<0.2
Fluorene ^	µg/L	<0.2	<0.2
Phenanthrene ^	µg/L	<0.2	<0.2
Anthracene ^	µg/L	<0.2	<0.2
Fluoranthene ^	µg/L	<0.2	<0.2
Pyrene ^	µg/L	<0.2	<0.2
Benzo[a]anthracene ^	µg/L	<0.2	<0.2
Chrysene ^	µg/L	<0.2	<0.2
Benzo[b,k]fluoranthene ^	µg/L	<0.4	<0.4
Benzo[a]pyrene ^	µg/L	<0.005	<0.005
Indeno[123-cd]pyrene ^	µg/L	<0.2	<0.2
Dibenzo[ah]anthracene ^	µg/L	<0.2	<0.2
Benzo[ghi]perylene ^	µg/L	<0.2	<0.2
Total PAH ^	µg/L	<3.0	<3.0
d14-p-terphenyl (Surrogate)^	%	16	8.0

CLIENT: Alluvium Consulting (Queensland)

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LABORATORY REPORT

----- Our Reference Your Reference Type of Sample Date Sampled	Units	CE66983R-7 8 Water 17/03/2010	CE66983R-8 20 Water 16/03/2010	CE66983R-10 17 Water 16/03/2010
Date Extracted		24/03/2010	24/03/2010	24/03/2010
Date Analysed		24/03/2010	24/03/2010	24/03/2010
Total phenolics ^ (as phenol)	mg/L	0.02	[NA]	0.007
Mirex ^	µg/L	<0.01	<0.01	<0.01
Toxaphene ^	µg/L	<1.0	<1.0	<1.0
Demeton S Methyl - LL	µg/L	<0.50	<0.50	<0.50
Dimethoate ^	µg/L	<0.15	<0.15	<0.15
Profenofos ^	µg/L	<0.020	<0.020	<0.020
Temephos ^	µg/L	<0.50	<0.50	<0.50

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TEST PARAMETERS	UNITS	LOR	METHOD
Date Extracted			
Date Analysed			
Total Suspended Solids	mg/L	5	AN114 CEI-016
Chloride, Cl	mg/L	2	AN274 CEA-020
Sulphate, SO ₄	mg/L	2	AN275 CEA-021
Fluoride, F	mg/L	0.05	AN141
Ammonia Nitrogen NH ₃ as N	mg/L	0.005	AN280 CEA-022
Total Kjeldahl Nitrogen (as N)	mg/L	0.05	AN281 CEA-016
Total Oxidised Nitrogen (as N)	mg/L	0.005	AN248 CEA-001
Total Nitrogen	mg/L	0.05	Calculation
Nitrite (NO ₂) (as N)	mg/L	0.005	AN277 CEA-019
Nitrate (LIMS Calc)	mg/L	0.005	Calculation
Total Phosphorus	mg/L	0.02	AN279 CEA-015
Sodium, Na	mg/L	0.5	AN320
Potassium, K	mg/L	0.05	AN320
Calcium, Ca	mg/L	0.05	AN320
Magnesium, Mg	mg/L	0.05	AN320
Hardness (as CaCO ₃)	mg/L CaCO ₃	5	AN124
Sodium Absorption Ratio		1	R & H ##
Triethylene Glycol ^^	mg/L	5	Other
Triethylene Glycol ^^#	mg/L	0.01	Other

CLIENT: Alluvium Consulting (Queensland)

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TEST PARAMETERS	UNITS	LOR	METHOD
Date Extracted			
Date Analysed			
Total Arsenic, As	mg/L	0.003	AN320_USN
Arsenic, As	mg/L	0.003	AN320_USN
Total Boron, B	mg/L	0.002	AN320_USN
Boron, B	mg/L	0.002	AN320_USN
Total Cadmium, Cd	mg/L	0.0001	AN320_USN
Cadmium, Cd	mg/L	0.0001	AN320_USN
Total Cobalt, Co	mg/L	0.001	AN320_USN
Cobalt, Co	mg/L	0.001	AN320_USN
Total Copper, Cu	mg/L	0.001	AN320_USN
Copper, Cu	mg/L	0.001	AN320_USN
Total Mercury, Hg	mg/L	0.0001	AN312 CEI-202
Mercury, Hg (Filtered)	mg/L	0.0001	AN312 CEI-202
Total Nickel, Ni	mg/L	0.002	AN320_USN
Nickel, Ni	mg/L	0.002	AN320_USN
Total Lead, Pb	mg/L	0.001	AN320_USN
Lead, Pb	mg/L	0.001	AN320_USN
Total Selenium, Se	mg/L	0.003	AN320_USN
Selenium, Se	mg/L	0.003	AN320_USN
Total Vanadium, V	mg/L	0.005	AN318
Vanadium, V	mg/L	0.005	AN318
Total Zinc, Zn	mg/L	0.005	AN320
Zinc, Zn	mg/L	0.005	AN320

CLIENT: Alluvium Consulting (Queensland)

PROJECT: Alluvium Job - NRA

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TEST PARAMETERS	UNITS	LOR	METHOD
Date Analysed ^			
Date Extracted ^			
TRH C ₆ - C ₉ ^	µg/L	20	AN403
TRH C ₁₀ - C ₁₄ ^	µg/L	50	AN403
TRH C ₁₅ - C ₂₈ ^	µg/L	100	AN403
TRH C ₂₉ - C ₃₆ ^	µg/L	50	AN403
TRH Surrogate	%	0	AN403

CLIENT: Alluvium Consulting (Queensland)

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LABORATORY REPORT

TEST PARAMETERS	UNITS	LOR	METHOD
Date Extracted (BTEX) ^			
Date Analysed (BTEX) ^			
Benzene ^	µg/L	0.5	AN433
Toluene ^	µg/L	0.5	AN433
Ethyl Benzene ^	µg/L	0.5	AN433
<i>m/p</i> -Xylenes ^	µg/L	1	AN433
Styrene ^	µg/L	0.5	AN433
<i>o</i> -Xylene ^	µg/L	0.5	AN433
Isopropylbenzene ^	µg/L	0.5	AN433
<i>n</i> -Propylbenzene ^	µg/L	0.5	AN433
1,3,5-Trimethylbenzene ^	µg/L	0.5	AN433
<i>tert</i> -Butylbenzene ^	µg/L	0.5	AN433
1,2,4-Trimethylbenzene ^	µg/L	0.5	AN433
<i>sec</i> -Butylbenzene ^	µg/L	0.5	AN433
<i>p</i> -Isopropyltoluene ^	µg/L	0.5	AN433
<i>n</i> -Butylbenzene ^	µg/L	0.5	AN433
Dibromofluoromethane ^	%	0	AN433
Toluene- <i>d8</i> Surrogate 2 ^	%	0	AN433
4-Bromofluorobenzene Surrogate 3 ^	%	0	AN433

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TEST PARAMETERS	UNITS	LOR	METHOD
Date Extracted ^			
Date Analysed ^			
alpha (cis-) Chlordane ^	µg/L	0.002	AN420
gamma (trans-) Chlordane ^	µg/L	0.002	AN420
p,p' - DDT ^	µg/L	0.002	AN420
Endosulfan sulphate ^	µg/L	0.005	AN420
Endrin ^	µg/L	0.004	AN420
Heptachlor ^	µg/L	0.01	AN420
Lindane ^	µg/L	0.05	AN420
Aldrin ^	µg/L	0.01	AN420
p,p' - DDE ^	µg/L	0.01	AN420
p,p' - DDD ^	µg/L	0.01	AN420
Dieldrin ^	µg/L	0.002	AN420
alpha - Endosulfan ^	µg/L	0.005	AN420
beta - Endosulfan ^	µg/L	0.005	AN420
Methoxychlor ^	µg/L	0.1	AN420
HCB ^	µg/L	0.01	AN420
alpha - BHC ^	µg/L	0.05	AN420
beta - BHC ^	µg/L	0.05	AN420
delta - BHC ^	µg/L	0.05	AN420
Endrin ketone ^	µg/L	0.05	AN420
Dichlorvos ^	µg/L	0.5	AN420
Bromophos ethyl ^	µg/L	0.05	AN420
Methidathion ^	µg/L	0.05	AN420
Ethion ^	µg/L	0.05	AN420
Heptachlor epoxide ^	µg/L	0.02	AN420
Dicofol ^	µg/L	0.5	AN420
Diazinon ^	µg/L	0.01	AN420
Chlorpyrifos ^	µg/L	0.009	AN420

CLIENT: Alluvium Consulting (Queensland)

PROJECT: Alluvium Job - NRA

Laboratory Report No: CE66983R

LABORATORY REPORT

TEST PARAMETERS	UNITS	LOR	METHOD
Malathion ^	µg/L	0.05	AN420
Fenitrothion ^	µg/L	0.2	AN420
Azinphos methyl (Guthion) ^	µg/L	0.05	AN420
Parathion ethyl ^	µg/L	0.01	AN420
Methyl Parathion ^	µg/L	0.01	AN420
p-Terphenyl-d14 ^	% Recovery		AN420

CLIENT: Alluvium Consulting (Queensland)

PROJECT: Alluvium Job - NRA

Laboratory Report No: CE66983R

LABORATORY REPORT

TEST PARAMETERS	UNITS	LOR	METHOD
Date Extracted ^			
Date Analysed ^			
Naphthalene ^	µg/L	0.2	AN420
2-Methylnaphthalene ^	µg/L	0.2	AN420
1-Methylnaphthalene ^	µg/L	0.2	AN420
Acenaphthylene ^	µg/L	0.2	AN420
Acenaphthene ^	µg/L	0.2	AN420
Fluorene ^	µg/L	0.2	AN420
Phenanthrene ^	µg/L	0.2	AN420
Anthracene ^	µg/L	0.2	AN420
Fluoranthene ^	µg/L	0.2	AN420
Pyrene ^	µg/L	0.2	AN420
Benzo[a]anthracene ^	µg/L	0.2	AN420
Chrysene ^	µg/L	0.2	AN420
Benzo[b,k]fluoranthene ^	µg/L	0.4	AN420
Benzo[a]pyrene ^	µg/L	0.005	AN420
Indeno[123-cd]pyrene ^	µg/L	0.2	AN420
Dibenzo[ah]anthracene ^	µg/L	0.2	AN420
Benzo[ghi]perylene ^	µg/L	0.2	AN420
Total PAH ^	µg/L	3	AN420
d14-p-terphenyl (Surrogate)^	%		AN420

CLIENT: Alluvium Consulting (Queensland)

PROJECT: Alluvium Job - NRA

Laboratory Report No: CE66983R

LABORATORY REPORT

TEST PARAMETERS	UNITS	LOR	METHOD
Date Extracted			
Date Analysed			
Total phenolics ^ (as phenol)	mg/L	0.005	AN194
Mirex ^	µg/L	0.01	AN420
Toxaphene ^	µg/L	1	AN420
Demeton S Methyl - LL	µg/L	0.5	AN420
Dimethoate ^	µg/L	0.15	AN420
Profenofos ^	µg/L	0.02	AN420
Temephos ^	µg/L	0.5	AN420

CLIENT: Alluvium Consulting (Queensland)

PROJECT: Alluvium Job - NRA

Laboratory Report No: CE66983R

LABORATORY REPORT

QUALITY CONTROL	UNITS	Blank	Duplicate Sm#	Duplicate Sample Duplicate	Spike Sm#	Spike Recovery
Date Extracted		19/03/10	[NT]	[NT]	Batch Spike	-
Date Analysed		19/03/10	[NT]	[NT]	Batch Spike	-
Total Suspended Solids	mg/L	<5	[NT]	[NT]	Batch Spike	-
Chloride, Cl	mg/L	<2	[NT]	[NT]	Batch Spike	-
Sulphate, SO ₄	mg/L	<2	[NT]	[NT]	Batch Spike	-
Fluoride, F	mg/L	<0.05	[NT]	[NT]	Batch Spike	-
Ammonia Nitrogen NH ₃ as N	mg/L	<0.005	[NT]	[NT]	Batch Spike	109%
Total Kjeldahl Nitrogen (as N)	mg/L	<0.05	[NT]	[NT]	Batch Spike	99%
Total Oxidised Nitrogen (as N)	mg/L	<0.005	[NT]	[NT]	Batch Spike	99%
Total Nitrogen	mg/L	-	[NT]	[NT]	Batch Spike	-
Nitrite (NO ₂) (as N)	mg/L	<0.005	[NT]	[NT]	Batch Spike	-
Nitrate (LIMS Calc)	mg/L	-	[NT]	[NT]	Batch Spike	-
Total Phosphorus	mg/L	<0.02	[NT]	[NT]	Batch Spike	-
Sodium, Na	mg/L	<0.50	[NT]	[NT]	Batch Spike	102%
Potassium, K	mg/L	<0.05	[NT]	[NT]	Batch Spike	103%
Calcium, Ca	mg/L	<0.05	[NT]	[NT]	Batch Spike	102%
Magnesium, Mg	mg/L	<0.05	[NT]	[NT]	Batch Spike	104%
Hardness (as CaCO ₃)	mg/L CaCO ₃	-	[NT]	[NT]	Batch Spike	-
Sodium Absorption Ratio		-	[NT]	[NT]	Batch Spike	-
Triethylene Glycol ^^	mg/L	-	[NT]	[NT]	Batch Spike	-
Triethylene Glycol ^^#	mg/L	-	[NT]	[NT]	Batch Spike	-

CLIENT: Alluvium Consulting (Queensland)

PROJECT: Alluvium Job - NRA

Laboratory Report No: CE66983R

LABORATORY REPORT

QUALITY CONTROL	UNITS	Blank	Duplicate Sm#	Duplicate Sample Duplicate	Spike Sm#	Spike Recovery
Date Extracted		19/03/10	CE66983-1	19/03/2010 19/03/2010	Batch Spike	-
Date Analysed		23/03/10	CE66983-1	23/03/2010 23/03/2010	Batch Spike	-
Total Arsenic, As	mg/L	<0.003	[NT]	[NT]	Batch Spike	98%
Arsenic, As	mg/L	<0.003	CE66983-1	<0.003 <0.003	Batch Spike	98%
Total Boron, B	mg/L	<0.002	[NT]	[NT]	Batch Spike	100%
Boron, B	mg/L	<0.002	CE66983-1	0.023 0.022 RPD: 4	Batch Spike	100%
Total Cadmium, Cd	mg/L	<0.0001	[NT]	[NT]	Batch Spike	102%
Cadmium, Cd	mg/L	<0.0001	CE66983-1	<0.0001 <0.0001	Batch Spike	102%
Total Cobalt, Co	mg/L	<0.001	[NT]	[NT]	Batch Spike	99%
Cobalt, Co	mg/L	<0.001	CE66983-1	0.001 0.001 RPD: 0	Batch Spike	99%
Total Copper, Cu	mg/L	<0.001	[NT]	[NT]	Batch Spike	103%
Copper, Cu	mg/L	<0.001	CE66983-1	0.001 0.001 RPD: 0	Batch Spike	103%
Total Mercury, Hg	mg/L	<0.0001	[NT]	[NT]	Batch Spike	95%
Mercury, Hg (Filtered)	mg/L	<0.0001	CE66983-1	<0.0001 <0.0001	Batch Spike	95%
Total Nickel, Ni	mg/L	<0.002	[NT]	[NT]	Batch Spike	97%
Nickel, Ni	mg/L	<0.002	CE66983-1	<0.002 <0.002	Batch Spike	97%
Total Lead, Pb	mg/L	<0.001	[NT]	[NT]	Batch Spike	99%
Lead, Pb	mg/L	<0.001	CE66983-1	0.003 0.004 RPD: 29	Batch Spike	99%
Total Selenium, Se	mg/L	<0.003	[NT]	[NT]	Batch Spike	110%
Selenium, Se	mg/L	<0.003	CE66983-1	<0.003 <0.003	Batch Spike	110%
Total Vanadium, V	mg/L	<0.005	[NT]	[NT]	Batch Spike	102%
Vanadium, V	mg/L	<0.005	CE66983-1	0.005 0.005 RPD: 0	Batch Spike	102%
Total Zinc, Zn	mg/L	<0.005	[NT]	[NT]	Batch Spike	100%

CLIENT: Alluvium Consulting (Queensland)

PROJECT: Alluvium Job - NRA

Laboratory Report No: CE66983R

LABORATORY REPORT

QUALITY CONTROL	UNITS	Blank	Duplicate Sm#	Duplicate Sample Duplicate	Spike Sm#	Spike Recovery
Zinc, Zn	mg/L	<0.005	CE66983-1	0.006 0.005 RPD: 18	Batch Spike	100%
QUALITY CONTROL	UNITS	Blank	Duplicate Sm#	Duplicate Sample Duplicate	Spike Sm#	Spike Recovery
Date Analysed ^		-	[NT]	[NT]	Batch Spike	-
Date Extracted ^		-	[NT]	[NT]	Batch Spike	-
TRH C ₆ - C ₉ ^	µg/L	<20	[NT]	[NT]	Batch Spike	93%
TRH C ₁₀ - C ₁₄ ^	µg/L	<50	[NT]	[NT]	Batch Spike	80%
TRH C ₁₅ - C ₂₈ ^	µg/L	<100	[NT]	[NT]	Batch Spike	86%
TRH C ₂₉ - C ₃₆ ^	µg/L	<50	[NT]	[NT]	Batch Spike	88%
TRH Surrogate	%	92	[NT]	[NT]	Batch Spike	81%
QUALITY CONTROL	UNITS	Blank	Duplicate Sm#	Duplicate Sample Duplicate	Spike Sm#	Spike Recovery
Date Extracted (BTEX) ^		-	[NT]	[NT]	Batch Spike	-
Date Analysed (BTEX) ^		-	[NT]	[NT]	Batch Spike	-
Benzene ^	µg/L	<0.5	[NT]	[NT]	Batch Spike	93%
Toluene ^	µg/L	<0.5	[NT]	[NT]	Batch Spike	92%
Ethyl Benzene ^	µg/L	<0.5	[NT]	[NT]	Batch Spike	115%
<i>m/p</i> -Xylenes ^	µg/L	<1.0	[NT]	[NT]	Batch Spike	-
Styrene ^	µg/L	<0.5	[NT]	[NT]	Batch Spike	-
<i>o</i> -Xylene ^	µg/L	<0.5	[NT]	[NT]	Batch Spike	-
Isopropylbenzene ^	µg/L	<0.5	[NT]	[NT]	Batch Spike	-
<i>n</i> -Propylbenzene ^	µg/L	<0.5	[NT]	[NT]	Batch Spike	-
1,3,5-Trimethylbenzene ^	µg/L	<0.5	[NT]	[NT]	Batch Spike	-
<i>tert</i> -Butylbenzene ^	µg/L	<0.5	[NT]	[NT]	Batch Spike	-
1,2,4-Trimethylbenzene ^	µg/L	<0.5	[NT]	[NT]	Batch Spike	-
<i>sec</i> -Butylbenzene ^	µg/L	<0.5	[NT]	[NT]	Batch Spike	-

CLIENT: Alluvium Consulting (Queensland)

PROJECT: Alluvium Job - NRA

Laboratory Report No: CE66983R

LABORATORY REPORT

QUALITY CONTROL	UNITS	Blank	Duplicate Sm#	Duplicate Sample Duplicate	Spike Sm#	Spike Recovery
<i>p</i> -Isopropyltoluene ^	µg/L	<0.5	[NT]	[NT]	Batch Spike	-
<i>n</i> -Butylbenzene ^	µg/L	<0.5	[NT]	[NT]	Batch Spike	-
Dibromofluoromethane^	%	87	[NT]	[NT]	Batch Spike	90%
Toluene- <i>d</i> 8 Surrogate 2^	%	96	[NT]	[NT]	Batch Spike	95%
4-Bromofluorobenzene Surrogate 3 ^	%	98	[NT]	[NT]	Batch Spike	117%
QUALITY CONTROL	UNITS	Blank	Duplicate Sm#	Duplicate Sample Duplicate	Spike Sm#	Spike Recovery
Date Extracted ^		-	[NT]	[NT]	Batch Spike	-
Date Analysed ^		-	[NT]	[NT]	Batch Spike	-
alpha (cis-) Chlordane ^	µg/L	<0.002	[NT]	[NT]	Batch Spike	98%
gamma (trans-) Chlordane ^	µg/L	<0.002	[NT]	[NT]	Batch Spike	98%
<i>p,p'</i> - DDT ^	µg/L	<0.002	[NT]	[NT]	Batch Spike	-
Endosulfan sulphate ^	µg/L	<0.005	[NT]	[NT]	Batch Spike	100%
Endrin ^	µg/L	<0.004	[NT]	[NT]	Batch Spike	85%
Heptachlor ^	µg/L	<0.01	[NT]	[NT]	Batch Spike	95%
Lindane ^	µg/L	<0.05	[NT]	[NT]	Batch Spike	93%
Aldrin ^	µg/L	<0.01	[NT]	[NT]	Batch Spike	95%
<i>p,p'</i> - DDE ^	µg/L	<0.01	[NT]	[NT]	Batch Spike	101%
<i>p,p'</i> - DDD ^	µg/L	<0.01	[NT]	[NT]	Batch Spike	-
Dieldrin ^	µg/L	<0.002	[NT]	[NT]	Batch Spike	93%
alpha - Endosulfan ^	µg/L	<0.005	[NT]	[NT]	Batch Spike	-
beta - Endosulfan ^	µg/L	<0.005	[NT]	[NT]	Batch Spike	-
Methoxychlor ^	µg/L	<0.10	[NT]	[NT]	Batch Spike	-
HCB ^	µg/L	<0.01	[NT]	[NT]	Batch Spike	96%
alpha - BHC ^	µg/L	<0.05	[NT]	[NT]	Batch Spike	-
beta - BHC ^	µg/L	<0.05	[NT]	[NT]	Batch Spike	-
delta - BHC ^	µg/L	<0.05	[NT]	[NT]	Batch Spike	-

CLIENT: Alluvium Consulting (Queensland)

PROJECT: Alluvium Job - NRA

Laboratory Report No: CE66983R

LABORATORY REPORT

QUALITY CONTROL	UNITS	Blank	Duplicate Sm#	Duplicate Sample Duplicate	Spike Sm#	Spike Recovery
Endrin ketone ^	µg/L	<0.05	[NT]	[NT]	Batch Spike	-
Dichlorvos ^	µg/L	<0.5	[NT]	[NT]	Batch Spike	-
Bromophos ethyl ^	µg/L	<0.05	[NT]	[NT]	Batch Spike	-
Methidathion ^	µg/L	<0.05	[NT]	[NT]	Batch Spike	-
Ethion ^	µg/L	<0.05	[NT]	[NT]	Batch Spike	-
Heptachlor epoxide ^	µg/L	<0.02	[NT]	[NT]	Batch Spike	95%
Dicofol ^	µg/L	<0.50	[NT]	[NT]	Batch Spike	-
Diazinon ^	µg/L	<0.01	[NT]	[NT]	Batch Spike	97%
Chlorpyrifos ^	µg/L	<0.009	[NT]	[NT]	Batch Spike	93%
Malathion ^	µg/L	<0.05	[NT]	[NT]	Batch Spike	-
Fenitrothion ^	µg/L	<0.2	[NT]	[NT]	Batch Spike	-
Azinphos methyl (Guthion) ^	µg/L	<0.05	[NT]	[NT]	Batch Spike	97%
Parathion ethyl ^	µg/L	<0.01	[NT]	[NT]	Batch Spike	95%
Methyl Parathion ^	µg/L	<0.01	[NT]	[NT]	Batch Spike	-
p-Terphenyl-d14 ^	% Recovery	87	[NT]	[NT]	Batch Spike	84%
QUALITY CONTROL	UNITS	Blank	Duplicate Sm#	Duplicate Sample Duplicate	Spike Sm#	Spike Recovery
Date Extracted ^		-	[NT]	[NT]	Batch Spike	-
Date Analysed ^		-	[NT]	[NT]	Batch Spike	-
Naphthalene ^	µg/L	<0.2	[NT]	[NT]	Batch Spike	98%
2-Methylnaphthalene ^	µg/L	<0.2	[NT]	[NT]	Batch Spike	-
1-Methylnaphthalene ^	µg/L	<0.2	[NT]	[NT]	Batch Spike	-
Acenaphthylene ^	µg/L	<0.2	[NT]	[NT]	Batch Spike	-
Acenaphthene ^	µg/L	<0.2	[NT]	[NT]	Batch Spike	-
Fluorene ^	µg/L	<0.2	[NT]	[NT]	Batch Spike	97%
Phenanthrene ^	µg/L	<0.2	[NT]	[NT]	Batch Spike	97%
Anthracene ^	µg/L	<0.2	[NT]	[NT]	Batch Spike	-

CLIENT: Alluvium Consulting (Queensland)

PROJECT: Alluvium Job - NRA

Laboratory Report No: CE66983R

LABORATORY REPORT

QUALITY CONTROL	UNITS	Blank	Duplicate Sm#	Duplicate Sample Duplicate	Spike Sm#	Spike Recovery
Fluoranthene ^	µg/L	<0.2	[NT]	[NT]	Batch Spike	-
Pyrene ^	µg/L	<0.2	[NT]	[NT]	Batch Spike	96%
Benzo[a]anthracene ^	µg/L	<0.2	[NT]	[NT]	Batch Spike	101%
Chrysene ^	µg/L	<0.2	[NT]	[NT]	Batch Spike	-
Benzo[b,k]fluoranthene ^	µg/L	<0.4	[NT]	[NT]	Batch Spike	-
Benzo[a]pyrene ^	µg/L	<0.005	[NT]	[NT]	Batch Spike	98%
Indeno[123-cd]pyrene ^	µg/L	<0.2	[NT]	[NT]	Batch Spike	-
Dibenzo[ah]anthracene ^	µg/L	<0.2	[NT]	[NT]	Batch Spike	-
Benzo[ghi]perylene ^	µg/L	<0.2	[NT]	[NT]	Batch Spike	-
Total PAH ^	µg/L	<3.0	[NT]	[NT]	Batch Spike	-
d14-p-terphenyl (Surrogate)^	%	87	[NT]	[NT]	Batch Spike	84%
QUALITY CONTROL	UNITS	Blank	Duplicate Sm#	Duplicate Sample Duplicate	Spike Sm#	Spike Recovery
Date Extracted		-	[NT]	[NT]	Batch Spike	-
Date Analysed		-	[NT]	[NT]	Batch Spike	-
Total phenolics ^ (as phenol)	mg/L	<0.005	[NT]	[NT]	Batch Spike	-
Mirex ^	µg/L	<0.01	[NT]	[NT]	Batch Spike	-
Toxaphene ^	µg/L	<1.0	[NT]	[NT]	Batch Spike	-
Demeton S Methyl - LL	µg/L	<0.50	[NT]	[NT]	Batch Spike	-
Dimethoate ^	µg/L	<0.15	[NT]	[NT]	Batch Spike	-
Profenofos ^	µg/L	<0.020	[NT]	[NT]	Batch Spike	-
Temephos ^	µg/L	<0.50	[NT]	[NT]	Batch Spike	-

CLIENT: Alluvium Consulting (Queensland)
PROJECT: Alluvium Job - NRA

Laboratory Report No: CE66983R

LABORATORY REPORT

NOTES:

LOR - Limit of Reporting.

This test is not covered by our current NATA accreditation.

^ This analysis was determined at our Coburg Laboratory, their reference ME102344.

Method from Rayment & Higginson - "Australian Laboratory Handbook of Soil and Water Chemical Methods".

^ This analysis was determined at our Perth Laboratory, their reference PE029368.

SVOC surrogate recoveries on all samples are low due to sample emulsification on extraction.

No surrogate reported for the TRH due to analysing samples for low level SVOCs.

Samples analysed as received.

Solid samples expressed on a dry weight basis

Analysis Date: **Between** 19/03/10 **and** 16/04/10

SGS Terms and Conditions are available at www.au.sgs.com

Geneva Legal Comment

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ISO 17025

Unless otherwise stated the results shown in this test report only refer to the sample(s) tested and such sample(s) are only retained for 60 days only. This document cannot be reproduced except in full, without prior approval of the Company.



CHAIN OF CUSTODY & ANALYSIS REQUEST

Job Reference Number: **CE67075**

(SGS use only)

Page 1 of 2

Laboratory ID	Client SAMPLE ID	Sample Date	Matrix			Preservation Method			Analysis Required:						Comments:
			SOIL	WATER	OTHER	NONE	ICE	ACID	OTHER	As, Pb, Hg, Ni, V Cu, Zn	Soluble As, B, Cd, Co Cr, Pb, Hg, Ni, V Se, Zn	OP Pesticides OC Pesticides	Methylene glycol	PAH, phenol	
1	137	17/03/10													TEC to be analysed not single and 0.3mg/L Nutrients for field filtered (125ml bottles - must be frozen as not frozen in the field)
2	A4	17/03/10													
3	10	17/03/10													
4	6	17/03/10													
5	88	18/03/10													
6	1	18/03/10													
7	4	18/03/10													
8	79	18/03/10													
9	107	18/03/10													
10	117	18/03/10													

Company Name: **ALUMINIUM** (supplied by NRE)
 Address: **3/122 Walker St**
PO Box 1561 Tennantville
 Contact Name: **Angie Meane Cash + Maths Anderson - Jason Carter**
 Email address: **Jason.Carter@alluvium.com.au** or **angie.meane@alluvium.com.au**
 Telephone: **08 4924 2170** Facsimile: **08 4924 5124**
 Project Name: **ALUMINIUM**
 Project Number: **ALUMI NRE CA10-09**
 Laboratory Contact: **ALUMINIUM**
 Total Number of Containers/Bottles: **10**
 Total Number of Samples/Sites: **10**

Relinquished by: **[Signature]** Date: **17/3/10** Time: **11:10am** Received by: **[Signature]** Date: **19/3/10** Time: **11:00**
 Relinquished by: **[Signature]** Date: **22/3/10** Time: **11:00** Received by: **[Signature]** Date: **22/3/10** Time: **11:00**

Sample Cooler Sealed: **YES/NO*** **YES/NO*** **YES/NO*** Correct Sample Bottles Used: **YES/NO*** **YES/NO*** Temperature: **AMBIENT/CHILLED***
 Comments including subcontracting details: **Invoice to be sent to Jason Carter from Alluvium**
 Please provide client with details
 Consent given for subcontracting

Client Details

Client : Alluvium Consulting (Queensland)
Contact : Jason Carter
Address : 3 / 62 Walker St
Townsville QLD 4810

Email : jason.carter@alluvium.com.au
Telephone : 07 4724 2170
Facsimile : 07 4724 1639

Project : Alluvium - NRA
Order Number :
Samples : 12 Waters

Laboratory Details

Laboratory : SGS Environmental Services
Manager : Jon Dicker
Address : Unit 2, 58 Comport St
Portsmith QLD 4870

Email : Shey.Goddard@SGS.com
Telephone : 61 7 4035 5111
Facsimile : 61 7 4035 5122

Report No : **CE67025**
No. of Samples : 12
Due Date : 31/03/2010

Date Instructions Received : 23/03/2010
Sample Receipt Date : 23/03/2010
Requested By : Jason C

Samples received in good order	: yes	Samples received in correct containers:	yes
Samples received without headspace:	yes	Sufficient quantity supplied	: yes
Upon receipt sample temperature	: 7 degrees C	Cooling Method	: ice
Sample containers provided by	: sgs	Samples clearly Labelled	: yes
Turnaround time requested	: Standard	Completed documentation received	: yes

Samples will be held for 1 month for water samples and 3 months for soil samples from date of receipt of samples, unless otherwise instructed.

Comments

To the extent not inconsistent with the other provisions of this document and unless specifically agreed otherwise in writing by SGS, all SGS services are rendered in accordance with the applicable SGS General Conditions of Service accessible at http://www.sgs.com/terms_and_conditions.htm as at the date of this document. Attention is drawn to the limitations of liability and to the clauses of indemnification.

The signed chain of custody will be returned to you with the original report.

SAMPLE RECEIPT ADVICE (SRA) - continued

Client : Alluvium Consulting (Queensland)
Project : Alluvium - NRA

Report No : CE67025

Summary of Samples and Requested Analysis

The table below represents SGS Environmental Service's interpretation of the customer supplied Chain of Custody. Please indicate ASAP if your request differs from these details.

Testing shall commence immediately as per this table, unless the customer intervenes with a correction prior to testing. Note that a lowercase x in the table below indicates some testing has not been requested in the package.

Sample No.	Description	Misc Inorganics	HM 11 - Water - ANZECC
1	137	X	X
2	A4	X	X
3	10	X	X
4	6	X	X
6	1	X	X
7	4	X	X
8	79	X	X
9	109	X	X
11	120	X	X



LABORATORY REPORT COVERSHEET

Date: 11 May 2011

To: Alluvium Consulting (Queensland)
3 / 62 Walker St
Townsville QLD 4810

Attention: Jason Carter

Your Reference: Alluvium - NRA
Laboratory Report No: CE67025R

Samples Received: 23/03/2010
Samples / Quantity: 12 Waters

The above samples were received intact and analysed according to your written instructions. Unless otherwise stated, solid samples are reported on a dry weight basis and liquid samples as received.
This report cancels and supersedes the final report issued 06/04/2010 by SGS Environmental Services, Cairns.

Jon Dicker
Manager
CAIRNS

Shey Goddard
Administration Manager
CAIRNS



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CLIENT: Alluvium Consulting (Queensland)

PROJECT: Alluvium - NRA

Laboratory Report No: CE67025R

LABORATORY REPORT

----- Our Reference Your Reference Type of Sample Date Sampled	Units	CE67025R-1 137 Water 17/03/2010	CE67025R-2 A4 Water 17/03/2010	CE67025R-3 10 Water 17/03/2010
Date Extracted		24/03/2010	24/03/2010	24/03/2010
Date Analysed		24/03/2010	24/03/2010	24/03/2010
Chloride, Cl	mg/L	20	24	19
Sulphate, SO ₄	mg/L	10	10	8
Fluoride, F	mg/L	0.06	<0.05	<0.05
Hardness (as CaCO ₃)	mg/L CaCO ₃	22	22	20
Sodium Absorption Ratio		1	1	1
Calcium, Ca	mg/L	4.2	4.7	4.0
Magnesium, Mg	mg/L	2.7	2.6	2.4
Sodium, Na	mg/L	15	15	14
Potassium, K	mg/L	3.5	4.4	5.4
Total Suspended Solids	mg/L	8	7	<5
Ammonia Nitrogen NH ₃ as N	mg/L	0.045	0.11	0.085
Total Oxidised Nitrogen as N (NO ₂ +NO ₃)	mg/L	0.025	0.021	0.018
Total Kjeldahl Nitrogen (as N)	mg/L	3.2	2.3	2.0
Total Nitrogen	mg/L	3.2	2.3	2.0
Nitrite (NO ₂) (as N)	mg/L	<0.005	<0.005	<0.005
Nitrate (LIMS Calc)	mg/L	0.025	0.021	0.018
Total Phosphorus	mg/L	0.23	0.20	0.22
Triethylene Glycol ^^	mg/L	[NA]	[NA]	<5.0
Triethylene Glycol ^^#	mg/L	[NA]	[NA]	<0.01

CLIENT: Alluvium Consulting (Queensland)

PROJECT: Alluvium - NRA

Laboratory Report No: CE67025R

LABORATORY REPORT

----- Our Reference Your Reference Type of Sample Date Sampled	Units	CE67025R-4 6 Water 17/03/2010	CE67025R-5 88 Water 18/03/2010	CE67025R-6 1 Water 18/03/2010
Date Extracted		24/03/2010	[NA]	24/03/2010
Date Analysed		24/03/2010	[NA]	24/03/2010
Chloride, Cl	mg/L	21	[NA]	14
Sulphate, SO ₄	mg/L	15	[NA]	4
Fluoride, F	mg/L	0.14	[NA]	0.10
Hardness (as CaCO ₃)	mg/L CaCO ₃	100	[NA]	60
Sodium Absorption Ratio		1	[NA]	<1
Calcium, Ca	mg/L	21	[NA]	12
Magnesium, Mg	mg/L	12	[NA]	7.2
Sodium, Na	mg/L	26	[NA]	12
Potassium, K	mg/L	8.9	[NA]	3.3
Total Suspended Solids	mg/L	110	[NA]	110
Ammonia Nitrogen NH ₃ as N	mg/L	0.051	[NA]	0.061
Total Oxidised Nitrogen as N (NO ₂ +NO ₃)	mg/L	0.21	[NA]	0.14
Total Kjeldahl Nitrogen (as N)	mg/L	1.5	[NA]	1.0
Total Nitrogen	mg/L	1.7	[NA]	1.1
Nitrite (NO ₂) (as N)	mg/L	<0.005	[NA]	<0.005
Nitrate (LIMS Calc)	mg/L	0.21	[NA]	0.14
Total Phosphorus	mg/L	0.62	[NA]	0.30
Triethylene Glycol ^^	mg/L	[NA]	<5.0	[NA]
Triethylene Glycol ^^#	mg/L	[NA]	<0.01	[NA]

CLIENT: Alluvium Consulting (Queensland)

PROJECT: Alluvium - NRA

Laboratory Report No: CE67025R

LABORATORY REPORT

----- Our Reference Your Reference Type of Sample Date Sampled	Units	CE67025R-7 4 Water 18/03/2010	CE67025R-8 79 Water 18/03/2010	CE67025R-9 109 Water 18/03/2010
Date Extracted		24/03/2010	24/03/2010	24/03/2010
Date Analysed		24/03/2010	24/03/2010	24/03/2010
Chloride, Cl	mg/L	14	35	8
Sulphate, SO ₄	mg/L	4	7	5
Fluoride, F	mg/L	0.08	0.06	0.13
Hardness (as CaCO ₃)	mg/L CaCO ₃	57	36	45
Sodium Absorption Ratio		<1	2	1
Calcium, Ca	mg/L	12	4.6	12
Magnesium, Mg	mg/L	6.5	5.9	3.7
Sodium, Na	mg/L	13	30	20
Potassium, K	mg/L	3.0	6.0	7.7
Total Suspended Solids	mg/L	74	66	<5
Ammonia Nitrogen NH ₃ as N	mg/L	0.060	0.030	0.097
Total Oxidised Nitrogen as N (NO ₂ +NO ₃)	mg/L	0.071	0.019	0.031
Total Kjeldahl Nitrogen (as N)	mg/L	0.84	2.2	1.6
Total Nitrogen	mg/L	0.91	2.2	1.6
Nitrite (NO ₂) (as N)	mg/L	<0.005	<0.005	<0.005
Nitrate (LIMS Calc)	mg/L	0.071	0.019	0.031
Total Phosphorus	mg/L	0.25	0.30	0.18

CLIENT: Alluvium Consulting (Queensland)

PROJECT: Alluvium - NRA

Laboratory Report No: CE67025R

LABORATORY REPORT

----- Our Reference Your Reference Type of Sample Date Sampled	Units	CE67025R-10 119 Water 18/03/2010	CE67025R-11 120 Water 18/03/2010	CE67025R-12 127 Water 18/03/2010
Date Extracted		[NA]	24/03/2010	[NA]
Date Analysed		[NA]	24/03/2010	[NA]
Chloride, Cl	mg/L	[NA]	20	[NA]
Sulphate, SO ₄	mg/L	[NA]	6	[NA]
Fluoride, F	mg/L	[NA]	0.05	[NA]
Hardness (as CaCO ₃)	mg/L CaCO ₃	[NA]	30	[NA]
Sodium Absorption Ratio		[NA]	2	[NA]
Calcium, Ca	mg/L	[NA]	7.1	[NA]
Magnesium, Mg	mg/L	[NA]	3.1	[NA]
Sodium, Na	mg/L	[NA]	21	[NA]
Potassium, K	mg/L	[NA]	5.8	[NA]
Total Suspended Solids	mg/L	[NA]	<5	[NA]
Ammonia Nitrogen NH ₃ as N	mg/L	[NA]	0.056	[NA]
Total Oxidised Nitrogen as N (NO ₂ +NO ₃)	mg/L	[NA]	0.036	[NA]
Total Kjeldahl Nitrogen (as N)	mg/L	[NA]	1.2	[NA]
Total Nitrogen	mg/L	[NA]	1.2	[NA]
Nitrite (NO ₂) (as N)	mg/L	[NA]	<0.005	[NA]
Nitrate (LIMS Calc)	mg/L	[NA]	0.036	[NA]
Total Phosphorus	mg/L	[NA]	0.08	[NA]
Triethylene Glycol ^	mg/L	<5.0	[NA]	<5.0
Triethylene Glycol ^#	mg/L	<0.01	[NA]	<0.01

CLIENT: Alluvium Consulting (Queensland)
PROJECT: Alluvium - NRA

Laboratory Report No: CE67025R

LABORATORY REPORT

Heavy Metals - Water ANZECC Our Reference Your Reference Type of Sample Date Sampled	Units	CE67025R-1 137 Water 17/03/2010	CE67025R-2 A4 Water 17/03/2010	CE67025R-3 10 Water 17/03/2010
Date Extracted		24/03/2010	24/03/2010	24/03/2010
Date Analysed		30/03/2010	30/03/2010	30/03/2010
Total Arsenic, As	mg/L	<0.003	<0.003	<0.003
Arsenic, As	mg/L	<0.003	<0.003	<0.003
Total Boron, B	mg/L	0.025	0.024	0.030
Boron, B	mg/L	0.025	0.024	0.029
Total Cadmium, Cd	mg/L	<0.0001	<0.0001	<0.0001
Cadmium, Cd	mg/L	<0.0001	<0.0001	<0.0001
Total Cobalt, Co	mg/L	0.006	0.002	0.002
Cobalt, Co	mg/L	0.006	0.001	0.001
Total Copper, Cu	mg/L	<0.001	<0.001	<0.001
Copper, Cu	mg/L	<0.001	0.001	0.001
Total Mercury, Hg	mg/L	<0.0001	<0.0001	<0.0001
Mercury, Hg (Filtered)	mg/L	<0.0001	<0.0001	<0.0001
Total Nickel, Ni	mg/L	0.002	0.003	0.002
Nickel, Ni	mg/L	0.003	0.004	0.002
Total Lead, Pb	mg/L	0.001	0.001	0.001
Lead, Pb	mg/L	0.001	0.001	<0.001
Total Selenium, Se	mg/L	<0.003	<0.003	<0.003
Selenium, Se	mg/L	<0.003	<0.003	<0.003
Total Vanadium, V	mg/L	0.010	0.005	0.005
Vanadium, V	mg/L	0.005	0.005	<0.005
Total Zinc, Zn	mg/L	0.008	0.011	0.012
Zinc, Zn	mg/L	0.006	0.011	0.013

CLIENT: Alluvium Consulting (Queensland)

PROJECT: Alluvium - NRA

Laboratory Report No: CE67025R

LABORATORY REPORT

Heavy Metals - Water ANZECC Our Reference Your Reference Type of Sample Date Sampled	Units	CE67025R-4 6 Water 17/03/2010	CE67025R-6 1 Water 18/03/2010	CE67025R-7 4 Water 18/03/2010
Date Extracted		24/03/2010	24/03/2010	24/03/2010
Date Analysed		30/03/2010	30/03/2010	30/03/2010
Total Arsenic, As	mg/L	<0.003	<0.003	<0.003
Arsenic, As	mg/L	<0.003	<0.003	<0.003
Total Boron, B	mg/L	0.073	0.025	0.022
Boron, B	mg/L	0.064	0.019	0.019
Total Cadmium, Cd	mg/L	<0.0001	<0.0001	<0.0001
Cadmium, Cd	mg/L	<0.0001	0.0001	<0.0001
Total Cobalt, Co	mg/L	0.003	0.003	0.003
Cobalt, Co	mg/L	<0.001	<0.001	<0.001
Total Copper, Cu	mg/L	0.017	0.005	0.004
Copper, Cu	mg/L	0.004	0.003	0.002
Total Mercury, Hg	mg/L	<0.0001	<0.0001	<0.0001
Mercury, Hg (Filtered)	mg/L	<0.0001	<0.0001	<0.0001
Total Nickel, Ni	mg/L	0.017	0.009	0.008
Nickel, Ni	mg/L	0.008	0.003	0.003
Total Lead, Pb	mg/L	0.009	0.003	0.003
Lead, Pb	mg/L	0.003	<0.001	0.003
Total Selenium, Se	mg/L	<0.003	<0.003	<0.003
Selenium, Se	mg/L	<0.003	<0.003	<0.003
Total Vanadium, V	mg/L	0.022	0.022	0.017
Vanadium, V	mg/L	0.014	0.013	0.010
Total Zinc, Zn	mg/L	0.013	0.008	0.012
Zinc, Zn	mg/L	<0.005	<0.005	<0.005

CLIENT: Alluvium Consulting (Queensland)

PROJECT: Alluvium - NRA

Laboratory Report No: CE67025R

LABORATORY REPORT

Heavy Metals - Water ANZECC Our Reference Your Reference Type of Sample Date Sampled	Units	CE67025R-8 79 Water 18/03/2010	CE67025R-9 109 Water 18/03/2010	CE67025R-11 120 Water 18/03/2010
Date Extracted		24/03/2010	24/03/2010	24/03/2010
Date Analysed		30/03/2010	30/03/2010	30/03/2010
Total Arsenic, As	mg/L	0.004	<0.003	<0.003
Arsenic, As	mg/L	<0.003	<0.003	<0.003
Total Boron, B	mg/L	0.036	0.037	0.048
Boron, B	mg/L	0.027	0.035	0.047
Total Cadmium, Cd	mg/L	<0.0001	<0.0001	<0.0001
Cadmium, Cd	mg/L	<0.0001	<0.0001	<0.0001
Total Cobalt, Co	mg/L	0.009	0.001	0.002
Cobalt, Co	mg/L	0.001	<0.001	<0.001
Total Copper, Cu	mg/L	0.001	0.003	0.002
Copper, Cu	mg/L	0.002	0.003	0.001
Total Mercury, Hg	mg/L	<0.0001	<0.0001	<0.0001
Mercury, Hg (Filtered)	mg/L	<0.0001	<0.0001	<0.0001
Total Nickel, Ni	mg/L	0.004	0.003	0.002
Nickel, Ni	mg/L	0.003	0.002	0.002
Total Lead, Pb	mg/L	0.005	0.004	0.002
Lead, Pb	mg/L	<0.001	<0.001	0.001
Total Selenium, Se	mg/L	<0.003	<0.003	<0.003
Selenium, Se	mg/L	<0.003	<0.003	<0.003
Total Vanadium, V	mg/L	0.017	0.007	0.011
Vanadium, V	mg/L	0.005	<0.005	0.006
Total Zinc, Zn	mg/L	0.015	0.005	0.005
Zinc, Zn	mg/L	0.009	<0.005	0.005

CLIENT: Alluvium Consulting (Queensland)

PROJECT: Alluvium - NRA

Laboratory Report No: CE67025R

LABORATORY REPORT

TRH (waters) Our Reference Your Reference Type of Sample Date Sampled	Units	CE67025R-1 137 Water 17/03/2010	CE67025R-2 A4 Water 17/03/2010	CE67025R-3 10 Water 17/03/2010
Date Analysed		29/03/2010	29/03/2010	29/03/2010
Date Extracted		1/04/2010	1/04/2010	1/04/2010
TRH C ₆ - C ₉ ^	µg/L	<20	<20	<20
TRH C ₁₀ - C ₁₄ ^	µg/L	<50	<50	<50
TRH C ₁₅ - C ₂₈ ^	µg/L	<100	<100	<100
TRH C ₂₉ - C ₃₆ ^	µg/L	<50	<50	<50

TRH (waters) Our Reference Your Reference Type of Sample Date Sampled	Units	CE67025R-4 6 Water 17/03/2010	CE67025R-6 1 Water 18/03/2010	CE67025R-7 4 Water 18/03/2010
Date Analysed		29/03/2010	29/03/2010	29/03/2010
Date Extracted		1/04/2010	1/04/2010	1/04/2010
TRH C ₆ - C ₉ ^	µg/L	<20	<20	<20
TRH C ₁₀ - C ₁₄ ^	µg/L	<50	<50	<50
TRH C ₁₅ - C ₂₈ ^	µg/L	<100	<100	<100
TRH C ₂₉ - C ₃₆ ^	µg/L	<50	<50	<50

CLIENT: Alluvium Consulting (Queensland)

PROJECT: Alluvium - NRA

Laboratory Report No: CE67025R

LABORATORY REPORT

TRH (waters) Our Reference Your Reference Type of Sample Date Sampled	Units	CE67025R-8 79 Water 18/03/2010	CE67025R-9 109 Water 18/03/2010	CE67025R-11 120 Water 18/03/2010
Date Analysed		29/03/2010	29/03/2010	29/03/2010
Date Extracted		1/04/2010	1/04/2010	1/04/2010
TRH C ₆ - C ₉ ^	µg/L	<20	<20	<20
TRH C ₁₀ - C ₁₄ ^	µg/L	<50	<50	<50
TRH C ₁₅ - C ₂₈ ^	µg/L	<100	<100	<100
TRH C ₂₉ - C ₃₆ ^	µg/L	<50	<50	<50

CLIENT: Alluvium Consulting (Queensland)

PROJECT: Alluvium - NRA

Laboratory Report No: CE67025R

LABORATORY REPORT

VOC - MAH - PERTH Our Reference Your Reference Type of Sample Date Sampled	Units	CE67025R-1 137 Water 17/03/2010	CE67025R-2 A4 Water 17/03/2010	CE67025R-3 10 Water 17/03/2010
Date Extracted		31/03/2010	31/03/2010	31/03/2010
Date Analysed		31/03/2010	31/03/2010	31/03/2010
Benzene ^	µg/L	<0.5	<0.5	<0.5
Toluene ^	µg/L	<0.5	<0.5	<0.5
Ethyl Benzene ^	µg/L	<0.5	<0.5	<0.5
<i>m/p</i> -Xylenes ^	µg/L	<1.0	<1.0	<1.0
Styrene ^	µg/L	<0.5	<0.5	<0.5
<i>o</i> -Xylene ^	µg/L	<0.5	<0.5	<0.5
Isopropylbenzene (Cumene) ^	µg/L	<0.5	<0.5	<0.5
<i>n</i> -Propylbenzene ^	µg/L	<0.5	<0.5	<0.5
1,3,5-Trimethylbenzene ^	µg/L	<0.5	<0.5	<0.5
<i>tert</i> -Butylbenzene ^	µg/L	<0.5	<0.5	<0.5
1,2,4-Trimethylbenzene ^	µg/L	<0.5	<0.5	<0.5
<i>sec</i> -Butylbenzene ^	µg/L	<0.5	<0.5	<0.5
<i>p</i> -Isopropyltoluene ^	µg/L	<0.5	<0.5	<0.5
<i>n</i> -Butylbenzene ^	µg/L	<0.5	<0.5	<0.5
Dibromofluoromethane ^	%	92	90	92
Toluene- <i>d8</i> Surrogate 2 ^	%	94	95	96
4-Bromofluorobenzene Surrogate 3 ^	%	94	92	93

CLIENT: Alluvium Consulting (Queensland)

PROJECT: Alluvium - NRA

Laboratory Report No: CE67025R

LABORATORY REPORT

VOC - MAH - PERTH Our Reference Your Reference Type of Sample Date Sampled	Units	CE67025R-4 6 Water 17/03/2010	CE67025R-6 1 Water 18/03/2010	CE67025R-7 4 Water 18/03/2010
Date Extracted		31/03/2010	31/03/2010	31/03/2010
Date Analysed		31/03/2010	31/03/2010	31/03/2010
Benzene ^	µg/L	<0.5	<0.5	<0.5
Toluene ^	µg/L	<0.5	<0.5	<0.5
Ethyl Benzene ^	µg/L	<0.5	<0.5	<0.5
<i>m/p</i> -Xylenes ^	µg/L	<1.0	<1.0	<1.0
Styrene ^	µg/L	<0.5	<0.5	<0.5
<i>o</i> -Xylene ^	µg/L	<0.5	<0.5	<0.5
Isopropylbenzene (Cumene) ^	µg/L	<0.5	<0.5	<0.5
<i>n</i> -Propylbenzene ^	µg/L	<0.5	<0.5	<0.5
1,3,5-Trimethylbenzene ^	µg/L	<0.5	<0.5	<0.5
<i>tert</i> -Butylbenzene ^	µg/L	<0.5	<0.5	<0.5
1,2,4-Trimethylbenzene ^	µg/L	<0.5	<0.5	<0.5
<i>sec</i> -Butylbenzene ^	µg/L	<0.5	<0.5	<0.5
<i>p</i> -Isopropyltoluene ^	µg/L	<0.5	<0.5	<0.5
<i>n</i> -Butylbenzene ^	µg/L	<0.5	<0.5	<0.5
Dibromofluoromethane ^	%	99	95	100
Toluene- <i>d8</i> Surrogate 2 ^	%	97	100	102
4-Bromofluorobenzene Surrogate 3 ^	%	95	98	102

CLIENT: Alluvium Consulting (Queensland)

PROJECT: Alluvium - NRA

Laboratory Report No: CE67025R

LABORATORY REPORT

VOC - MAH - PERTH Our Reference Your Reference Type of Sample Date Sampled	Units	CE67025R-8 79 Water 18/03/2010	CE67025R-9 109 Water 18/03/2010	CE67025R-11 120 Water 18/03/2010
Date Extracted		31/03/2010	31/03/2010	31/03/2010
Date Analysed		31/03/2010	31/03/2010	31/03/2010
Benzene ^	µg/L	<0.5	<0.5	<0.5
Toluene ^	µg/L	<0.5	<0.5	<0.5
Ethyl Benzene ^	µg/L	<0.5	<0.5	<0.5
<i>m/p</i> -Xylenes ^	µg/L	<1.0	<1.0	<1.0
Styrene ^	µg/L	<0.5	<0.5	<0.5
<i>o</i> -Xylene ^	µg/L	<0.5	<0.5	<0.5
Isopropylbenzene (Cumene) ^	µg/L	<0.5	<0.5	<0.5
<i>n</i> -Propylbenzene ^	µg/L	<0.5	<0.5	<0.5
1,3,5-Trimethylbenzene ^	µg/L	<0.5	<0.5	<0.5
<i>tert</i> -Butylbenzene ^	µg/L	<0.5	<0.5	<0.5
1,2,4-Trimethylbenzene ^	µg/L	<0.5	<0.5	<0.5
<i>sec</i> -Butylbenzene ^	µg/L	<0.5	<0.5	<0.5
<i>p</i> -Isopropyltoluene ^	µg/L	<0.5	<0.5	<0.5
<i>n</i> -Butylbenzene ^	µg/L	<0.5	<0.5	<0.5
Dibromofluoromethane ^	%	98	90	99
Toluene- <i>d8</i> Surrogate 2 ^	%	91	91	97
4-Bromofluorobenzene Surrogate 3 ^	%	122	91	96

CLIENT: Alluvium Consulting (Queensland)
PROJECT: Alluvium - NRA

Laboratory Report No: CE67025R

LABORATORY REPORT

PAHs Our Reference Your Reference Type of Sample Date Sampled	Units	CE67025R-3 10 Water 17/03/2010
Date Extracted		29/03/2010
Date Analysed		1/04/2010
Naphthalene	µg/L	<0.2
2-Methylnaphthalene	µg/L	<0.2
1-Methylnaphthalene	µg/L	<0.2
Acenaphthylene	µg/L	<0.2
Acenaphthene	µg/L	<0.2
Fluorene	µg/L	<0.2
Phenanthrene	µg/L	<0.2
Anthracene	µg/L	<0.2
Fluoranthene	µg/L	<0.2
Pyrene	µg/L	<0.2
Benzo[a]anthracene	µg/L	<0.2
Chrysene	µg/L	<0.2
Benzo[b,k]fluoranthene	µg/L	<0.4
Benzo[a]pyrene ^	µg/L	<0.005
Indeno[123-cd]pyrene	µg/L	<0.2
Dibenzo[ah]anthracene	µg/L	<0.2
Benzo[ghi]perylene	µg/L	<0.2
Total PAH ^	µg/L	<3.0
d14-p-terphenyl (Surrogate)	%	7.0

CLIENT: Alluvium Consulting (Queensland)

PROJECT: Alluvium - NRA

Laboratory Report No: CE67025R

LABORATORY REPORT

Organochlorine Pest LL - Perth Our Reference Your Reference Type of Sample Date Sampled	Units	CE67025R-3 10 Water 17/03/2010	CE67025R-5 88 Water 18/03/2010	CE67025R-10 119 Water 18/03/2010
Date Extracted		29/03/2010	29/03/2010	29/03/2010
Date Analysed		1/04/2010	1/04/2010	1/04/2010
alpha (cis-) Chlordane ^	µg/L	<0.002	<0.002	<0.002
gamma (trans-) Chlordane ^	µg/L	<0.002	<0.002	<0.002
p,p' - DDT ^	µg/L	<0.002	<0.002	<0.002
Endosulfan sulphate ^	µg/L	<0.005	<0.005	<0.005
Endrin ^	µg/L	<0.004	<0.004	<0.004
Heptachlor ^	µg/L	<0.01	<0.01	<0.01
Lindane ^	µg/L	<0.05	<0.05	<0.05
Aldrin ^	µg/L	<0.01	<0.01	<0.01
p,p' - DDE ^	µg/L	<0.01	<0.01	<0.01
p,p' - DDD ^	µg/L	<0.01	<0.01	<0.01
Dieldrin ^	µg/L	<0.002	<0.002	<0.002
alpha - Endosulfan ^	µg/L	<0.005	<0.005	<0.005
beta - Endosulfan ^	µg/L	<0.005	<0.005	<0.005
Methoxychlor ^	µg/L	<0.10	<0.10	<0.10
HCB ^	µg/L	<0.01	<0.01	<0.01
alpha - BHC ^	µg/L	<0.05	<0.05	<0.05
beta - BHC ^	µg/L	<0.05	<0.05	<0.05
delta - BHC ^	µg/L	<0.05	<0.05	<0.05
Endrin ketone ^	µg/L	<0.05	<0.05	<0.05
Dichlorvos ^	µg/L	<0.5	<0.5	<0.5
Bromophos ethyl ^	µg/L	<0.05	<0.05	<0.05
Methidathion ^	µg/L	<0.05	<0.05	<0.05
Ethion ^	µg/L	<0.05	<0.05	<0.05
Heptachlor epoxide ^	µg/L	<0.02	<0.02	<0.02
Dicofol ^	µg/L	<0.50	<0.50	<0.50
Diazinon ^	µg/L	<0.01	<0.01	<0.01

CLIENT: Alluvium Consulting (Queensland)

PROJECT: Alluvium - NRA

Laboratory Report No: CE67025R

LABORATORY REPORT

Organochlorine Pest LL - Perth Our Reference Your Reference Type of Sample Date Sampled	Units	CE67025R-3 10 Water 17/03/2010	CE67025R-5 88 Water 18/03/2010	CE67025R-10 119 Water 18/03/2010
Chlorpyrifos ^	µg/L	<0.009	<0.009	<0.009
Malathion ^	µg/L	<0.05	<0.05	<0.05
Fenitrothion ^	µg/L	<0.2	<0.2	<0.2
Azinphos methyl (Guthion) ^	µg/L	<0.05	<0.05	<0.05
Parathion ethyl ^	µg/L	<0.01	<0.01	<0.01
Methyl Parathion ^	µg/L	<0.010	<0.010	<0.010
p-Terphenyl-d14 ^	% Recovery	7.0	6.0	47

Organochlorine Pest LL - Perth Our Reference Your Reference Type of Sample Date Sampled	Units	CE67025R-12 127 Water 18/03/2010
Date Extracted		29/03/2010
Date Analysed		1/04/2010
alpha (cis-) Chlordane ^	µg/L	<0.002
gamma (trans-) Chlordane ^	µg/L	<0.002
p,p' - DDT ^	µg/L	<0.002
Endosulfan sulphate ^	µg/L	<0.005
Endrin ^	µg/L	<0.004
Heptachlor ^	µg/L	<0.01
Lindane ^	µg/L	<0.05
Aldrin ^	µg/L	<0.01
p,p' - DDE ^	µg/L	<0.01
p,p' - DDD ^	µg/L	<0.01
Dieldrin ^	µg/L	<0.002
alpha - Endosulfan ^	µg/L	<0.005
beta - Endosulfan ^	µg/L	<0.005

CLIENT: Alluvium Consulting (Queensland)

PROJECT: Alluvium - NRA

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LABORATORY REPORT

Organochlorine Pest LL - Perth Our Reference Your Reference Type of Sample Date Sampled	Units	CE67025R-12 127 Water 18/03/2010
Methoxychlor ^	µg/L	<0.10
HCB ^	µg/L	<0.01
alpha - BHC ^	µg/L	<0.05
beta - BHC ^	µg/L	<0.05
delta - BHC ^	µg/L	<0.05
Endrin ketone ^	µg/L	<0.05
Dichlorvos ^	µg/L	<0.5
Bromophos ethyl ^	µg/L	<0.05
Methidathion ^	µg/L	<0.05
Ethion ^	µg/L	<0.05
Heptachlor epoxide ^	µg/L	<0.02
Dicofol ^	µg/L	<0.50
Diazinon ^	µg/L	<0.01
Chlorpyrifos ^	µg/L	<0.009
Malathion ^	µg/L	<0.05
Fenitrothion ^	µg/L	<0.2
Azinphos methyl (Guthion) ^	µg/L	<0.05
Parathion ethyl ^	µg/L	<0.01
Methyl Parathion ^	µg/L	<0.010
p-Terphenyl-d14 ^	% Recovery	51

CLIENT: Alluvium Consulting (Queensland)

PROJECT: Alluvium - NRA

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LABORATORY REPORT

----- Our Reference Your Reference Type of Sample Date Sampled	Units	CE67025R-3 10 Water 17/03/2010	CE67025R-5 88 Water 18/03/2010	CE67025R-10 119 Water 18/03/2010
Date Extracted		29/03/2010	29/03/2010	29/03/2010
Date Analysed		29/03/2010	29/03/2010	29/03/2010
Total phenolics (as phenol)	mg/L	0.022	[NA]	[NA]
Mirex	µg/L	<0.01	<0.01	<0.01
Toxaphene	µg/L	<1.0	<1.0	<1.0
Demeton S Methyl ^	µg/L	<0.5	<0.5	<0.5
Dimethoate ^	µg/L	<0.15	<0.15	<0.15
Profenofos ^	µg/L	<0.02	<0.02	<0.02
Temephos ^	µg/L	<0.5	<0.5	<0.5

----- Our Reference Your Reference Type of Sample Date Sampled	Units	CE67025R-12 127 Water 18/03/2010
Date Extracted		29/03/2010
Date Analysed		29/03/2010
Mirex	µg/L	<0.01
Toxaphene	µg/L	<1.0
Demeton S Methyl ^	µg/L	<0.5
Dimethoate ^	µg/L	<0.15
Profenofos ^	µg/L	<0.02
Temephos ^	µg/L	<0.5

CLIENT: Alluvium Consulting (Queensland)

PROJECT: Alluvium - NRA

Laboratory Report No: CE67025R

LABORATORY REPORT

TEST PARAMETERS	UNITS	LOR	METHOD
Date Extracted			
Date Analysed			
Chloride, Cl	mg/L	2	AN274
Sulphate, SO ₄	mg/L	2	AN290
Fluoride, F	mg/L	0.05	AN141
Hardness (as CaCO ₃)	mg/L CaCO ₃	5	AN124
Sodium Absorption Ratio		1	R & H **
Calcium, Ca	mg/L	0.05	AN320
Magnesium, Mg	mg/L	0.05	AN320
Sodium, Na	mg/L	0.5	AN320
Potassium, K	mg/L	0.05	AN320
Total Suspended Solids	mg/L	5	AN114
Ammonia Nitrogen NH ₃ as N	mg/L	0.005	AN280 CEA-022
Total Oxidised Nitrogen as N (NO ₂ +NO ₃)	mg/L	0.005	AN248 CEA-001
Total Kjeldahl Nitrogen (as N)	mg/L	0.05	AN281 CEA-016
Total Nitrogen	mg/L	0.05	Calculation
Nitrite (NO ₂) (as N)	mg/L	0.005	AN277
Nitrate (LIMS Calc)	mg/L	0.005	Calculation
Total Phosphorus	mg/L	0.02	AN279 CEA-015
Triethylene Glycol ^^	mg/L	5	Other
Triethylene Glycol ^^#	mg/L	0.01	Other

CLIENT: Alluvium Consulting (Queensland)

PROJECT: Alluvium - NRA

Laboratory Report No: CE67025R

LABORATORY REPORT

TEST PARAMETERS	UNITS	LOR	METHOD
Date Extracted			
Date Analysed			
Total Arsenic, As	mg/L	0.003	AN320_USN
Arsenic, As	mg/L	0.003	AN320_USN
Total Boron, B	mg/L	0.002	AN320_USN
Boron, B	mg/L	0.002	AN320_USN
Total Cadmium, Cd	mg/L	0.0001	AN320_USN
Cadmium, Cd	mg/L	0.0001	AN320_USN
Total Cobalt, Co	mg/L	0.001	AN320_USN
Cobalt, Co	mg/L	0.001	AN320_USN
Total Copper, Cu	mg/L	0.001	AN320_USN
Copper, Cu	mg/L	0.001	AN320_USN
Total Mercury, Hg	mg/L	0.0001	AN312 CEI-202
Mercury, Hg (Filtered)	mg/L	0.0001	AN312 CEI-202
Total Nickel, Ni	mg/L	0.001	AN320_USN
Nickel, Ni	mg/L	0.001	AN320_USN
Total Lead, Pb	mg/L	0.001	AN320_USN
Lead, Pb	mg/L	0.001	AN320_USN
Total Selenium, Se	mg/L	0.003	AN320_USN
Selenium, Se	mg/L	0.003	AN320_USN
Total Vanadium, V	mg/L	0.005	AN318
Vanadium, V	mg/L	0.005	AN318
Total Zinc, Zn	mg/L	0.005	AN320
Zinc, Zn	mg/L	0.005	AN320

CLIENT: Alluvium Consulting (Queensland)

PROJECT: Alluvium - NRA

Laboratory Report No: CE67025R

LABORATORY REPORT

TEST PARAMETERS	UNITS	LOR	METHOD
Date Analysed			
Date Extracted			
TRH C ₆ - C ₉ ^	µg/L	20	AN433
TRH C ₁₀ - C ₁₄ ^	µg/L	50	AN403
TRH C ₁₅ - C ₂₈ ^	µg/L	100	AN403
TRH C ₂₉ - C ₃₆ ^	µg/L	50	AN403
TRH Surrogate	%	0	AN403

CLIENT: Alluvium Consulting (Queensland)

PROJECT: Alluvium - NRA

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LABORATORY REPORT

TEST PARAMETERS	UNITS	LOR	METHOD
Date Extracted			
Date Analysed			
Benzene ^	µg/L	0.5	AN433
Toluene ^	µg/L	0.5	AN433
Ethyl Benzene ^	µg/L	0.5	AN433
<i>m/p</i> -Xylenes ^	µg/L	1	AN433
Styrene ^	µg/L	0.5	AN433
<i>o</i> -Xylene ^	µg/L	0.5	AN433
Isopropylbenzene (Cumene) ^	µg/L	0.5	AN433
<i>n</i> -Propylbenzene ^	µg/L	0.5	AN433
1,3,5-Trimethylbenzene ^	µg/L	0.5	AN433
<i>tert</i> -Butylbenzene ^	µg/L	0.5	AN433
1,2,4-Trimethylbenzene ^	µg/L	0.5	AN433
<i>sec</i> -Butylbenzene ^	µg/L	0.5	AN433
<i>p</i> -Isopropyltoluene ^	µg/L	0.5	AN433
<i>n</i> -Butylbenzene ^	µg/L	0.5	AN433
Dibromofluoromethane ^	%	0	AN433
Toluene- <i>d</i> 8 Surrogate 2 ^	%	0	AN433
4-Bromofluorobenzene Surrogate 3 ^	%	0	AN433

CLIENT: Alluvium Consulting (Queensland)

PROJECT: Alluvium - NRA

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LABORATORY REPORT

TEST PARAMETERS	UNITS	LOR	METHOD
Date Extracted			
Date Analysed			
Naphthalene	µg/L	0.2	AN420
2-Methylnaphthalene	µg/L	0.2	AN420
1-Methylnaphthalene	µg/L	0.2	AN420
Acenaphthylene	µg/L	0.2	AN420
Acenaphthene	µg/L	0.2	AN420
Fluorene	µg/L	0.2	AN420
Phenanthrene	µg/L	0.2	AN420
Anthracene	µg/L	0.2	AN420
Fluoranthene	µg/L	0.2	AN420
Pyrene	µg/L	0.2	AN420
Benzo[a]anthracene	µg/L	0.2	AN420
Chrysene	µg/L	0.2	AN420
Benzo[b,k]fluoranthene	µg/L	0.4	AN420
Benzo[a]pyrene ^	µg/L	0.005	AN420
Indeno[123-cd]pyrene	µg/L	0.2	AN420
Dibenzo[ah]anthracene	µg/L	0.2	AN420
Benzo[ghi]perylene	µg/L	0.2	AN420
Total PAH ^	µg/L	3	AN420
d14-p-terphenyl (Surrogate)	%		AN420

CLIENT: Alluvium Consulting (Queensland)

PROJECT: Alluvium - NRA

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LABORATORY REPORT

TEST PARAMETERS	UNITS	LOR	METHOD
Date Extracted			
Date Analysed			
alpha (cis-) Chlordane ^	µg/L	0.002	AN420
gamma (trans-) Chlordane ^	µg/L	0.002	AN420
p,p' - DDT ^	µg/L	0.002	AN420
Endosulfan sulphate ^	µg/L	0.005	AN420
Endrin ^	µg/L	0.004	AN420
Heptachlor ^	µg/L	0.01	AN420
Lindane ^	µg/L	0.05	AN420
Aldrin ^	µg/L	0.01	AN420
p,p' - DDE ^	µg/L	0.01	AN420
p,p' - DDD ^	µg/L	0.01	AN420
Dieldrin ^	µg/L	0.002	AN420
alpha - Endosulfan ^	µg/L	0.005	AN420
beta - Endosulfan ^	µg/L	0.005	AN420
Methoxychlor ^	µg/L	0.1	AN420
HCB ^	µg/L	0.01	AN420
alpha - BHC ^	µg/L	0.05	AN420
beta - BHC ^	µg/L	0.05	AN420
delta - BHC ^	µg/L	0.05	AN420
Endrin ketone ^	µg/L	0.05	AN420
Dichlorvos ^	µg/L	0.5	AN420
Bromophos ethyl ^	µg/L	0.05	AN420
Methidathion ^	µg/L	0.05	AN420
Ethion ^	µg/L	0.05	AN420
Heptachlor epoxide ^	µg/L	0.02	AN420
Dicofol ^	µg/L	0.5	AN420
Diazinon ^	µg/L	0.01	AN420
Chlorpyrifos ^	µg/L	0.009	AN420

CLIENT: Alluvium Consulting (Queensland)

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TEST PARAMETERS	UNITS	LOR	METHOD
Malathion ^	µg/L	0.05	AN420
Fenitrothion ^	µg/L	0.2	AN420
Azinphos methyl (Guthion) ^	µg/L	0.05	AN420
Parathion ethyl ^	µg/L	0.01	AN420
Methyl Parathion ^	µg/L	0.01	AN420
<i>p</i> -Terphenyl-d14 ^	% Recovery		AN420

CLIENT: Alluvium Consulting (Queensland)

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TEST PARAMETERS	UNITS	LOR	METHOD
Date Extracted			
Date Analysed			
Total phenolics (as phenol)	mg/L	0.005	PEI-045
Mirex	µg/L	0.01	AN420
Toxaphene	µg/L	1	AN420
Demeton S Methyl ^	µg/L	0.5	AN420
Dimethoate ^	µg/L	0.15	AN420
Profenofos ^	µg/L	0.02	AN420
Temephos ^	µg/L	0.5	AN420

CLIENT: Alluvium Consulting (Queensland)
PROJECT: Alluvium - NRA

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LABORATORY REPORT

QUALITY CONTROL	UNITS	Blank	Duplicate Sm#	Duplicate Sample Duplicate	Spike Sm#	Spike Recovery
Date Extracted		24/03/2010	CE67025-1	24/03/2010 24/03/2010	Batch Spike	24/03/2010
Date Analysed		24/03/2010	CE67025-1	24/03/2010 24/03/2010	Batch Spike	24/03/2010
Chloride, Cl	mg/L	<2	CE67025-1	20 [NT]	Batch Spike	99%
Sulphate, SO ₄	mg/L	<2	CE67025-1	10 [NT]	Batch Spike	97%
Fluoride, F	mg/L	<0.05	CE67025-1	0.06 <0.05	Batch Spike	104%
Hardness (as CaCO ₃)	mg/L CaCO ₃	-	CE67025-1	22 22 RPD: 0	Batch Spike	-
Sodium Absorption Ratio		-	CE67025-1	1 1 RPD: 0	Batch Spike	-
Calcium, Ca	mg/L	<0.05	CE67025-1	4.2 4.3 RPD: 2	Batch Spike	102%
Magnesium, Mg	mg/L	<0.05	CE67025-1	2.7 2.7 RPD: 0	Batch Spike	105%
Sodium, Na	mg/L	<0.5	CE67025-1	15 15 RPD: 0	Batch Spike	99%
Potassium, K	mg/L	<0.05	CE67025-1	3.5 3.5 RPD: 0	Batch Spike	105%
Total Suspended Solids	mg/L	<5	CE67025-1	8 13 RPD: 48	Batch Spike	104%
Ammonia Nitrogen NH ₃ as N	mg/L	<0.005	CE67025-1	0.045 0.048 RPD: 6	Batch Spike	99%
Total Oxidised Nitrogen as N (NO ₂ +NO ₃)	mg/L	<0.005	CE67025-1	0.025 0.024 RPD: 4	Batch Spike	104%
Total Kjeldahl Nitrogen (as N)	mg/L	<0.05	CE67025-1	3.2 3.2 RPD: 0	Batch Spike	107%
Total Nitrogen	mg/L	-	CE67025-1	3.2 3.2 RPD: 0	Batch Spike	-
Nitrite (NO ₂) (as N)	mg/L	<0.005	CE67025-1	<0.005 <0.005	Batch Spike	99%
Nitrate (LIMS Calc)	mg/L	-	CE67025-1	0.025 0.024 RPD: 4	Batch Spike	-
Total Phosphorus	mg/L	<0.02	CE67025-1	0.23 0.23 RPD: 0	Batch Spike	102%
Triethylene Glycol ^^	mg/L	<10	[NT]	[NT]	Batch Spike	-
Triethylene Glycol ^^#	mg/L	<0.01	[NT]	[NT]	Batch Spike	-

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PROJECT: Alluvium - NRA

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LABORATORY REPORT

QUALITY CONTROL	UNITS	Blank	Duplicate Sm#	Duplicate Sample Duplicate	Spike Sm#	Spike Recovery
Date Extracted		24/03/2010	CE67025-1	24/03/2010 24/03/2010	Batch Spike	24/03/2010
Date Analysed		30/03/2010	CE67025-1	30/03/2010 30/03/2010	Batch Spike	30/03/2010
Total Arsenic, As	mg/L	<0.003	CE67025-1	<0.003 <0.003	Batch Spike	106%
Arsenic, As	mg/L	<0.003	CE67025-1	<0.003 <0.003	Batch Spike	106%
Total Boron, B	mg/L	<0.002	CE67025-1	0.025 0.024 RPD: 4	Batch Spike	93%
Boron, B	mg/L	<0.002	CE67025-1	0.025 0.032 RPD: 25	Batch Spike	93%
Total Cadmium, Cd	mg/L	<0.0001	CE67025-1	<0.0001 <0.0001	Batch Spike	100%
Cadmium, Cd	mg/L	<0.0001	CE67025-1	<0.0001 <0.0001	Batch Spike	100%
Total Cobalt, Co	mg/L	<0.001	CE67025-1	0.006 0.006 RPD: 0	Batch Spike	99%
Cobalt, Co	mg/L	<0.001	CE67025-1	0.006 0.006 RPD: 0	Batch Spike	99%
Total Copper, Cu	mg/L	<0.001	CE67025-1	<0.001 <0.001	Batch Spike	102%
Copper, Cu	mg/L	<0.001	CE67025-1	<0.001 <0.001	Batch Spike	102%
Total Mercury, Hg	mg/L	<0.0001	CE67025-1	<0.0001 <0.0001	Batch Spike	92%
Mercury, Hg (Filtered)	mg/L	<0.0001	CE67025-1	<0.0001 <0.0001	Batch Spike	92%
Total Nickel, Ni	mg/L	<0.002	CE67025-1	0.002 0.002 RPD: 0	Batch Spike	108%
Nickel, Ni	mg/L	<0.002	CE67025-1	0.003 0.003 RPD: 0	Batch Spike	108%
Total Lead, Pb	mg/L	<0.001	CE67025-1	0.001 0.001 RPD: 0	Batch Spike	99%
Lead, Pb	mg/L	<0.001	CE67025-1	0.001 <0.001	Batch Spike	99%
Total Selenium, Se	mg/L	<0.003	CE67025-1	<0.003 <0.003	Batch Spike	90%
Selenium, Se	mg/L	<0.003	CE67025-1	<0.003 <0.003	Batch Spike	90%
Total Vanadium, V	mg/L	<0.005	CE67025-1	0.010 0.010 RPD: 0	Batch Spike	97%

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LABORATORY REPORT

QUALITY CONTROL	UNITS	Blank	Duplicate Sm#	Duplicate Sample Duplicate	Spike Sm#	Spike Recovery
Vanadium, V	mg/L	<0.005	CE67025-1	0.005 0.005 RPD: 0	Batch Spike	97%
Total Zinc, Zn	mg/L	<0.005	CE67025-1	0.008 0.008 RPD: 0	Batch Spike	107%
Zinc, Zn	mg/L	<0.005	CE67025-1	0.006 0.005 RPD: 18	Batch Spike	107%
QUALITY CONTROL	UNITS	Blank	Duplicate Sm#	Duplicate Sample Duplicate	Spike Sm#	Spike Recovery
Date Analysed		-	[NT]	[NT]	Batch Spike	-
Date Extracted		-	[NT]	[NT]	Batch Spike	-
TRH C6 - C9 ^	µg/L	<20	[NT]	[NT]	Batch Spike	91%
TRH C10 - C14 ^	µg/L	<50	[NT]	[NT]	Batch Spike	71%
TRH C15 - C28 ^	µg/L	<100	[NT]	[NT]	Batch Spike	104%
TRH C29 - C36 ^	µg/L	<50	[NT]	[NT]	Batch Spike	110%
TRH Surrogate	%	95	[NT]	[NT]	Batch Spike	80%
QUALITY CONTROL	UNITS	Blank	Duplicate Sm#	Duplicate Sample Duplicate	Spike Sm#	Spike Recovery
Date Extracted		-	[NT]	[NT]	Batch Spike	-
Date Analysed		-	[NT]	[NT]	Batch Spike	-
Benzene ^	µg/L	<0.5	[NT]	[NT]	Batch Spike	98%
Toluene ^	µg/L	<0.5	[NT]	[NT]	Batch Spike	103%
Ethyl Benzene ^	µg/L	<0.5	[NT]	[NT]	Batch Spike	103%
m/p-Xylenes ^	µg/L	<1.0	[NT]	[NT]	Batch Spike	-
Styrene ^	µg/L	<0.5	[NT]	[NT]	Batch Spike	-
o-Xylene ^	µg/L	<0.5	[NT]	[NT]	Batch Spike	-
Isopropylbenzene (Cumene) ^	µg/L	<0.5	[NT]	[NT]	Batch Spike	-
n-Propylbenzene ^	µg/L	<0.5	[NT]	[NT]	Batch Spike	-

CLIENT: Alluvium Consulting (Queensland)

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QUALITY CONTROL	UNITS	Blank	Duplicate Sm#	Duplicate Sample Duplicate	Spike Sm#	Spike Recovery
1,3,5-Trimethylbenzene ^	µg/L	<0.5	[NT]	[NT]	Batch Spike	-
tert-Butylbenzene ^	µg/L	<0.5	[NT]	[NT]	Batch Spike	-
1,2,4-Trimethylbenzene ^	µg/L	<0.5	[NT]	[NT]	Batch Spike	-
sec-Butylbenzene ^	µg/L	<0.5	[NT]	[NT]	Batch Spike	-
p-Isopropyltoluene ^	µg/L	<0.5	[NT]	[NT]	Batch Spike	-
n-Butylbenzene ^	µg/L	<0.5	[NT]	[NT]	Batch Spike	-
Dibromofluoromethane ^	%	98	[NT]	[NT]	Batch Spike	99%
Toluene-d8 Surrogate 2 ^	%	102	[NT]	[NT]	Batch Spike	105%
4-Bromofluorobenzene Surrogate 3 ^	%	101	[NT]	[NT]	Batch Spike	106%
QUALITY CONTROL	UNITS	Blank	Duplicate Sm#	Duplicate Sample Duplicate	Spike Sm#	Spike Recovery
Date Extracted		-	[NT]	[NT]	Batch Spike	-
Date Analysed		-	[NT]	[NT]	Batch Spike	-
Naphthalene	µg/L	<0.2	[NT]	[NT]	Batch Spike	82%
2-Methylnaphthalene	µg/L	<0.2	[NT]	[NT]	Batch Spike	-
1-Methylnaphthalene	µg/L	<0.2	[NT]	[NT]	Batch Spike	-
Acenaphthylene	µg/L	<0.2	[NT]	[NT]	Batch Spike	-
Acenaphthene	µg/L	<0.2	[NT]	[NT]	Batch Spike	-
Fluorene	µg/L	<0.2	[NT]	[NT]	Batch Spike	96%
Phenanthrene	µg/L	<0.2	[NT]	[NT]	Batch Spike	101%
Anthracene	µg/L	<0.2	[NT]	[NT]	Batch Spike	-
Fluoranthene	µg/L	<0.2	[NT]	[NT]	Batch Spike	-
Pyrene	µg/L	<0.2	[NT]	[NT]	Batch Spike	107%
Benzo[a]anthracene	µg/L	<0.2	[NT]	[NT]	Batch Spike	-
Chrysene	µg/L	<0.2	[NT]	[NT]	Batch Spike	-
Benzo[b,k]fluoranthene	µg/L	<0.4	[NT]	[NT]	Batch Spike	-
Benzo[a]pyrene ^	µg/L	<0.005	[NT]	[NT]	Batch Spike	92%

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QUALITY CONTROL	UNITS	Blank	Duplicate Sm#	Duplicate Sample Duplicate	Spike Sm#	Spike Recovery
Indeno[123-cd]pyrene	µg/L	<0.2	[NT]	[NT]	Batch Spike	-
Dibenzo[ah]anthracene	µg/L	<0.2	[NT]	[NT]	Batch Spike	79%
Benzo[ghi]perylene	µg/L	<0.2	[NT]	[NT]	Batch Spike	-
Total PAH ^	µg/L	<3.0	[NT]	[NT]	Batch Spike	-
d14-p-terphenyl (Surrogate)	%	110	[NT]	[NT]	Batch Spike	96%
QUALITY CONTROL	UNITS	Blank	Duplicate Sm#	Duplicate Sample Duplicate	Spike Sm#	Spike Recovery
Date Extracted		-	[NT]	[NT]	Batch Spike	-
Date Analysed		-	[NT]	[NT]	Batch Spike	-
alpha (cis-) Chlordane ^	µg/L	<0.002	[NT]	[NT]	Batch Spike	106%
gamma (trans-) Chlordane ^	µg/L	<0.002	[NT]	[NT]	Batch Spike	104%
p,p' - DDT ^	µg/L	<0.002	[NT]	[NT]	Batch Spike	-
Endosulfan sulphate ^	µg/L	<0.005	[NT]	[NT]	Batch Spike	100%
Endrin ^	µg/L	<0.004	[NT]	[NT]	Batch Spike	115%
Heptachlor ^	µg/L	<0.01	[NT]	[NT]	Batch Spike	104%
Lindane ^	µg/L	<0.05	[NT]	[NT]	Batch Spike	100%
Aldrin ^	µg/L	<0.01	[NT]	[NT]	Batch Spike	112%
p,p' - DDE ^	µg/L	<0.01	[NT]	[NT]	Batch Spike	114%
p,p' - DDD ^	µg/L	<0.01	[NT]	[NT]	Batch Spike	-
Dieldrin ^	µg/L	<0.002	[NT]	[NT]	Batch Spike	93%
alpha - Endosulfan ^	µg/L	<0.005	[NT]	[NT]	Batch Spike	-
beta - Endosulfan ^	µg/L	<0.005	[NT]	[NT]	Batch Spike	-
Methoxychlor ^	µg/L	<0.10	[NT]	[NT]	Batch Spike	-
HCB ^	µg/L	<0.01	[NT]	[NT]	Batch Spike	91%
alpha - BHC ^	µg/L	<0.05	[NT]	[NT]	Batch Spike	-
beta - BHC ^	µg/L	<0.05	[NT]	[NT]	Batch Spike	-
delta - BHC ^	µg/L	<0.05	[NT]	[NT]	Batch Spike	-

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QUALITY CONTROL	UNITS	Blank	Duplicate Sm#	Duplicate Sample Duplicate	Spike Sm#	Spike Recovery
Endrin ketone ^	µg/L	<0.05	[NT]	[NT]	Batch Spike	-
Dichlorvos ^	µg/L	<0.5	[NT]	[NT]	Batch Spike	-
Bromophos ethyl ^	µg/L	<0.05	[NT]	[NT]	Batch Spike	-
Methidathion ^	µg/L	<0.05	[NT]	[NT]	Batch Spike	-
Ethion ^	µg/L	<0.05	[NT]	[NT]	Batch Spike	-
Heptachlor epoxide ^	µg/L	<0.02	[NT]	[NT]	Batch Spike	90%
Dicofol ^	µg/L	<0.50	[NT]	[NT]	Batch Spike	-
Diazinon ^	µg/L	<0.01	[NT]	[NT]	Batch Spike	87%
Chlorpyrifos ^	µg/L	<0.009	[NT]	[NT]	Batch Spike	101%
Malathion ^	µg/L	<0.05	[NT]	[NT]	Batch Spike	-
Fenitrothion ^	µg/L	<0.2	[NT]	[NT]	Batch Spike	-
Azinphos methyl (Guthion) ^	µg/L	<0.05	[NT]	[NT]	Batch Spike	-
Parathion ethyl ^	µg/L	<0.01	[NT]	[NT]	Batch Spike	89%
Methyl Parathion ^	µg/L	<0.010	[NT]	[NT]	Batch Spike	-
p-Terphenyl-d14 ^	% Recovery	111	[NT]	[NT]	Batch Spike	96%
QUALITY CONTROL	UNITS	Blank	Duplicate Sm#	Duplicate Sample Duplicate	Spike Sm#	Spike Recovery
Date Extracted		-	[NT]	[NT]	Batch Spike	-
Date Analysed		-	[NT]	[NT]	Batch Spike	-
Total phenolics (as phenol)	mg/L	<0.05	[NT]	[NT]	Batch Spike	96%
Mirex	µg/L	<0.01	[NT]	[NT]	Batch Spike	-
Toxaphene	µg/L	<1.0	[NT]	[NT]	Batch Spike	-
Demeton S Methyl ^	µg/L	<0.5	[NT]	[NT]	Batch Spike	-
Dimethoate ^	µg/L	<0.15	[NT]	[NT]	Batch Spike	-
Profenofos ^	µg/L	<0.02	[NT]	[NT]	Batch Spike	-
Temephos ^	µg/L	<0.5	[NT]	[NT]	Batch Spike	-

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QUALITY CONTROL	UNITS	Blank	Duplicate Sm#	Duplicate
				Sample Duplicate
Date Extracted		[NT]	CE67025-11	24/03/2010 24/03/2010
Date Analysed		[NT]	CE67025-11	24/03/2010 24/03/2010
Chloride, Cl	mg/L	[NT]	CE67025-11	20 [NT]
Sulphate, SO ₄	mg/L	[NT]	CE67025-11	6 [NT]
Fluoride, F	mg/L	[NT]	CE67025-11	0.05 0.05 RPD: 0
Hardness (as CaCO ₃)	mg/L CaCO ₃	[NT]	CE67025-11	30 30 RPD: 0
Sodium Absorption Ratio		[NT]	CE67025-11	2 2 RPD: 0
Calcium, Ca	mg/L	[NT]	CE67025-11	7.1 7.0 RPD: 1
Magnesium, Mg	mg/L	[NT]	CE67025-11	3.1 3.0 RPD: 3
Sodium, Na	mg/L	[NT]	CE67025-11	21 22 RPD: 5
Potassium, K	mg/L	[NT]	CE67025-11	5.8 5.8 RPD: 0
Total Suspended Solids	mg/L	[NT]	CE67025-11	<5 <5
Ammonia Nitrogen NH ₃ as N	mg/L	[NT]	CE67025-11	0.056 0.058 RPD: 4
Total Oxidised Nitrogen as N (NO ₂ +NO ₃)	mg/L	[NT]	CE67025-11	0.036 0.032 RPD: 12
Total Kjeldahl Nitrogen (as N)	mg/L	[NT]	CE67025-11	1.2 1.2 RPD: 0
Total Nitrogen	mg/L	[NT]	CE67025-11	1.2 1.2 RPD: 0
Nitrite (NO ₂) (as N)	mg/L	[NT]	CE67025-11	<0.005 <0.005
Nitrate (LIMS Calc)	mg/L	[NT]	CE67025-11	0.036 0.032 RPD: 12
Total Phosphorus	mg/L	[NT]	CE67025-11	0.08 0.08 RPD: 0
Triethylene Glycol ^^	mg/L	[NT]	[NT]	[NT]
Triethylene Glycol ^^#	mg/L	[NT]	[NT]	[NT]

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QUALITY CONTROL	UNITS	Blank	Duplicate Sm#	Duplicate
				Sample Duplicate
Date Extracted		[NT]	CE67025-11	24/03/2010 24/03/2010
Date Analysed		[NT]	CE67025-11	30/03/2010 30/03/2010
Total Arsenic, As	mg/L	[NT]	CE67025-11	<0.003 <0.003
Arsenic, As	mg/L	[NT]	CE67025-11	<0.003 <0.003
Total Boron, B	mg/L	[NT]	CE67025-11	0.048 0.049 RPD: 2
Boron, B	mg/L	[NT]	CE67025-11	0.047 0.045 RPD: 4
Total Cadmium, Cd	mg/L	[NT]	CE67025-11	<0.0001 <0.0001
Cadmium, Cd	mg/L	[NT]	CE67025-11	<0.0001 <0.0001
Total Cobalt, Co	mg/L	[NT]	CE67025-11	0.002 0.002 RPD: 0
Cobalt, Co	mg/L	[NT]	CE67025-11	<0.001 <0.001
Total Copper, Cu	mg/L	[NT]	CE67025-11	0.002 <0.001
Copper, Cu	mg/L	[NT]	CE67025-11	0.001 0.002 RPD: 67
Total Mercury, Hg	mg/L	[NT]	CE67025-11	<0.0001 <0.0001
Mercury, Hg (Filtered)	mg/L	[NT]	CE67025-11	<0.0001 <0.0001
Total Nickel, Ni	mg/L	[NT]	CE67025-11	0.002 0.003 RPD: 40
Nickel, Ni	mg/L	[NT]	CE67025-11	0.002 0.002 RPD: 0
Total Lead, Pb	mg/L	[NT]	CE67025-11	0.002 0.002 RPD: 0
Lead, Pb	mg/L	[NT]	CE67025-11	0.001 0.002 RPD: 67
Total Selenium, Se	mg/L	[NT]	CE67025-11	<0.003 <0.003
Selenium, Se	mg/L	[NT]	CE67025-11	<0.003 <0.003
Total Vanadium, V	mg/L	[NT]	CE67025-11	0.011 0.011 RPD: 0
Vanadium, V	mg/L	[NT]	CE67025-11	0.006 0.006 RPD: 0

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QUALITY CONTROL	UNITS	Blank	Duplicate Sm#	Duplicate
				Sample Duplicate
Total Zinc, Zn	mg/L	[NT]	CE67025-11	0.005 0.005 RPD: 0
Zinc, Zn	mg/L	[NT]	CE67025-11	0.005 0.005 RPD: 0

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NOTES:

LOR - Limit of Reporting.

This test is not covered by our current NATA accreditation.

^^ This analysis was determined at our Coburg Laboratory, their reference ME102364.

##Method from Rayment & Higginson - "Australian Laboratory Handbook of Soil and Water Chemical Methods".

^ This analysis was determined at our Perth Laboratory, their reference PE029441.

SVOC Surrogate recoveries were low for samples 10, 88, 119, 127 due to sample emulsification during extraction.

No surrogate reported for the TRH due to analysing samples for low level SVOCs.

Samples analysed as received.

Solid samples expressed on a dry weight basis.

Analysis Date: Between 23/03/10 and 11/05/11

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Geneva Legal Comment

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ISO 17025

Unless otherwise stated the results shown in this test report only refer to the sample(s) tested and such sample(s) are only retained for 60 days only. This document cannot be reproduced except in full, without prior approval of the Company.

Attachment C
QA Summary

AC1 Data Quality Assurance, October 2009 Data Set

AC1.1 Reproducibility assessment method

NRA uses a reproducibility assessment method that is in accordance with AS4482.1-2005 Guide to the Investigation and Sampling of Sites with Potentially Contaminated Soil – Part 1: Non-Volatile and Semi-Volatile Compounds (Standards Australia 2005⁹) and ALS Method QWI-EN/38 for laboratory duplicates.

The reproducibility of the analytical data is assessed using replicate sample sets. The analytical values from the sample and its replicate are compared by calculating the Relative Percent Difference (RPD, see equation below) for each analyte.

$$\text{RPD for Analyte } x = \frac{[x]_{\text{Sample}} - [x]_{\text{Replicate}}}{[x]_{\text{Mean of Sample and Replicate}}} \times 100$$

The RPD is then used to assess reproducibility using the Limit Of Reporting (LOR) to identify a threshold of which the RPD must be less for the analysis to have valid reproducibility. The thresholds are:

If values are less than 10 times the LOR, there is no RPD threshold (ie reproducibility is valid).

If values are between 10 and 20 times the limit of reporting, the RPD threshold is 50.

If values are 20 or more times the limit of reporting, the RPD threshold is 20.

Where values from the replicate set straddle two thresholds, the threshold indicated by the lowest value is used.

Replicate sets that report two values below the LOR are considered to have valid reproducibility. Replicate sets that report a single value below the LOR and a second value 10 or more times greater than the LOR are not considered to have valid reproducibility.

AC1.2 Analytical reproducibility of water quality data

Water sample reproducibility data are presented in Table AC1-1. All RPDs were within the thresholds required for valid reproducibility. Considering this, reproducibility for the water samples is considered satisfactory.

Table AC1-1. Reproducibility of water sample analytical data as indicated by duplicate samples

Analyte grouping/Analyte	Units	LOR	Sample				RPD/Assessment
			14	QA	QA1	QA2	
Sodium Absorption Ratio (SAR)	-	0.01	2.64	2.77	---	---	5 / OK
Suspended Solids (SS)	mg/L	5	36	29	---	---	22 / OK^
Total Hardness as CaCO3	mg/L	1	11	10	---	---	10 / OK
Free Cyanide	mg/L	0.004	<0.004	<0.004	---	---	ND / OK
Fluoride	mg/L	0.1	<0.1	<0.1	---	---	ND / OK
Sulfate as SO ₄ ²⁻	mg/L	1	2	2	---	---	ND / OK
Chloride	mg/L	1	16	16	---	---	ND / OK
Calcium	mg/L	1	2	1	---	---	67 / OK^
Magnesium	mg/L	1	2	2	---	---	ND / OK
Sodium	mg/L	1	20	20	---	---	ND / OK
Metals - Dissolved							
Selenium	µg/L	0.2	---	---	0.4	0.4	ND / OK

⁹ Standards Australia (2005) AS4482.1-2005 *Guide to the Investigation and Sampling of Sites with Potentially Contaminated Soil – Part 1: Non-Volatile and Semi-Volatile Compounds*, Standards Australia, Sydney.

Analyte grouping/Analyte	Units	LOR	Sample				RPD/Assessment
			14	QA	QA1	QA2	
Arsenic	µg/L	0.2	---	---	0.6	0.6	ND / OK
Boron	µg/L	5	---	---	82	83	1 / OK
Cadmium	µg/L	0.05	---	---	<0.05	<0.05	ND / OK
Cobalt	µg/L	0.1	---	---	0.4	0.4	ND / OK
Copper	µg/L	0.5	---	---	0.7	0.7	ND / OK
Lead	µg/L	0.1	---	---	<0.1	<0.1	ND / OK
Nickel	µg/L	0.5	---	---	1.7	1.6	6 / OK^
Vanadium	µg/L	0.2	---	---	4.7	4.9	4 / OK
Zinc	µg/L	1	---	---	6	5	18 / OK^
Mercury	mg/L	0.0001	---	---	<0.0001	<0.0001	ND / OK
Metals - Total							
Selenium	µg/L	0.2	0.7	0.6	---	---	15 / OK^
Arsenic	µg/L	0.2	6	6.1	---	---	2 / OK^
Boron	µg/L	5	20	19	---	---	5 / OK^
Cadmium	µg/L	0.05	<0.05	<0.05	---	---	ND / OK
Cobalt	µg/L	0.1	10.4	11.1	---	---	7 / OK^
Copper	µg/L	0.5	7.3	7.5	---	---	3 / OK
Lead	µg/L	0.1	9.4	9.5	---	---	1 / OK
Nickel	µg/L	0.5	8	8.5	---	---	6 / OK
Zinc	µg/L	1	42	41	---	---	2 / OK
Mercury	mg/L	0.0001	<0.0001	<0.0001	---	---	ND / OK
Nutrients							
Ammonia as N	mg/L	0.01	0.13	0.14	---	---	7 / OK
Nitrite as N	mg/L	0.01	<0.01	0.01	---	---	67 / OK^
Nitrate as N	mg/L	0.01	0.06	0.23	---	---	117 / OK^
Nitrite + Nitrate as N	mg/L	0.01	0.06	0.24	---	---	120 / OK^
Total Nitrogen as N	mg/L	0.05	1.11	1.14	---	---	3 / OK
Total Phosphorus as P	mg/L	0.005	0.431	0.382	---	---	12 / OK
Monocyclic Aromatic Hydrocarbons							
Benzene	µg/L	1	<1	<1	---	---	ND / OK
Toluene	µg/L	2	<2	<2	---	---	ND / OK
Ethylbenzene	µg/L	2	<2	<2	---	---	ND / OK
meta- & para-Xylene	µg/L	2	<2	<2	---	---	ND / OK
Styrene	µg/L	5	<5	<5	---	---	ND / OK
ortho-Xylene	µg/L	2	<2	<2	---	---	ND / OK
Isopropylbenzene	µg/L	5	<5	<5	---	---	ND / OK
n-Propylbenzene	µg/L	5	<5	<5	---	---	ND / OK
1,3,5-Trimethylbenzene	µg/L	5	<5	<5	---	---	ND / OK
sec-Butylbenzene	µg/L	5	<5	<5	---	---	ND / OK
1,2,4-Trimethylbenzene	µg/L	5	<5	<5	---	---	ND / OK
tert-Butylbenzene	µg/L	5	<5	<5	---	---	ND / OK
p-Isopropyltoluene	µg/L	5	<5	<5	---	---	ND / OK
n-Butylbenzene	µg/L	5	<5	<5	---	---	ND / OK
Polynuclear Aromatic Hydrocarbons							
Naphthalene	µg/L	0.02	<0.02	<0.02	---	---	ND / OK
Acenaphthylene	µg/L	0.02	<0.02	<0.02	---	---	ND / OK
Acenaphthene	µg/L	0.02	<0.02	<0.02	---	---	ND / OK
Fluorene	µg/L	0.02	<0.02	<0.02	---	---	ND / OK
Phenanthrene	µg/L	0.02	<0.02	<0.02	---	---	ND / OK
Anthracene	µg/L	0.02	<0.02	<0.02	---	---	ND / OK
Fluoranthene	µg/L	0.02	<0.02	<0.02	---	---	ND / OK
Pyrene	µg/L	0.02	<0.02	<0.02	---	---	ND / OK
Benz(a)anthracene	µg/L	0.02	<0.02	<0.02	---	---	ND / OK
Chrysene	µg/L	0.02	<0.02	<0.02	---	---	ND / OK
Benzo(b)fluoranthene	µg/L	0.02	<0.02	<0.02	---	---	ND / OK
Benzo(k)fluoranthene	µg/L	0.02	<0.02	<0.02	---	---	ND / OK
Benzo(a)pyrene	µg/L	0.005	<0.005	<0.005	---	---	ND / OK
Indeno(1.2.3.cd)pyrene	µg/L	0.02	<0.02	<0.02	---	---	ND / OK
Dibenz(a,h)anthracene	µg/L	0.02	<0.02	<0.02	---	---	ND / OK

Analyte			Sample				RPD/Assessment
grouping/Analyte	Units	LOR	14	QA	QA1	QA2	
Benzo(g,h,i)perylene	µg/L	0.02	<0.02	<0.02	---	---	ND / OK
Total PAH	µg/L	0.005	<0.005	<0.005	---	---	ND / OK
Total Petroleum Hydrocarbons							
C6 - C9 Fraction	µg/L	20	<20	<20	---	---	ND / OK
C10 - C14 Fraction	µg/L	50	<50	<50	---	---	ND / OK
C15 - C28 Fraction	µg/L	100	<100	<100	---	---	ND / OK
C29 - C36 Fraction	µg/L	50	<50	<50	---	---	ND / OK
C10 - C36 Fraction (sum)	µg/L	50	<50	<50	---	---	ND / OK
Organophosphorus Pesticides							
Bromophos-ethyl	µg/L	0.1	<0.10	<0.10	---	---	ND / OK
Carbophenothion	µg/L	0.1	<0.10	<0.10	---	---	ND / OK
Chlorfenvinphos (E)	µg/L	0.1	<0.10	<0.10	---	---	ND / OK
Chlorfenvinphos (Z)	µg/L	0.1	<0.10	<0.10	---	---	ND / OK
Chlorpyrifos	µg/L	0.05	<0.050	<0.050	---	---	ND / OK
Chlorpyrifos-methyl	µg/L	0.1	<0.10	<0.10	---	---	ND / OK
Demeton-S-methyl	µg/L	0.1	<0.10	<0.10	---	---	ND / OK
Diazinon	µg/L	0.1	<0.10	<0.10	---	---	ND / OK
Dichlorvos	µg/L	0.1	<0.10	<0.10	---	---	ND / OK
Dimethoate	µg/L	0.1	<0.10	<0.10	---	---	ND / OK
Ethion	µg/L	0.1	<0.10	<0.10	---	---	ND / OK
Fenamiphos	µg/L	0.1	<0.10	<0.10	---	---	ND / OK
Fenthion	µg/L	0.1	<0.10	<0.10	---	---	ND / OK
Malathion	µg/L	0.1	<0.10	<0.10	---	---	ND / OK
Azinphos Methyl	µg/L	0.1	<0.10	<0.10	---	---	ND / OK
Monocrotophos	µg/L	0.1	<0.10	<0.10	---	---	ND / OK
Parathion	µg/L	0.1	<0.10	<0.10	---	---	ND / OK
Parathion-methyl	µg/L	0.1	<0.10	<0.10	---	---	ND / OK
Pirimphos-ethyl	µg/L	0.1	<0.10	<0.10	---	---	ND / OK
Prothiofos	µg/L	0.1	<0.10	<0.10	---	---	ND / OK
Organochlorine Pesticides							
Aldrin	µg/L	0.002	<0.002	<0.002	---	---	ND / OK
alpha-BHC	µg/L	0.002	<0.002	<0.002	---	---	ND / OK
beta-BHC	µg/L	0.002	<0.002	<0.002	---	---	ND / OK
delta-BHC	µg/L	0.002	<0.002	<0.002	---	---	ND / OK
4,4'-DDD	µg/L	0.002	<0.002	<0.002	---	---	ND / OK
4,4'-DDE	µg/L	0.002	<0.002	<0.002	---	---	ND / OK
4,4'-DDT	µg/L	0.002	<0.002	<0.002	---	---	ND / OK
DDT (total)	µg/L	0.002	<0.002	<0.002	---	---	ND / OK
Dieldrin	µg/L	0.002	<0.002	<0.002	---	---	ND / OK
alpha-Endosulfan	µg/L	0.002	<0.002	<0.002	---	---	ND / OK
beta-Endosulfan	µg/L	0.002	<0.002	<0.002	---	---	ND / OK
Endosulfan sulfate	µg/L	0.002	<0.002	<0.002	---	---	ND / OK
Endosulfan (sum)	µg/L	0.002	<0.002	<0.002	---	---	ND / OK
Endrin	µg/L	0.002	<0.002	<0.002	---	---	ND / OK
Endrin aldehyde	µg/L	0.002	<0.002	<0.002	---	---	ND / OK
Endrin ketone	µg/L	0.002	<0.002	<0.002	---	---	ND / OK
Heptachlor	µg/L	0.001	<0.001	<0.001	---	---	ND / OK
Heptachlor epoxide	µg/L	0.002	<0.002	<0.002	---	---	ND / OK
Hexachlorobenzene (HCB)	µg/L	0.002	<0.002	<0.002	---	---	ND / OK
gamma-BHC	µg/L	0.002	<0.002	<0.002	---	---	ND / OK
Methoxychlor	µg/L	0.002	<0.002	<0.002	---	---	ND / OK
cis-Chlordane	µg/L	0.002	<0.002	<0.002	---	---	ND / OK
trans-Chlordane	µg/L	0.002	<0.002	<0.002	---	---	ND / OK
Total Chlordane (sum)	µg/L	0.002	<0.002	<0.002	---	---	ND / OK
Oxychlordane	µg/L	0.002	<0.002	<0.002	---	---	ND / OK
Polychlorinated							

Analyte grouping/Analyte	Units	LOR	Sample				RPD/Assessment
			14	QA	QA1	QA2	
Biphenyls (as Aroclors)							
Total Polychlorinated biphenyls	µg/L	0.05	<0.05	<0.05	---	---	ND / OK
Aroclor 1016	µg/L	0.05	<0.05	<0.05	---	---	ND / OK
Aroclor 1221	µg/L	0.05	<0.05	<0.05	---	---	ND / OK
Aroclor 1232	µg/L	0.05	<0.05	<0.05	---	---	ND / OK
Aroclor 1242	µg/L	0.05	<0.05	<0.05	---	---	ND / OK
Aroclor 1248	µg/L	0.05	<0.05	<0.05	---	---	ND / OK
Aroclor 1254	µg/L	0.05	<0.05	<0.05	---	---	ND / OK
Aroclor 1260	µg/L	0.05	<0.05	<0.05	---	---	ND / OK
Total Phenol	mg/L	0.05	0.18	0.33	---	---	59 / OK [^]

ND = No Difference

IR = Insufficient Reproducibility

[^] Water quality values are less than 10 times the LOR, therefore there is no RPD threshold (*ie* reproducibility is valid).

AC1-3 Water sample contamination

All analytes reported at values less than the LOR in the field blank with the exception of ammonia, total oxidised nitrogen and nitrate (Table AC1-2). Ammonia and total oxidised nitrogen concentrations were low, but detectable (0.03 mg/L and 0.01 mg/L). Nitrate was also reported in the blank (it is calculated from the total oxidised nitrogen concentration (*ie* nitrate = total oxidised nitrogen – nitrite)). The concentrations of ammonia and total oxidised nitrogen (and nitrate) are not considered significant, and therefore, the samples are deemed to be free of gross contamination.

Table AC1-2. Water sample contamination as indicated by field blank samples

Analyte grouping/Analyte	Units	LOR	Field Blank (B)
Sodium Absorption Ratio (SAR)	-	0.01	<0.01
Suspended Solids (SS)	mg/L	5	<5
Total Hardness as CaCO ₃	mg/L	1	<1
Free Cyanide	mg/L	0.004	<0.004
Fluoride	mg/L	0.1	<0.1
Sulfate as SO ₄ ²⁻	mg/L	1	<1
Chloride	mg/L	1	<1
Dissolved Major Cations			
Calcium	mg/L	1	<1
Magnesium	mg/L	1	<1
Sodium	mg/L	1	<1
Metals – Dissolved			
Selenium	µg/L	0.2	<0.2
Arsenic	µg/L	0.2	<0.2
Boron	µg/L	5	<5
Cadmium	µg/L	0.05	<0.05
Cobalt	µg/L	0.1	<0.1
Copper	µg/L	0.5	<0.5
Lead	µg/L	0.1	<0.1
Nickel	µg/L	0.5	<0.5
Vanadium	µg/L	0.2	<0.2
Zinc	µg/L	1	<1
Mercury	mg/L	0.0001	<0.0001
Metals – Total			
Selenium	µg/L	0.2	<0.2
Arsenic	µg/L	0.2	<0.2
Boron	µg/L	5	<5
Cadmium	µg/L	0.05	<0.05
Cobalt	µg/L	0.1	<0.1
Copper	µg/L	0.5	<0.5
Lead	µg/L	0.1	<0.1

Analyte grouping/Analyte	Units	LOR	Field Blank (B)
Nickel	µg/L	0.5	<0.5
Zinc	µg/L	1	<1
Mercury	mg/L	0.0001	<0.0001
Nutrients			
Ammonia as N	mg/L	0.01	0.03
Nitrite as N	mg/L	0.01	<0.01
Nitrate as N	mg/L	0.01	0.01
Nitrite + Nitrate as N	mg/L	0.01	0.01
Total Nitrogen as N	mg/L	0.05	<0.05
Total Phosphorus as P	mg/L	0.005	<0.005
Monocyclic Aromatic Hydrocarbons			
Benzene	µg/L	1	<1
Toluene	µg/L	2	<2
Ethylbenzene	µg/L	2	<2
meta- & para-Xylene	µg/L	2	<2
Styrene	µg/L	5	<5
ortho-Xylene	µg/L	2	<2
Isopropylbenzene	µg/L	5	<5
n-Propylbenzene	µg/L	5	<5
1,3,5-Trimethylbenzene	µg/L	5	<5
sec-Butylbenzene	µg/L	5	<5
1,2,4-Trimethylbenzene	µg/L	5	<5
tert-Butylbenzene	µg/L	5	<5
p-Isopropyltoluene	µg/L	5	<5
n-Butylbenzene	µg/L	5	<5
Polynuclear Aromatic Hydrocarbons			
Naphthalene	µg/L	0.02	<0.02
Acenaphthylene	µg/L	0.02	<0.02
Acenaphthene	µg/L	0.02	<0.02
Fluorene	µg/L	0.02	<0.02
Phenanthrene	µg/L	0.02	<0.02
Anthracene	µg/L	0.02	<0.02
Fluoranthene	µg/L	0.02	<0.02
Pyrene	µg/L	0.02	<0.02
Benz(a)anthracene	µg/L	0.02	<0.02
Chrysene	µg/L	0.02	<0.02
Benzo(b)fluoranthene	µg/L	0.02	<0.02
Benzo(k)fluoranthene	µg/L	0.02	<0.02
Benzo(a)pyrene	µg/L	0.005	<0.005
Indeno(1.2.3.cd)pyrene	µg/L	0.02	<0.02
Dibenz(a,h)anthracene	µg/L	0.02	<0.02
Benzo(g,h,i)perylene	µg/L	0.02	<0.02
Total PAH	µg/L	0.005	<0.005
Total Petroleum Hydrocarbons			
C6 – C9 Fraction	µg/L	20	<20
C10 – C14 Fraction	µg/L	50	<50
C15 – C28 Fraction	µg/L	100	<100
C29 – C36 Fraction	µg/L	50	<50
C10 – C36 Fraction (sum)	µg/L	50	<50
Organophosphorus Pesticides			
Bromophos-ethyl	µg/L	0.1	<0.10
Carbophenothion	µg/L	0.1	<0.10
Chlorfenvinphos (E)	µg/L	0.1	<0.10
Chlorfenvinphos (Z)	µg/L	0.1	<0.10
Chlorpyrifos	µg/L	0.05	<0.050
Chlorpyrifos-methyl	µg/L	0.1	<0.10
Demeton-S-methyl	µg/L	0.1	<0.10
Diazinon	µg/L	0.1	<0.10
Dichlorvos	µg/L	0.1	<0.10

Analyte grouping/Analyte	Units	LOR	Field Blank (B)
Dimethoate	µg/L	0.1	<0.10
Ethion	µg/L	0.1	<0.10
Fenamiphos	µg/L	0.1	<0.10
Fenthion	µg/L	0.1	<0.10
Malathion	µg/L	0.1	<0.10
Azinphos Methyl	µg/L	0.1	<0.10
Monocrotophos	µg/L	0.1	<0.10
Parathion	µg/L	0.1	<0.10
Parathion-methyl	µg/L	0.1	<0.10
Pirimphos-ethyl	µg/L	0.1	<0.10
Prothiofos	µg/L	0.1	<0.10
Organochlorine Pesticides			
Aldrin	µg/L	0.002	<0.002
alpha-BHC	µg/L	0.002	<0.002
beta-BHC	µg/L	0.002	<0.002
delta-BHC	µg/L	0.002	<0.002
4,4'-DDD	µg/L	0.002	<0.002
4,4'-DDE	µg/L	0.002	<0.002
4,4'-DDT	µg/L	0.002	<0.002
DDT (total)	µg/L	0.002	<0.002
Dieldrin	µg/L	0.002	<0.002
alpha-Endosulfan	µg/L	0.002	<0.002
beta-Endosulfan	µg/L	0.002	<0.002
Endosulfan sulfate	µg/L	0.002	<0.002
Endosulfan (sum)	µg/L	0.002	<0.002
Endrin	µg/L	0.002	<0.002
Endrin aldehyde	µg/L	0.002	<0.002
Endrin ketone	µg/L	0.002	<0.002
Heptachlor	µg/L	0.001	<0.001
Heptachlor epoxide	µg/L	0.002	<0.002
Hexachlorobenzene (HCB)	µg/L	0.002	<0.002
gamma-BHC	µg/L	0.002	<0.002
Methoxychlor	µg/L	0.002	<0.002
cis-Chlordane	µg/L	0.002	<0.002
trans-Chlordane	µg/L	0.002	<0.002
Total Chlordane (sum)	µg/L	0.002	<0.002
Oxychlordane	µg/L	0.002	<0.002
Polychlorinated Biphenyls (as Aroclors)			
Total Polychlorinated biphenyls	µg/L	0.05	<0.05
Aroclor 1016	µg/L	0.05	<0.05
Aroclor 1221	µg/L	0.05	<0.05
Aroclor 1232	µg/L	0.05	<0.05
Aroclor 1242	µg/L	0.05	<0.05
Aroclor 1248	µg/L	0.05	<0.05
Aroclor 1254	µg/L	0.05	<0.05
Aroclor 1260	µg/L	0.05	<0.05
Total Phenol	mg/L	0.05	<0.05

AC2 Data Quality Assurance, November 2009 Data Set

AC2.1 Reproducibility assessment method

NRA uses a reproducibility assessment method that is in accordance with AS4482.1-2005 Guide to the Investigation and Sampling of Sites with Potentially Contaminated Soil – Part 1: Non-Volatile and Semi-Volatile Compounds (Standards Australia 2005¹⁰) and ALS Method QWI-EN/38 for laboratory duplicates.

The reproducibility of the analytical data is assessed using replicate sample sets. The analytical values from the sample and its replicate are compared by calculating the Relative Percent Difference (RPD, see equation below) for each analyte.

$$\text{RPD for Analyte } x = \frac{[x]_{\text{Sample}} - [x]_{\text{Replicate}}}{[x]_{\text{Mean of Sample and Replicate}}} \times 100$$

The RPD is then used to assess reproducibility using the Limit Of Reporting (LOR) to identify a threshold of which the RPD must be less for the analysis to have valid reproducibility. The thresholds are:

If the smallest value is less than 10 times the LOR:

- AND the largest value is less than 10 times the smallest value, then there is no RPD threshold the reproducibility is considered valid.
- AND the largest value is greater than 10 times the smallest value, reproducibility for the analyte is not considered valid.

If the smallest value is between 10 and 20 times the limit of reporting, the RPD threshold is 50.

If both values are 20 or more times the limit of reporting, the RPD threshold is 20.

Replicate sets that report two values below the LOR are considered to have valid reproducibility. Replicate sets that report a single value below the LOR and a second value 10 or more times greater than the LOR are not considered to have valid reproducibility.

AC2.2 Analytical reproducibility of water quality data

Reproducibility of the analytical data was measured using a replicate sample set (Samples 20 (ALS Laboratory ID EB0918276-001, ACS Laboratory ID EB0918276-1) and Sample QA (ALS Laboratory ID EB0918276002, ACS Laboratory ID EB0918276-2). Replicate sample set data are presented in Table AC2-1. All analytes reported valid reproducibility. Considering this, reproducibility for the water samples is considered satisfactory. Note turbidity was not analysed in the replicate set.

Table AC2-1. *Reproducibility of water sample analytical data as indicated by replicate sample set (Samples QA and 20)*

Analyte grouping/Analyte	Units	LOR	QA	20	RPD / Assessment
Sodium Absorption Ratio	-	0.01	4.15	3.94	5 / OK
Suspended Solids	mg/L	5	123	131	6 / OK
Total Hardness as CaCO ₃	mg/L	1	18	22	20 / OK
Sulfate as SO ₄ ²⁻	mg/L	1	12	13	8 / OK
Chloride	mg/L	1	46	46	0 / OK

¹⁰ Standards Australia (2005) AS4482.1-2005 *Guide to the Investigation and Sampling of Sites with Potentially Contaminated Soil – Part 1: Non-Volatile and Semi-Volatile Compounds*, Standards Australia, Sydney.

Analyte grouping/Analyte	Units	LOR	QA	20	RPD / Assessment
Fluoride	mg/L	0.1	<0.1	<0.1	- / OK
Calcium	mg/L	1	2	2	0 / OK
Magnesium	mg/L	1	3	4	29 / OK
Sodium	mg/L	1	40	42	5 / OK
Tri-Ethylene Glycol	mg/L	5	<5	<5	- / OK
Trace Elements - Dissolved					
Selenium - Dissolved	µg/L	0.2	<0.2	<0.2	- / OK
Arsenic - Dissolved	µg/L	0.2	0.5	0.5	0 / OK
Boron – Dissolved	µg/L	5	14	15	7 / OK
Cadmium - Dissolved	µg/L	0.05	<0.05	<0.05	- / OK
Cobalt – Dissolved	µg/L	0.1	0.7	0.7	0 / OK
Copper - Dissolved	µg/L	0.5	<0.5	<0.5	- / OK
Lead – Dissolved	µg/L	0.1	<0.1	<0.1	- / OK
Mercury - Dissolved	mg/L	0.0001	<0.0001	<0.0001	- / OK
Nickel – Dissolved	µg/L	0.5	<0.5	<0.5	- / OK
Vanadium - Dissolved	µg/L	0.2	0.4	0.4	0 / OK
Zinc – Dissolved	µg/L	1	2	2	0 / OK
Trace Elements - Dissolved					
Selenium - Total	µg/L	0.2	0.3	0.3	0 / OK
Arsenic - Total	µg/L	0.2	1.4	1.3	7 / OK
Boron - Total	µg/L	5	10	10	0 / OK
Cadmium - Total	µg/L	0.05	<0.05	<0.05	- / OK
Cobalt - Total	µg/L	0.1	4.5	4.3	5 / OK
Copper - Total	µg/L	0.5	4.1	4.0	2 / OK
Lead - Total	µg/L	0.1	6.7	6.3	6 / OK
Mercury - Total	mg/L	0.0001	<0.0001	<0.0001	- / OK
Nickel - Total	µg/L	0.5	2	1.9	5 / OK
Vanadium - Total	µg/L	0.2	22.7	21.4	6 / OK
Zinc - Total	µg/L	1	14	14	0 / OK
Nutrients					
Nitrite as N	mg/L	0.01	<0.01	<0.01	- / OK
Nitrate as N	mg/L	0.01	0.06	0.07	15 / OK
Nitrite + Nitrate as N	mg/L	0.01	0.06	0.07	15 / OK
Ammonia as N	mg/L	0.005	0.12	0.12	0 / OK
Total Nitrogen as N	mg/L	0.05	0.43	0.43	0 / OK
Total Phosphorus as P	mg/L	0.005	1.22	1.08	12 / OK
Monocyclic Aromatic Hydrocarbons					
Benzene	µg/L	1	<1	<1	- / OK
Toluene	µg/L	2	<2	<2	- / OK
Ethylbenzene	µg/L	2	<2	<2	- / OK
meta- & para-Xylene	µg/L	2	<2	<2	- / OK
Styrene	µg/L	5	<5	<5	- / OK
ortho-Xylene	µg/L	2	<2	<2	- / OK
Isopropylbenzene	µg/L	5	<5	<5	- / OK
n-Propylbenzene	µg/L	5	<5	<5	- / OK
1.3.5-Trimethylbenzene	µg/L	5	<5	<5	- / OK
sec-Butylbenzene	µg/L	5	<5	<5	- / OK
1.2.4-Trimethylbenzene	µg/L	5	<5	<5	- / OK
tert-Butylbenzene	µg/L	5	<5	<5	- / OK
p-Isopropyltoluene	µg/L	5	<5	<5	- / OK
n-Butylbenzene	µg/L	5	<5	<5	- / OK
Polynuclear Aromatic Hydrocarbons					

Analyte grouping/Analyte	Units	LOR	QA	20	RPD / Assessment
Naphthalene	µg/L	0.02	<0.02	0.08	- / OK
Acenaphthylene	µg/L	0.02	<0.02	<0.02	- / OK
Acenaphthene	µg/L	0.02	<0.02	<0.02	- / OK
Fluorene	µg/L	0.02	<0.02	<0.02	- / OK
Phenanthrene	µg/L	0.02	<0.02	<0.02	- / OK
Anthracene	µg/L	0.02	<0.02	<0.02	- / OK
Fluoranthene	µg/L	0.02	<0.02	<0.02	- / OK
Pyrene	µg/L	0.02	<0.02	<0.02	- / OK
Benz(a)anthracene	µg/L	0.02	<0.02	<0.02	- / OK
Chrysene	µg/L	0.02	<0.02	<0.02	- / OK
Benzo(b)fluoranthene	µg/L	0.02	<0.02	<0.02	- / OK
Benzo(k)fluoranthene	µg/L	0.02	<0.02	<0.02	- / OK
Benzo(a)pyrene	µg/L	0.005	<0.005	<0.005	- / OK
Indeno(1.2.3.cd)pyrene	µg/L	0.02	<0.02	<0.02	- / OK
Dibenz(a,h)anthracene	µg/L	0.02	<0.02	<0.02	- / OK
Benzo(g,h,i)perylene	µg/L	0.02	<0.02	<0.02	- / OK
Total PAH	µg/L	0.005	<0.005	<0.005	- / OK
Phenolic Compounds					
Phenol	µg/L	2	<2	<2	- / OK
2-Chlorophenol	µg/L	2	<2	<2	- / OK
2-Methylphenol	µg/L	2	<2	<2	- / OK
3- & 4-Methylphenol	µg/L	4	<4	<4	- / OK
2-Nitrophenol	µg/L	2	<2	<2	- / OK
2,4-Dimethylphenol	µg/L	2	<2	<2	- / OK
2,4-Dichlorophenol	µg/L	2	<2	<2	- / OK
2,6-Dichlorophenol	µg/L	2	<2	<2	- / OK
4-Chloro-3-Methylphenol	µg/L	2	<2	<2	- / OK
2,4,6-Trichlorophenol	µg/L	2	<2	<2	- / OK
2,4,5-Trichlorophenol	µg/L	2	<2	<2	- / OK
Pentachlorophenol	µg/L	4	<4	<4	- / OK
Total Petroleum Hydrocarbons					
C6 - C9 Fraction	µg/L	20	<20	<20	- / OK
C10 – C14 Fraction	µg/L	50	<50	<50	- / OK
C15 – C28 Fraction	µg/L	100	180	210	15 / OK
C29 – C36 Fraction	µg/L	50	90	80	12 / OK
C10 – C36 Fraction (sum)	µg/L	50	270	290	7 / OK
Organophosphorus Pesticides					
Bromophos-ethyl	µg/L	0.02	<0.02	<0.02	- / OK
Carbophenothion	µg/L	0.02	<0.02	<0.02	- / OK
Chlorfenvinphos (E)	µg/L	0.02	<0.02	<0.02	- / OK
Chlorfenvinphos (Z)	µg/L	0.02	<0.02	<0.02	- / OK
Chlorpyrifos	µg/L	0.010	<0.010	<0.010	- / OK
Chlorpyrifos-methyl	µg/L	0.02	<0.02	<0.02	- / OK
Demeton-S-methyl	µg/L	0.02	<0.02	<0.02	- / OK
Diazinon	µg/L	0.02	<0.02	<0.02	- / OK
Dichlorvos	µg/L	0.02	<0.02	<0.02	- / OK
Dimethoate	µg/L	0.02	<0.02	<0.02	- / OK
Ethion	µg/L	0.02	<0.02	<0.02	- / OK
Fenamiphos	µg/L	0.02	<0.02	<0.02	- / OK
Fenthion	µg/L	0.02	<0.02	<0.02	- / OK
Malathion	µg/L	0.02	<0.02	<0.02	- / OK
Azinphos Methyl	µg/L	0.02	<0.02	<0.02	- / OK

Analyte grouping/Analyte	Units	LOR	QA	ZO	RPD / Assessment
Monocrotophos	µg/L	0.02	<0.02	<0.02	- / OK
Parathion	µg/L	0.02	<0.02	<0.02	- / OK
Parathion-methyl	µg/L	0.02	<0.02	<0.02	- / OK
Pirimphos-ethyl	µg/L	0.02	<0.02	<0.02	- / OK
Prothiofos	µg/L	0.02	<0.02	<0.02	- / OK
Organochlorine Pesticides					
Aldrin	µg/L	0.002	<0.002	<0.002	- / OK
alpha-BHC	µg/L	0.002	<0.002	<0.002	- / OK
beta-BHC	µg/L	0.002	<0.002	<0.002	- / OK
delta-BHC	µg/L	0.002	<0.002	<0.002	- / OK
4.4`-DDD	µg/L	0.002	<0.002	<0.002	- / OK
4.4`-DDE	µg/L	0.002	<0.002	<0.002	- / OK
4.4`-DDT	µg/L	0.002	<0.002	<0.002	- / OK
DDT (total)	µg/L	0.002	<0.002	<0.002	- / OK
Dieldrin	µg/L	0.002	<0.002	<0.002	- / OK
alpha-Endosulfan	µg/L	0.002	<0.002	<0.002	- / OK
beta-Endosulfan	µg/L	0.002	<0.002	<0.002	- / OK
Endosulfan sulfate	µg/L	0.002	<0.002	<0.002	- / OK
Endosulfan (sum)	µg/L	0.002	<0.002	<0.002	- / OK
Endrin	µg/L	0.002	<0.002	<0.002	- / OK
Endrin aldehyde	µg/L	0.002	<0.002	<0.002	- / OK
Endrin ketone	µg/L	0.002	<0.002	<0.002	- / OK
Heptachlor	µg/L	0.001	<0.001	<0.001	- / OK
Heptachlor epoxide	µg/L	0.002	<0.002	<0.002	- / OK
Hexachlorobenzene (HCB)	µg/L	0.002	<0.002	<0.002	- / OK
gamma-BHC	µg/L	0.002	<0.002	<0.002	- / OK
Methoxychlor	µg/L	0.002	<0.002	<0.002	- / OK
cis-Chlordane	µg/L	0.002	<0.002	<0.002	- / OK
trans-Chlordane	µg/L	0.002	<0.002	<0.002	- / OK
Total Chlordane (sum)	µg/L	0.002	<0.002	<0.002	- / OK
Oxychlordane	µg/L	0.002	<0.002	<0.002	- / OK

- = Not calculable

IR = Insufficient Reproducibility

AC2.3 Water sample contamination

Water sample contamination was measured by analysis of a field blank (Sample B (ALS Laboratory ID EB0918276-003, ACS Laboratory ID EB0918276-3)). All analytes were reported at concentrations less than the LOR in the field blank with the exception of ammonia, total oxidised nitrogen, nitrate and dissolved zinc (Table AC2-2). Ammonia, total oxidised nitrogen and dissolved zinc concentrations were low, but detectable (0.047 mg/L, 0.02 mg/L and 0.002 mg/L, respectively). Nitrate also reported in the blank at a concentration of 0.02 mg/L (it is calculated from the total oxidised nitrogen concentration (*ie* nitrate = total oxidised nitrogen – nitrite)). The dissolved zinc concentration was confirmed by re-analysis of the sample. However, the concentration of total zinc in the sample was less than the LOR (< 0.001 mg/L). This suggests the low concentration of dissolved zinc was possibly introduced during filtering, or was the product of analytical error which increases as the LOR is approached. The concentrations of ammonia, total oxidised nitrogen (and nitrate) and dissolved zinc are not considered significant (as they were detected at concentrations marginally above the laboratory's LOR). Hence, it is not considered that these results will compromise interpretation of the dataset.

Table AC2-2. Water sample contamination as indicated by field blank samples

Analyte grouping/Analyte	Units	LOR	Blank
Sodium Absorption Ratio	-	0.01	<0.01
Suspended Solids	mg/L	5	<5
Turbidity	NTU	0.1	NT
Total Hardness as CaCO ₃	mg/L	1	<1
Sulfate as SO ₄ ²⁻	mg/L	1	<1
Chloride	mg/L	1	<1
Fluoride	mg/L	0.1	<0.1
Calcium	mg/L	1	<1
Magnesium	mg/L	1	<1
Sodium	mg/L	1	<1
Tri-Ethylene Glycol	mg/L	5	<5
Trace Elements – Dissolved			
Selenium - Dissolved	µg/L	0.2	<0.2
Arsenic - Dissolved	µg/L	0.2	<0.2
Boron - Dissolved	µg/L	5	<5
Cadmium - Dissolved	µg/L	0.05	<0.05
Cobalt - Dissolved	µg/L	0.1	<0.1
Copper - Dissolved	µg/L	0.5	<0.5
Lead - Dissolved	µg/L	0.1	<0.1
Mercury - Dissolved	mg/L	0.0001	<0.0001
Nickel - Dissolved	µg/L	0.5	<0.5
Vanadium - Dissolved	µg/L	0.2	<0.2
Zinc - Dissolved	µg/L	1	2
Trace Elements – Dissolved			
Selenium – Total	µg/L	0.2	<0.2
Arsenic – Total	µg/L	0.2	<0.2
Boron – Total	µg/L	5	<5
Cadmium - Total	µg/L	0.05	<0.05
Cobalt – Total	µg/L	0.1	<0.1
Copper – Total	µg/L	0.5	<0.5
Lead – Total	µg/L	0.1	<0.1
Mercury – Total	mg/L	0.0001	<0.0001
Nickel – Total	µg/L	0.5	<0.5
Vanadium - Total	µg/L	0.2	<0.2
Zinc – Total	µg/L	1	<1
Nutrients			
Nitrite as N	mg/L	0.01	<0.01
Nitrate as N	mg/L	0.01	0.02
Nitrite + Nitrate as N	mg/L	0.01	0.02
Ammonia as N	mg/L	0.005	0.047
Total Nitrogen as N	mg/L	0.05	<0.05
Total Phosphorus as P	mg/L	0.005	<0.005
Monocyclic Aromatic Hydrocarbons			
Benzene	µg/L	1	<1
Toluene	µg/L	2	<2
Ethylbenzene	µg/L	2	<2
meta- & para-Xylene	µg/L	2	<2
Styrene	µg/L	5	<5
ortho-Xylene	µg/L	2	<2
Isopropylbenzene	µg/L	5	<5
n-Propylbenzene	µg/L	5	<5

Analyte grouping/Analyte	Units	LOR	Blank
1.3.5-Trimethylbenzene	µg/L	5	<5
sec-Butylbenzene	µg/L	5	<5
1.2.4-Trimethylbenzene	µg/L	5	<5
tert-Butylbenzene	µg/L	5	<5
p-Isopropyltoluene	µg/L	5	<5
n-Butylbenzene	µg/L	5	<5
Polynuclear Aromatic Hydrocarbons			
Naphthalene	µg/L	0.02	<0.02
Acenaphthylene	µg/L	0.02	<0.02
Acenaphthene	µg/L	0.02	<0.02
Fluorene	µg/L	0.02	<0.02
Phenanthrene	µg/L	0.02	<0.02
Anthracene	µg/L	0.02	<0.02
Fluoranthene	µg/L	0.02	<0.02
Pyrene	µg/L	0.02	<0.02
Benz(a)anthracene	µg/L	0.02	<0.02
Chrysene	µg/L	0.02	<0.02
Benzo(b)fluoranthene	µg/L	0.02	<0.02
Benzo(k)fluoranthene	µg/L	0.02	<0.02
Benzo(a)pyrene	µg/L	0.005	<0.005
Indeno(1.2.3.cd)pyrene	µg/L	0.02	<0.02
Dibenz(a,h)anthracene	µg/L	0.02	<0.02
Benzo(g,h,i)perylene	µg/L	0.02	<0.02
Total PAH	µg/L	0.005	<0.005
Phenolic Compounds			
Phenol	µg/L	2	<2
2-Chlorophenol	µg/L	2	<2
2-Methylphenol	µg/L	2	<2
3- & 4-Methylphenol	µg/L	4	<4
2-Nitrophenol	µg/L	2	<2
2.4-Dimethylphenol	µg/L	2	<2
2.4-Dichlorophenol	µg/L	2	<2
2.6-Dichlorophenol	µg/L	2	<2
4-Chloro-3-Methylphenol	µg/L	2	<2
2.4.6-Trichlorophenol	µg/L	2	<2
2.4.5-Trichlorophenol	µg/L	2	<2
Pentachlorophenol	µg/L	4	<4
Total Petroleum Hydrocarbons			
C6 - C9 Fraction	µg/L	20	<20
C10 - C14 Fraction	µg/L	50	<50
C15 - C28 Fraction	µg/L	100	<100
C29 - C36 Fraction	µg/L	50	<50
C10 - C36 Fraction (sum)	µg/L	50	<50
Organophosphorus Pesticides			
Bromophos-ethyl	µg/L	0.02	<0.02
Carbophenothion	µg/L	0.02	<0.02
Chlorfenvinphos (E)	µg/L	0.02	<0.02
Chlorfenvinphos (Z)	µg/L	0.02	<0.02
Chlorpyrifos	µg/L	0.010	<0.010
Chlorpyrifos-methyl	µg/L	0.02	<0.02
Demeton-S-methyl	µg/L	0.02	<0.02
Diazinon	µg/L	0.02	<0.02
Dichlorvos	µg/L	0.02	<0.02

Analyte grouping/Analyte	Units	LOR	Blank
Dimethoate	µg/L	0.02	<0.02
Ethion	µg/L	0.02	<0.02
Fenamiphos	µg/L	0.02	<0.02
Fenthion	µg/L	0.02	<0.02
Malathion	µg/L	0.02	<0.02
Azinphos Methyl	µg/L	0.02	<0.02
Monocrotophos	µg/L	0.02	<0.02
Parathion	µg/L	0.02	<0.02
Parathion-methyl	µg/L	0.02	<0.02
Pirimphos-ethyl	µg/L	0.02	<0.02
Prothiofos	µg/L	0.02	<0.02
Organochlorine Pesticides			
Aldrin	µg/L	0.002	<0.002
alpha-BHC	µg/L	0.002	<0.002
beta-BHC	µg/L	0.002	<0.002
delta-BHC	µg/L	0.002	<0.002
4.4'-DDD	µg/L	0.002	<0.002
4.4'-DDE	µg/L	0.002	<0.002
4.4'-DDT	µg/L	0.002	<0.002
DDT (total)	µg/L	0.002	<0.002
Dieldrin	µg/L	0.002	<0.002
alpha-Endosulfan	µg/L	0.002	<0.002
beta-Endosulfan	µg/L	0.002	<0.002
Endosulfan sulfate	µg/L	0.002	<0.002
Endosulfan (sum)	µg/L	0.002	<0.002
Endrin	µg/L	0.002	<0.002
Endrin aldehyde	µg/L	0.002	<0.002
Endrin ketone	µg/L	0.002	<0.002
Heptachlor	µg/L	0.001	<0.001
Heptachlor epoxide	µg/L	0.002	<0.002
Hexachlorobenzene (HCB)	µg/L	0.002	<0.002
gamma-BHC	µg/L	0.002	<0.002
Methoxychlor	µg/L	0.002	<0.002
cis-Chlordane	µg/L	0.002	<0.002
trans-Chlordane	µg/L	0.002	<0.002
Total Chlordane (sum)	µg/L	0.002	<0.002
Oxychlordane	µg/L	0.002	<0.002

Bold values are greater than the LOR.

AC3 Data Quality Assurance, March 2010 Data Set

AC3.1 Reproducibility assessment method

NRA uses a reproducibility assessment method that is in accordance with AS4482.1-2005 Guide to the Investigation and Sampling of Sites with Potentially Contaminated Soil – Part 1: Non-Volatile and Semi-Volatile Compounds (Standards Australia 2005¹¹) and ALS Method QWI-EN/38 for laboratory duplicates.

¹¹ Standards Australia (2005) AS4482.1-2005 *Guide to the Investigation and Sampling of Sites with Potentially Contaminated Soil – Part 1: Non-Volatile and Semi-Volatile Compounds*, Standards Australia, Sydney.

The reproducibility of the analytical data is assessed using replicate sample sets. The analytical values from the sample and its replicate are compared by calculating the Relative Percent Difference (RPD, see equation below) for each analyte.

$$\text{RPD for Analyte } x = \frac{[x]_{\text{Sample}} - [x]_{\text{Replicate}}}{[x]_{\text{Mean of Sample and Replicate}}} \times 100$$

The RPD is then used to assess reproducibility using the Limit of Reporting (LOR) to identify a threshold which the RPD must be below for the analysis to have valid reproducibility. The thresholds are:

If values are less than 10 times the LOR, there is no RPD threshold (*ie* reproducibility is valid).

If values are between 10 and 20 times the limit of reporting, the RPD threshold is 50.

If values are 20 or more times the limit of reporting, the RPD threshold is 20.

Where values from the replicate set straddle two thresholds, the threshold indicated by the lowest value is used.

Replicate sets that report two values below the LOR are considered to have valid reproducibility. Replicate sets that report a single value below the LOR and a second value 10 or more times greater than the LOR are not considered to have valid reproducibility.

AC3.2 Analytical reproducibility of water quality data

Water sample reproducibility data are presented in Table AC3-1. All RPDs were within the thresholds required for valid reproducibility. Considering this, reproducibility for the water samples is considered satisfactory.

Table AC3-1. *Reproducibility of water sample analytical data as indicated by duplicate samples*

Analyte grouping/Analyte	Units	LOR	Sample		RPD/Assessment
			0	QA	
Sodium Absorption Ratio (SAR)	-	1	1	1	ND / OK
Total Suspended Solids (TSS)	mg/L	5	6	12	67 / OK^
Hardness as CaCO3	mg/L	5	80	80	ND / OK
Fluoride	mg/L	0.05	0.11	0.11	ND / OK
Sulfate as SO ₄ ²⁻	mg/L	2	5	5	ND / OK
Chloride	mg/L	2	27	22	20 / OK
Calcium	mg/L	0.05	24	24	ND / OK
Magnesium	mg/L	0.05	5.0	5.0	ND / OK
Sodium	mg/L	0.5	28	28	ND / OK
Potassium	mg/L	0.05	12	12	ND / OK
Triethylene Glycol (NATA)	mg/L	5	<5.0	<5.0	ND / OK
Triethylene Glycol	mg/L	0.01	<0.01	<0.01	ND / OK
Metals - Dissolved					
Arsenic	µg/L	3	<3	<3	ND / OK
Boron	µg/L	2	40	39	3 / OK
Cadmium	µg/L	0.1	<0.1	<0.1	ND / OK
Cobalt	µg/L	1	<1	<1	ND / OK
Copper	µg/L	1	2	3	40 / OK^
Lead	µg/L	1	<1	<1	ND / OK
Nickel	µg/L	2	<2	<2	ND / OK
Selenium	µg/L	3	<3	<3	ND / OK
Vanadium	µg/L	5	8	8	ND / OK
Zinc	µg/L	5	5	<5	67 / OK
Mercury	mg/L	0.1	<0.1	<0.1	ND / OK

Analyte grouping/Analyte	Units	LOR	Sample		RPD/Assessment
			0	QA	
Metals - Total					
Arsenic	µg/L	3	<3	<3	ND / OK
Boron	µg/L	2	41	40	2 / OK
Cadmium	µg/L	0.1	<0.1	<0.1	ND / OK
Cobalt	µg/L	1	1	2	67 / OK
Copper	µg/L	1	3	3	ND / OK
Lead	µg/L	1	3	1	100 / OK^
Nickel	µg/L	2	3	3	ND / OK
Selenium	µg/L	3	<3	<3	ND / OK
Vanadium	µg/L	5	10	10	ND / OK
Zinc	µg/L	5	8	9	12 / OK^
Mercury	mg/L	0.1	<0.1	<0.1	ND / OK
Nutrients					
Ammonia as N	mg/L	0.005	0.056	0.058	4/OK
Nitrite as N	mg/L	0.005	<0.005	<0.005	ND / OK
Nitrate as N	mg/L	0.005	0.037	0.036	3 / OK^
Nitrite + Nitrate as N	mg/L	0.005	0.037	0.036	3 / OK^
Total Kjeldahl Nitrogen (as N)	mg/L	0.05	1.3	1.3	ND / OK
Total Nitrogen as N	mg/L	0.05	1.3	1.3	ND / OK
Total Phosphorus as P	mg/L	0.02	0.24	0.32	29 / OK
Monocyclic Aromatic Hydrocarbons					
Benzene	µg/L	0.5	<0.5	<0.5	ND / OK
Toluene	µg/L	0.5	<0.5	<0.5	ND / OK
Ethyl Benzene	µg/L	0.5	<0.5	<0.5	ND / OK
<i>meta</i> - & <i>para</i> -Xylene	µg/L	1	<1.0	<1.0	ND / OK
Styrene	µg/L	0.5	<0.5	<0.5	ND / OK
<i>ortho</i> -Xylene	µg/L	0.5	<0.5	<0.5	ND / OK
Isopropylbenzene	µg/L	0.5	<0.5	<0.5	ND / OK
n-Propylbenzene	µg/L	0.5	<0.5	<0.5	ND / OK
1,3,5-Trimethylbenzene	µg/L	0.5	<0.5	<0.5	ND / OK
<i>sec</i> -Butylbenzene	µg/L	0.5	<0.5	<0.5	ND / OK
1,2,4-Trimethylbenzene	µg/L	0.5	<0.5	<0.5	ND / OK
<i>tert</i> -Butylbenzene	µg/L	0.5	<0.5	<0.5	ND / OK
<i>p</i> -Isopropyltoluene	µg/L	0.5	<0.5	<0.5	ND / OK
n-Butylbenzene	µg/L	0.5	<0.5	<0.5	ND / OK
Polynuclear Aromatic Hydrocarbons					
Naphthalene	µg/L	0.2	<0.2	<0.2	ND / OK
2-Methylnaphthalene	µg/L	0.2	<0.2	<0.2	ND / OK
1-Methylnaphthalene	µg/L	0.2	<0.2	<0.2	ND / OK
Acenaphthylene	µg/L	0.2	<0.2	<0.2	ND / OK
Acenaphthene	µg/L	0.2	<0.2	<0.2	ND / OK
Fluorene	µg/L	0.2	<0.2	<0.2	ND / OK
Phenanthrene	µg/L	0.2	<0.2	<0.2	ND / OK
Anthracene	µg/L	0.2	<0.2	<0.2	ND / OK
Fluoranthene	µg/L	0.2	<0.2	<0.2	ND / OK
Pyrene	µg/L	0.2	<0.2	<0.2	ND / OK
Benz(a)anthracene	µg/L	0.2	<0.2	<0.2	ND / OK
Chrysene	µg/L	0.2	<0.2	<0.2	ND / OK
Benzo(<i>b,k</i>)fluoranthene	µg/L	0.4	<0.4	<0.4	ND / OK
Benzo(<i>a</i>)pyrene	µg/L	0.2	<0.2	<0.2	ND / OK
Indeno(123- <i>cd</i>)pyrene	µg/L	0.2	<0.2	<0.2	ND / OK
Dibenzo(<i>ah</i>)anthracene	µg/L	0.2	<0.2	<0.2	ND / OK
Benzo(<i>ghi</i>)perylene	µg/L	0.2	<0.2	<0.2	ND / OK
Total PAH	µg/L	3	<3.0	<3.0	ND / OK
Total Petroleum Hydrocarbons					
C6 - C9 Fraction	µg/L	20	<20	<20	ND / OK

Analyte grouping/Analyte	Units	LOR	Sample		RPD/Assessment
			0	QA	
C10 - C14 Fraction	µg/L	50	<50	<50	ND / OK
C15 - C28 Fraction	µg/L	100	<100	<100	ND / OK
C29 - C36 Fraction	µg/L	50	<50	<50	ND / OK
Organophosphate Pesticides					
Bromophos-ethyl	µg/L	0.05	<0.05	<0.05	ND / OK
Chlorpyrifos	µg/L	0.009	<0.009	<0.009	ND / OK
Demeton-S-methyl	µg/L	0.5	<0.50	<0.50	ND / OK
Diazinon	µg/L	0.01	<0.01	<0.01	ND / OK
Dichlorvos	µg/L	0.5	<0.5	<0.5	ND / OK
Dimethoate	µg/L	0.15	<0.15	<0.15	ND / OK
Ethion	µg/L	0.05	<0.05	<0.05	ND / OK
Fenitrothion	µg/L	0.2	<0.2	<0.2	ND / OK
Malathion	µg/L	0.05	<0.05	<0.05	ND / OK
Methidathion	µg/L	0.05	<0.05	<0.05	ND / OK
Azinphos Methyl (Guthion)	µg/L	0.05	<0.05	<0.05	ND / OK
Methyl Parathion	µg/L	0.01	<0.010	<0.010	ND / OK
Parathion ethyl	µg/L	0.01	<0.01	<0.01	ND / OK
Profenofos	µg/L	0.02	<0.020	<0.020	ND / OK
Temephos	µg/L	0.5	<0.50	<0.50	ND / OK
Organochlorine Pesticides					
Aldrin	µg/L	0.01	<0.01	<0.01	ND / OK
alpha-BHC	µg/L	0.05	<0.05	<0.05	ND / OK
beta-BHC	µg/L	0.05	<0.05	<0.05	ND / OK
delta-BHC	µg/L	0.05	<0.05	<0.05	ND / OK
p,p'-DDD	µg/L	0.01	<0.01	<0.01	ND / OK
p,p'-DDE	µg/L	0.01	<0.01	<0.01	ND / OK
p,p'-DDT	µg/L	0.002	<0.002	<0.002	ND / OK
Dicofol	µg/L	0.5	<0.50	<0.50	ND / OK
Dieldrin	µg/L	0.002	<0.002	<0.002	ND / OK
alpha-Endosulfan	µg/L	0.005	<0.005	<0.005	ND / OK
beta-Endosulfan	µg/L	0.005	<0.005	<0.005	ND / OK
Endosulfan sulfate	µg/L	0.005	<0.005	<0.005	ND / OK
Endrin	µg/L	0.004	<0.004	<0.004	ND / OK
Endrin ketone	µg/L	0.05	<0.05	<0.05	ND / OK
Heptachlor	µg/L	0.01	<0.01	<0.01	ND / OK
Heptachlor epoxide	µg/L	0.02	<0.02	<0.02	ND / OK
Hexachlorobenzene (HCB)	µg/L	0.01	<0.01	<0.01	ND / OK
Lindane	µg/L	0.05	<0.05	<0.05	ND / OK
Mirex	µg/L	0.01	<0.01	<0.01	ND / OK
Methoxychlor	µg/L	0.1	<0.10	<0.10	ND / OK
alpha (cis-) Chlordane	µg/L	0.002	<0.002	<0.002	ND / OK
gamma (trans-) Chlordane	µg/L	0.002	<0.002	<0.002	ND / OK
Toxaphene	µg/L	1	<1.0	<1.0	ND / OK
Total Phenolics	mg/L	0.005	<0.005	0.006	82 / OK^

ND = No Difference

IR = Insufficient Reproducibility

^ Water quality values are less than 10 times the LOR, therefore there is no RPD threshold (ie reproducibility is valid).

AC3.3 Water sample contamination

All analytes were recorded below the LOR in the field blank with the exception of ammonia, total oxidised nitrogen, nitrate and total phenolics (Table AC3-2). Ammonia, total oxidised nitrogen and total phenolics concentrations were low, but detectable (0.045 mg/L, 0.021 mg/L and 0.006 mg/L, respectively). Nitrate was also reported in the blank (it is calculated from the total oxidised nitrogen concentration (ie nitrate = total oxidised nitrogen – nitrite)). The concentrations

of ammonia and total oxidised nitrogen (and nitrate) in the blank sample are within 10 times the limit or reporting and are not considered significant.

The total phenolics present in the blank water sample was attributed to the use of Phenol resins in the blank water provided by the laboratory (*pers. comm.* Shey Goddard of SGS, 20 April 2010).

The samples are deemed to be free of gross contamination providing confirmation of the field sample collection methods used for the survey.

Table AC3-2. Water sample contamination as indicated by field blank samples

Analyte grouping/Analyte	Units	LOR	Field Blank (B)
Sodium Absorption Ratio (SAR)	-	1	-
Total Suspended Solids (TSS)	mg/L	5	<5
Hardness as CaCO ₃	mg/L	5	<5
Fluoride	mg/L	0.05	<0.05
Sulfate as SO ₄ ²⁻	mg/L	2	<2
Chloride	mg/L	2	<2
Calcium	mg/L	0.05	<0.05
Magnesium	mg/L	0.05	<0.05
Sodium	mg/L	0.5	<0.50
Potassium	mg/L	0.05	<0.05
Triethylene Glycol (Nata)	mg/L	5	<5.0
Triethylene Glycol	mg/L	0.01	<0.01
Metals - Dissolved			
Arsenic	µg/L	3	<3
Boron	µg/L	2	<2
Cadmium	µg/L	0.1	<0.1
Cobalt	µg/L	1	<1
Copper	µg/L	1	<1
Lead	µg/L	1	<1
Nickel	µg/L	2	<2
Selenium	µg/L	3	<3
Vanadium	µg/L	5	<5
Zinc	µg/L	5	<5
Mercury	mg/L	0.1	<0.1
Metals - Total			
Arsenic	µg/L	3	<3
Boron	µg/L	2	<2
Cadmium	µg/L	0.1	<0.1
Cobalt	µg/L	1	<1
Copper	µg/L	1	<1
Lead	µg/L	1	<1
Nickel	µg/L	2	<2
Selenium	µg/L	3	<3
Vanadium	µg/L	5	<5
Zinc	µg/L	5	<5
Mercury	mg/L	0.1	<0.1
Nutrients			
Ammonia as N	mg/L	0.005	0.045
Nitrite as N	mg/L	0.005	<0.005
Nitrate as N	mg/L	0.005	0.021
Nitrite + Nitrate as N	mg/L	0.005	0.021
Total Kjeldahl Nitrogen (as N)	mg/L	0.05	<0.05
Total Nitrogen as N	mg/L	0.05	<0.05
Total Phosphorus as P	mg/L	0.02	<0.02
Monocyclic Aromatic Hydrocarbons			
Benzene	µg/L	0.5	<0.5

Analyte grouping/Analyte	Units	LOR	Field Blank (B)
Toluene	µg/L	0.5	<0.5
Ethyl Benzene	µg/L	0.5	<0.5
<i>meta</i> - & <i>para</i> -Xylene	µg/L	1	<1.0
Styrene	µg/L	0.5	<0.5
<i>ortho</i> -Xylene	µg/L	0.5	<0.5
Isopropylbenzene	µg/L	0.5	<0.5
n-Propylbenzene	µg/L	0.5	<0.5
1,3,5-Trimethylbenzene	µg/L	0.5	<0.5
<i>sec</i> -Butylbenzene	µg/L	0.5	<0.5
1,2,4-Trimethylbenzene	µg/L	0.5	<0.5
<i>tert</i> -Butylbenzene	µg/L	0.5	<0.5
<i>p</i> -Isopropyltoluene	µg/L	0.5	<0.5
n-Butylbenzene	µg/L	0.5	<0.5
Polynuclear Aromatic Hydrocarbons			
Naphthalene	µg/L	0.2	<0.2
2-Methylnaphthalene	µg/L	0.2	<0.2
1-Methylnaphthalene	µg/L	0.2	<0.2
Acenaphthylene	µg/L	0.2	<0.2
Acenaphthene	µg/L	0.2	<0.2
Fluorene	µg/L	0.2	<0.2
Phenanthrene	µg/L	0.2	<0.2
Anthracene	µg/L	0.2	<0.2
Fluoranthene	µg/L	0.2	<0.2
Pyrene	µg/L	0.2	<0.2
Benz(a)anthracene	µg/L	0.2	<0.2
Chrysene	µg/L	0.2	<0.2
Benzo(<i>b,k</i>)fluoranthene	µg/L	0.4	<0.4
Benzo(<i>a</i>)pyrene	µg/L	0.2	<0.2
Indeno(123- <i>cd</i>)pyrene	µg/L	0.2	<0.2
Dibenzo(<i>ah</i>)anthracene	µg/L	0.2	<0.2
Benzo(<i>ghi</i>)perylene	µg/L	0.2	<0.2
Total PAH	µg/L	3	<3.0
Total Petroleum Hydrocarbons			
C6 - C9 Fraction	µg/L	20	<20
C10 - C14 Fraction	µg/L	50	<50
C15 - C28 Fraction	µg/L	100	<100
C29 - C36 Fraction	µg/L	50	<50
Organophosphate Pesticides			
Bromophos-ethyl	µg/L	0.05	<0.05
Chlorpyrifos	µg/L	0.009	<0.009
Demeton-S-methyl	µg/L	0.5	<0.50
Diazinon	µg/L	0.01	<0.01
Dichlorvos	µg/L	0.5	<0.5
Dimethoate	µg/L	0.15	<0.15
Ethion	µg/L	0.05	<0.05
Fenitrothion	µg/L	0.2	<0.2
Malathion	µg/L	0.05	<0.05
Methidathion	µg/L	0.05	<0.05
Azinphos Methyl (Guthion)	µg/L	0.05	<0.05
Methyl Parathion	µg/L	0.01	<0.010
Parathion ethyl	µg/L	0.01	<0.01
Profenofos	µg/L	0.02	<0.020
Temephos	µg/L	0.5	<0.50
Organochlorine Pesticides			
Aldrin	µg/L	0.01	<0.01
alpha-BHC	µg/L	0.05	<0.05
beta-BHC	µg/L	0.05	<0.05
delta-BHC	µg/L	0.05	<0.05

Analyte grouping/Analyte	Units	LOR	Field Blank (B)
p,p'-DDD	µg/L	0.01	<0.01
p,p'-DDE	µg/L	0.01	<0.01
p,p'-DDT	µg/L	0.002	<0.002
Dicofol	µg/L	0.5	<0.50
Dieldrin	µg/L	0.002	<0.002
alpha-Endosulfan	µg/L	0.005	<0.005
beta-Endosulfan	µg/L	0.005	<0.005
Endosulfan sulfate	µg/L	0.005	<0.005
Endrin	µg/L	0.004	<0.004
Endrin ketone	µg/L	0.05	<0.05
Heptachlor	µg/L	0.01	<0.01
Heptachlor epoxide	µg/L	0.02	<0.02
Hexachlorobenzene (HCB)	µg/L	0.01	<0.01
Lindane	µg/L	0.05	<0.05
Mirex	µg/L	0.01	<0.01
Methoxychlor	µg/L	0.1	<0.10
alpha (cis-) Chlordane	µg/L	0.002	<0.002
gamma (trans-) Chlordane	µg/L	0.002	<0.002
Toxaphene	µg/L	1	<1.0
Total Phenolics	mg/L	0.005	0.006

Attachment D
Field Sheets and Photographs

October 2009 – Water Quality Assessment		Location: _Dalby Area __ Date: 14/10/09 - 16/10/09 Inspection by: Anne-Marie Calvi & Martine Adriaansen (NRA) Sheet 1 of 3 Meter Calibrated (please tick the box) pH ✓ EC ✓ DO ✓ Turbidity ✓ Site used for QA duplicate Site 14 was used as the QA site for most analytes except for filtered metals (too turbid and difficult to filter) Site 8 was used as QA site for filtered metals.						
Comments or general observations (such as weather conditions) 14/10/09 - Windy, dusty, clear sky. Rained in Dalby 13/10/09 (not much). 15/10/09 - clear sky - slight haze, breeze.								
Field data and observations	SITE REFERENCE NUMBER							
	7	8	6	1	A1	3	4	5
GPS co-ordinates (WGS 84)	56J 332980 6991059	56J 327101 6991447	56J 327460 6979588	56J 338242 6935920	56J 321826 6943689	56J 314934 6950656	56J 322793 6953318	56J 328860 6969047
FIELD Physico-Chemical								
pH	-	7.36	7.74	7.44	-	6.85	7.96	-
EC (mS/cm)	-	0.90	1.07	0.33	-	0.17	0.33	-
Temperature (°C)	-	20.9	18.5	17.2	-	16.9	22.1	-
DO (% satn.)	-	114.4 unreliable result	22.8	36.9	-	29.9	94.4	-
Turbidity (NTU)	-	28.5	353	303	-	755	24.1	-
Time of sampling	-	4:40 pm	5:40 pm	7:30 am	-	9:30am	10:40am	11:30am
Date	14/10/09	14/10/09	14/10/09	15/10/09	15/10/09	15/10/09	15/10/09	15/10/09
FIELD Observations								
Photo taken (tick and No.)	051 u'stream 050 d'stream	053 u'stream 052 d'stream	055, 056 u'stream 054 d'stream	057, 059, 060 u'stream 061, 058 d'stream	-	062 u'stream 063 d'stream	064 u'stream 065 d'stream	067 u'stream 066 d'stream
Floating litter, debris, scum, foam, objectionable matter	No - tree branches on fence	No	No	No	-	Scum on surface.	Scum on surface. Litter beside and in creek.	-
Oil/petrochem (film/odour)#	No	No	No	No	-	No	No	-
Objectionable odour	No	No	No	No	-	No	No	-

Cont. on next page

October 2009 – Water Quality Assessment		Location: _Dalby Area __ Date: 14/10/09 - 16/10/09 Inspection by: Anne-Marie Calvi & Martine Adriaansen (NRA) Sheet 1 of 3 Meter Calibrated (please tick the box) pH ✓ EC ✓ DO ✓ Turbidity ✓ Site used for QA duplicate Site 14 was used as the QA site for most analytes except for filtered metals (too turbid and difficult to filter) Site 8 was used as QA site for filtered metals.						
Comments or general observations (such as weather conditions) 14/10/09 - Windy, dusty, clear sky. Rained in Dalby 13/10/09 (not much). 15/10/09 - clear sky - slight haze, breeze.								
Field data and observations	SITE REFERENCE NUMBER							
	7	8	6	1	A1	3	4	5
Algal blooms or floating vegetation mats	Green algae mat on little puddle	No	No	No	-	No	Yes - floating macrophytes.	-
Dead fauna/flora	No	No	No	No	-	No	No	-
Other observations/notes *	Creek dry. Turbid puddle beyond fence - unable to access.	Duck on water. Litter on bank. Reeds. Waterbody approx 4m wide.	Approx 10mx3m pool of water. Boggy and turbid. Something splashed in water - possibly a fish.	Sample collected upstream of the bridge. Ducks observed in the water. Farming in area. Very turbid (opaque) water. Not flowing.	No site access - Fenced near river	Small pool of very turbid (opaque) water approx 6mx3m. No sample collected.	Fence blocking access to site 4 therefore sample site was moved u'stream. Sample collected u'stream of bridge. Waterbody was turbid and not flowing. Council work on bridge downstream.	Small pool of turbid water under bridge. Sample not collected.

Note: iron bacteria can sometimes form a film on the water surface that can be confused with hydrocarbons. The film caused by iron breaks up into smaller “plates” when disturbed (such as by running a stick through it), where as a hydrocarbon film will be fluid and will produce a swirling pattern or will remain unbroken.

* This may include any unusual activity that may have a site specific effect at the time of sampling, such as construction work.

October 2009 – Water Quality Assessment			Location: _Dalby Area __ Date: 14/10/09 - 16/10/09 Inspection by: AMC & MA (NRA) Sheet 2 of 3 Meter Calibrated (please tick the box) pH ✓ EC ✓ DO ✓ Turbidity ✓ Site used for QA duplicate Site 14 was used as the QA site for most analytes except for filtered metals (too turbid and difficult to filter) Site 8 was used as QA site for filtered metals.				
Comments or general observations (such as weather conditions)							
15/10/09 - Clear, breeze. Rained in Dalby 13/10/09. 16/10/09 - clear blue sky.							
Field data and observations	SITE REFERENCE NUMBER						
	A3	10	A5	11	A4	9	15C
GPS co-ordinates (WGS 84)	56J 326717 6973167	56J 311377 6973068	56J 293496 6985019	56J 302265 6983628	56J 302831 6986992	56J 310085 7006407	56J 302555 7027606
FIELD Physico-Chemical							
pH	-	-	7.03	7.22	6.81	-	7.72
EC (mS/cm)	-	-	0.14	0.93	0.21	-	0.31
Temperature (°C)	-	-	22.6	22.4	17.3	-	15.6
DO (% satn.)	-	-	82.3	68.9	73	-	71.7
Turbidity (NTU)	-	-	830	257	989	-	>999 (OVR)
Time of sampling	-	-	3:30 pm	4:30 pm	5:10pm	6:15am	7:15am
Date	15/10/09	15/10/09	15/10/09	15/10/09	15/10/09	16/10/09	16/10/09
FIELD Observations							
Photo taken (tick and No.)	069 u'stream 068 d'stream	070 - 073	076 u'stream 077 d'stream	079 u'stream, 078 d'stream U'stream of bridge 080 u'stream, 081 d'stream	082 u'stream 084 -086 d'stream	087 u'stream 084-86 d'stream	089 u'stream 088 d'stream
Floating litter, debris, scum, foam, objectionable matter	-	-	No	No	No	-	No
Oil/petrochem (film/odour)#	-	-	No	No	No	-	No
Objectionable odour	-	-	No	No	No	-	No
Algal blooms or floating vegetation mats	-	-	Algae scum on surface	Algae scum on surface	No	-	No
Dead fauna/flora	-	-	No	No	No	-	No

October 2009 – Water Quality Assessment		Location: _Dalby Area __ Date: 14/10/09 - 16/10/09 Inspection by: AMC & MA (NRA) Sheet 2 of 3 Meter Calibrated (please tick the box) pH ✓ EC ✓ DO ✓ Turbidity ✓ Site used for QA duplicate Site 14 was used as the QA site for most analytes except for filtered metals (too turbid and difficult to filter) Site 8 was used as QA site for filtered metals.					
Comments or general observations (such as weather conditions)							
15/10/09 - Clear, breeze. Rained in Dalby 13/10/09. 16/10/09 - clear blue sky.							
Field data and observations	SITE REFERENCE NUMBER						
	A3	10	A5	11	A4	9	15C
Other observations/notes *	Creek dry. Grass growing in bed.	Site Dry.	Large very turbid pool approx 30mx6m. Site moved u'stream. upstream of confluence on left (looking u'stream of side arm).	Muddy pool of water approx 4mx2m. Sample not collected fences u'stream and d'stream of creek.	Large pool >100mx15m. Opaque water.	D'stream of road and rail bridge. Grass surrounding channel and in channel.	Site 15 moved u'stream for access. Very turbid (opaque) pool of water approx 4mx20m. Small pool of water also on other side of culvert.

Note: iron bacteria can sometimes form a film on the water surface that can be confused with hydrocarbons. The film caused by iron breaks up into smaller “plates” when disturbed (such as by running a stick through it), where as a hydrocarbon film will be fluid and will produce a swirling pattern or will remain unbroken.

* This may include any unusual activity that may have a site specific effect at the time of sampling, such as construction work.

October 2009 – Water Quality Assessment	Location: _Dalby Area __ Date: 14/10/09 - 16/10/09				
	Inspection by: AMC & MA (NRA) Sheet 3 of 3 Meter Calibrated (please tick the box) pH ✓ EC ✓ DO ✓ Turbidity ✓ Site used for QA duplicate Site 14 was used as the QA site for most analytes except for filtered metals (too turbid and difficult to filter) Site 8 was used as QA site for filtered metals.				
Comments or general observations (such as weather conditions) 16/10/09 - clear blue sky. Rained in Dalby 13/10/09. Sites 14 and 17 were not field filtered for metals as very difficult - lab to field filter.					
Field data and observations	SITE REFERENCE NUMBER				
	16	17	14	A7	8
GPS co-ordinates (WGS 84)	56J 293194 7019709	56J 280481 7022127	56J 288318 7004153	56J 300080 7001348	As prev
FIELD Physico-Chemical					
pH	7.87	7.5	6.58	7.86	-
EC (mS/cm)	0.31	0.35	0.10	0.18	-
Temperature (°C)	16.2	15.2	19.0	27.3	-
DO (% satn.)	71.2	35.2	38.8	120.3	65.9
Turbidity (NTU)	537	942	534	284	-
Time of sampling	8:30am	9:45am	11:10 pm	12:45pm	1:30pm
Date	16/10/09	16/10/09	16/10/09	16/10/09	16/10/09
FIELD Observations					
Photo taken (tick and No.)	090-091 u'stream, 092 d'stream	094 u'stream, 093 d'stream	100 u'stream, 099 d'stream	101, 102 u'stream, 103 d'stream	-
Floating litter, debris, scum, foam, objectionable matter	Scum on surface of u'stream end of pool	No	No	Debris in creek	-
Oil/petrochem (film/odour)#	No	No	No	No	-
Objectionable odour	No	No	No	No	-
Algal blooms or floating vegetation mats	No	No	No	No	-
Dead fauna/flora	No	No	No	No	-
Other observations/notes *	Moved site further u'stream due to site access. Large opaque pool of water.	Series of isolated opaque pools of water. Filtering in the field too difficult - lab to filter for soluble metals.	Site 14 was moved downstream. Turbid brown water. Not flowing.	Site moved d'stream for access. Turbid (opaque) large pool of water.	Revisited site to collect DO reading (no confidence in prev result). Dissolved metal QA duplicate also collected as QA site was too difficult to field filter.

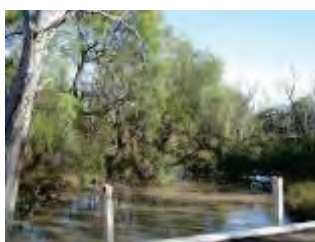
Note: iron bacteria can sometimes form a film on the water surface that can be confused with hydrocarbons. The film caused by iron breaks up into smaller "plates" when disturbed (such as by running a stick through it), where as a hydrocarbon film will be fluid and will produce a swirling pattern or will remain unbroken.

* This may include any unusual activity that may have a site specific effect at the time of sampling, such as construction work.

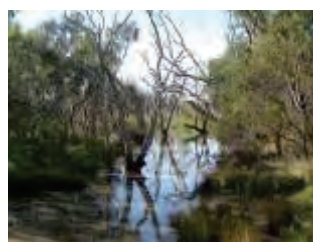
Field Photos October 2009



057 – 1 upstream of bridge



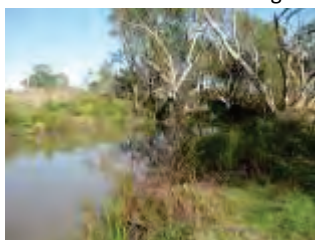
058 – 1 d'stream of bridge



059 – 1 upstream of bridge



060 – 1 upstream



061 – 1 downstream



062 – 3 downstream



063 – 3 upstream



064 – 4 upstream



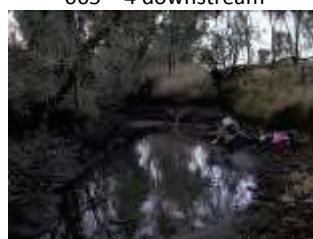
065 – 4 downstream



066 – 5 downstream



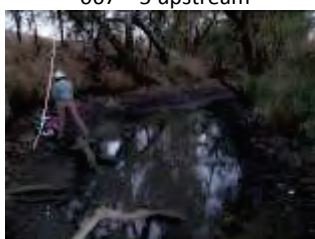
067 – 5 upstream



054 – 6 downstream



055 – 6 upstream



056 – 6 upstream



050 – 7 downstream



051 – 7 upstream



052 – 8 downstream



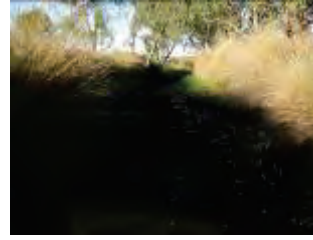
053 – 8 upstream



084 – 9 downstream



085 – 9 downstream



086 – 9 downstream



087 – 9 downstream



072 – 10



078 – 11 downstream



079 – 11 upstream



080 – 11 d'stream of bridge



081 – 11 upstream of bridge



099 – 14 downstream



100 – 14 upstream



085 – 15 downstream



089 – 15 upstream



090 – 16 upstream



091 – 16 upstream



092 – 16 downstream



093 – 17 downstream



094 – 17 upstream



068 – A3 downstream



069 – A3 upstream



082 – A4 upstream



083 – A4 downstream



076 – A5 upstream



077 – A5 downstream



101 – A7 upstream



102 – A7 upstream



103 – A7 downstream

November 2009 – Water Quality Assessment		Location: Surat Gas Project Date: 17/11/09 Inspection by: AMC & MA Sheet 1 of 3 Meter Calibrated (please tick the box) pH ✓ EC ✓ DO ✓ Turbidity ✓ Site used for QA duplicate: 20						
Comments or general observations (such as weather conditions): C1 = Photo Card 1 17/11/09 – Rain in past week. Storms overnight. Sunny Day. Light Breeze. Daily Temperature around 40°C. Rained while sampling site 17, stopped raining prior to sampling site 16.								
Field data and observations	SITE REFERENCE NUMBER							
	20 (17/11/09)	140 (17/11/09)	0 (17/11/09)	15B (17/11/09)	27 (17/11/09)	33 (17/11/09)	17 (17/11/09)	16 (17/11/09)
GPS co-ordinates (WGS 84)	56J 237168 7075632	56J 228766 7086312	56J 202512 7109815	56J 207488 7073776	56J 237102 7046515 (LMK 001)	56J 263434 7040275	56J 280536 7022184	56J 293248 7019706
FIELD Physico-Chemical								
pH	6.44	6.36	-	6.67	6.17	6.57	6.86	6.89
EC (mS/cm)	0.23	0.2	-	0.15	0.07	0.05	0.1	0.15
Temperature (°C)	21.4	21.1	-	23.3	24.7	30.7	26.8	26.9
DO (% satn.)	40.1	3.4	-	19.9	22.8	87.3	66	43.8
Turbidity (NTU)	705	779	-	894 (lab to analyse turbidity as outside field meter calibration range)	787	39.3	860 (lab to analyse turbidity as outside field meter calibration range)	691
Time of sampling	6:45 am	8:00 am	9:45 am	10:50 am	12:30 pm	1:15 pm	3:30 pm	4:15pm
FIELD Observations								
Photo taken (tick and No.) C1	001 u'stream 002 d'stream	003 u'stream 004 d'stream	005 u'stream 006 d'stream	010 u'stream 011 d'stream	014 u'stream 012-013 d'stream	015 u'stream 016 d'stream	018 u'stream 017 d'stream	022, 024 u'stream 021 d'stream
Floating litter, debris, scum, foam, objectionable matter	No	Thin algae film on surface	-	Some litter in channel near pool.	No	No	No	No
Oil/petrochem (film/odour)#	No	No	-	No	No	No	No	No
Objectionable odour	No	No	-	No	No	No	No	No

November 2009 – Water Quality Assessment		Location: Surat Gas Project Date: 17/11/09 Inspection by: AMC & MA Sheet 1 of 3 Meter Calibrated (please tick the box) pH ✓ EC ✓ DO ✓ Turbidity ✓ Site used for QA duplicate: 20						
Comments or general observations (such as weather conditions): C1 = Photo Card 1 17/11/09 – Rain in past week. Storms overnight. Sunny Day. Light Breeze. Daily Temperature around 40°C. Rained while sampling site 17, stopped raining prior to sampling site 16.								
Field data and observations	SITE REFERENCE NUMBER							
	20 (17/11/09)	140 (17/11/09)	0 (17/11/09)	15B (17/11/09)	27 (17/11/09)	33 (17/11/09)	17 (17/11/09)	16 (17/11/09)
Algal blooms or floating vegetation mats	No	Algae film on surface	-	No	No – pool u'stream of the pool sampled had an algae film on the surface.	Floating macrophytes and filamentous algae.	No	No
Dead fauna/flora	No	No	-	No	No	No	No	No
Other observations/notes *	Turbid opaque, Large pool of water (not flowing). U'stream of causeway. Full analyte (14 bottles). Samples sent to lab 17/11/09 from Chinchilla via courier.	Very turbid, shallow pool of water approx 5m x 10 m. Cowpats and pugging around waterbody. No sample collected – too shallow.	Site Dry. Alternate sites 1, 2 & 3 were also dry. Site 0 most appropriate for SW sampling. No sample collected.	Very turbid, opaque water, Not flowing. U'stream of road bridge. Reduced analyte list (9 bottles). Samples sent to lab 17/11/09 from Chinchilla via courier. Site renamed 15B (B is for Balonne River) due to duplication.	Very turbid, opaque pool of water (not flowing). D'stream of old bridge. Full analyte (14 bottles). Samples sent to lab 17/11/09 from Chinchilla via courier	Bedrock in channel. Slightly turbid water. Not flowing. Birds observed. Reduced analyte list (9 bottles). Samples sent to lab 17/11/09 from Chinchilla via courier	Flowing, turbid water. Photo 020 d'stream of bridge. 019 u'stream of bridge. Rained during sampling. Site sampled during 1.5mtpa fast track sample event (Oct 09). Not in original sample list for the Surat Gas Project, however was sampled as it looked very different from last month. Reduced analyte list (9 bottles). Samples sent to lab 18/11/09 from Dalby via courier	Site flowing turbid water – stopped raining u'stream of sample point. Reduced analyte list (9 bottles). Samples sent to lab 18/11/09 from Dalby via courier

Note: iron bacteria can sometimes form a film on the water surface that can be confused with hydrocarbons. The film caused by iron breaks up into smaller “plates” when disturbed (such as by running a stick through it), whereas a hydrocarbon film will be fluid and will produce a swirling pattern or will remain unbroken.

* This may include any unusual activity that may have a site specific effect at the time of sampling, such as construction work.

November 2009 – Water Quality Assessment		Location: Surat Gas Project Date: 17/11/09 – 19/11/09							
		Inspection by: AMC & MA Sheet 2 of 3							
		Meter Calibrated (please tick the box) pH ✓ EC ✓ DO ✓ Turbidity ✓							
		Site used for QA duplicate: 20							
Comments or general observations (such as weather conditions): C1 = Photo Card 1									
17/11/09 – Rain in past week. Storms overnight. Sunny Day. Light Breeze. Daily Temperature around 40°C.									
18/11/09 – Thunder storms previous day and over the past week. Clear sky. No breeze. Daily Temperature around 40°C.									
19/11/09 – Storms the prev night, breeze and some cloud in the morning. Daily Temperature around 40°C.									
Field data and observations		SITE REFERENCE NUMBER							
		26 (17/11/09)	8 (18/11/09)	A5 (18/11/09)	137/138 (18/11/09)	137 (18/11/09)	78 (19/11/09)	4 (19/11/09)	79 (19/11/09)
GPS co-ordinates (WGS 84)		56J 310659 6998633	56J 327102 6991451 (LMK 003)	56J 309777 6982561	-	56J 297549 6965603	56J 334238 6944040	56J 322772 6953334	56J 319050 6943624
FIELD Physico-Chemical									
pH		-	7.07	6.89	-	6.39	7.29	7.64	6.87
EC (mS/cm)		-	0.6	0.2	-	0.18	0.48	0.37	0.16
Temperature (°C)		-	23.5	21.1	-	26.5	20.5	24.3	23.3
DO (% satn.)		-	5.7	23.0	-	6.6	12.1	62.1	19-30
Turbidity (NTU)		-	29.1	882 (lab to analyse turbidity as outside field meter calibration range)	-	765	363	22.5	326
Time of sampling		6:00pm	6:00 am	7:15am	-	3:15 pm	6:30am	7:30am	8:00am
FIELD Observations									
Photo taken (tick and No.) C1		028 u'stream 029-030 d'stream	032-034 u'stream 031 d'stream	036-037 d'stream 035 u'stream	-	052-053 u'stream 054 d'stream	U'stream of bridge 095, 096 u'stream 094 d'stream	097 u'stream 098, 099 d'stream	101 u'stream 100 d'stream
Floating litter, debris, scum, foam, objectionable matter		-	No	No	-	No	Woody debris in channel.	Litter in channel.	Woody debris in channel.
Oil/petrochem (film/odour)#		-	No	No	-	No	No	No	No
Objectionable odour		-	No	No	-	No	No	No	No

November 2009 – Water Quality Assessment		Location: Surat Gas Project Date: 17/11/09 – 19/11/09 Inspection by: AMC & MA Sheet 2 of 3 Meter Calibrated (please tick the box) pH ✓ EC ✓ DO ✓ Turbidity ✓ Site used for QA duplicate: 20						
Comments or general observations (such as weather conditions): C1 = Photo Card 1 17/11/09 – Rain in past week. Storms overnight. Sunny Day. Light Breeze. Daily Temperature around 40°C. 18/11/09 – Thunder storms previous day and over the past week. Clear sky. No breeze. Daily Temperature around 40°C. 19/11/09 – Storms the prev night, breeze and some cloud in the morning. Daily Temperature around 40°C.								
Field data and observations	SITE REFERENCE NUMBER							
	26 (17/11/09)	8 (18/11/09)	A5 (18/11/09)	137/138 (18/11/09)	137 (18/11/09)	78 (19/11/09)	4 (19/11/09)	79 (19/11/09)
Algal blooms or floating vegetation mats	-	Floating macrophytes.	Algae film on surface.	-	Algae film on surface.	Algae u'stream of bridge where shallower and clearer.	Floating macrophytes.	Algae film on the surface – speckled.
Dead fauna/flora	-	No	No	-	No	No	No	No
Other observations/notes *	Site Dry.	Dam u'stream of site – couple hundred metres. Not flowing, slightly turbid. Reduced analyte list (9 bottles). Samples sent to lab 18/11/09 from Dalby via courier	Less water than previous sample occasion. Very turbid, opaque pool. Bugs observed. Reduced analyte list (9 bottles). Samples sent to lab 18/11/09 from Dalby via courier	Dingo gate on road to site 56J 301428 6971196 (LMK 005). Initially thought we could not access – Arrow personnel said the gate was a dingo fence and that we may enter.	Site located in between site 137 & 138. Turbid pool of water approx 15m x 4 m. Reduced analyte list (9 bottles). Samples sent to lab 18/11/09 from Dalby via courier	Large pool of turbid water. Reduced analyte list (9 bottles). Samples delivered to the lab by NRA 20/11/09.	Less water present than last sampling occasion (site sampled during the 1.5mtpa fast track field trip (Oct 09)). Not flowing, Slightly turbid. Reduced analyte list (9 bottles). Samples delivered to the lab by NRA 20/11/09	No cattle impact. Dingo/wild dog tracks. Very turbid opaque pool of water approx 12m x 4 m. Waterbody stratified (within 5cm (depth) there is a difference in DO, higher DO closer to the surface. Reduced analyte list (9 bottles). Samples delivered to the lab by NRA 20/11/09

Note: iron bacteria can sometimes form a film on the water surface that can be confused with hydrocarbons. The film caused by iron breaks up into smaller “plates” when disturbed (such as by running a stick through it), where as a hydrocarbon film will be fluid and will produce a swirling pattern or will remain unbroken.

* This may include any unusual activity that may have a site specific effect at the time of sampling, such as construction work.

November 2009 – Water Quality Assessment		Location: Surat Gas Project Date: 19/11/09 Inspection by: AMC & MA Sheet 3 of 3 Meter Calibrated (please tick the box) pH ✓ EC ✓ DO ✓ Turbidity ✓ Site used for QA duplicate: 20						
Comments or general observations (such as weather conditions): C1 = Photo Card 1 – note that unless stated otherwise, photo numbers are from photo card number 1 (C1). C2 = Photo Card 2. 19/11/09 – Rain in past week. Storms overnight. Sunny Day. Daily Temperature around 40°C.								
Field data and observations	SITE REFERENCE NUMBER							
	136 (19/11/09)	88 (19/11/09)	B (Domville) (19/11/09)	109 (19/11/09)	119 (19/11/09)	120 (19/11/09)	125 (19/11/09)	127 (19/11/09)
GPS co-ordinates (WGS 84)	-	56J 330481 6915697	56J 330439 6909410	56J 319654 6889868 (LMK 056)	56J 270380 6883087	56J 282183 6872959	56J 264500 6863915	56J 264553 6851196
FIELD Physico-Chemical								
pH	-	7.01	-	7.31	6.69	7.45	-	8.68
EC (mS/cm)	-	0.12	-	0.18	0.12	0.30	-	0.18
Temperature (°C)	-	26.2	-	30.3	31.4	27.5	-	35.2
DO (% satn.)	-	74.6	-	90.4	55.1	70.4	-	135.6
Turbidity (NTU)	-	13.36	-	469	195	477	-	666
Time of sampling	-	10:30am	-	12:00pm	1:30 pm	2:45pm	3:30pm	4:00pm
FIELD Observations								
Photo taken (tick and No.) C1	-	105, 106, 107, 108rm 104 d'stream	109, 110, 111 u'stream 112, 113 d'stream	114, u'stream C2 001 d'stream, C2 002 d'stream of bridge. C2 003 u'stream of bridge.	C2 004, C2 006 u'stream C2 005 d'stream	C2 009 u'stream C2 007, 008 d'stream	C2 011 d'stream C2 010 u'stream	C2 015 u'stream C2 012 d'stream
Floating litter, debris, scum, foam, objectionable matter	-	No	-	Some litter in channel but not in waterbody.	No	No	-	No
Oil/petrochem (film/odour)#	-	No	-	No	No	No	-	No
Objectionable odour	-	No	-	No	No	No	-	No

November 2009 – Water Quality Assessment		Location: Surat Gas Project Date: 19/11/09 Inspection by: AMC & MA Sheet 3 of 3 Meter Calibrated (please tick the box) pH ✓ EC ✓ DO ✓ Turbidity ✓ Site used for QA duplicate: 20						
Comments or general observations (such as weather conditions): C1 = Photo Card 1 – note that unless stated otherwise, photo numbers are from photo card number 1 (C1). C2 = Photo Card 2. 19/11/09 – Rain in past week. Storms overnight. Sunny Day. Daily Temperature around 40°C.								
Field data and observations	SITE REFERENCE NUMBER							
	136 (19/11/09)	88 (19/11/09)	B (Domville) (19/11/09)	109 (19/11/09)	119 (19/11/09)	120 (19/11/09)	125 (19/11/09)	127 (19/11/09)
Algal blooms or floating vegetation mats	-	Some floating macrophytes around the bank.	-	No	No	No	-	Orange algae globs and algae film on surface.
Dead fauna/flora	-	No	-	.No	No	No	-	No
Other observations/notes *	Could not access site – vermin fence	Sample collected u'stream of bridge. Not flowing Slightly turbid. Full analyte (14 bottles). Samples delivered to the lab by NRA 20/11/09	No Access – site fenced.	Sample collected from small pool of water (approx 5m x 2m) u'stream of bridge. Reduced analyte list (9 bottles). Samples delivered to the lab by NRA 20/11/09	Sample collected u'stream off road. Series of isolated very turbid, opaque pools. Approx 4m x 15 m Full analyte (14 bottles). Samples delivered to the lab by NRA 20/11/09	Very turbid pool of water – series of isolated, pools. Stratified pool. Sample difficult to field filter – lab to filter sample for metals. Dried clays on substrate in channel. Sample collected d'stream. Photo C2 006 u'stream. Reduced analyte list (9 bottles). Samples delivered to the lab by NRA 20/11/09	Site Dry. Shallow depression. Slight channel on d'stream side of Rd.	Photo C2 013 orange line at watermark. Orange algae globs and algae film on surface. Very turbid opaque pool of water 15m x 5m (shallow). Full analyte (14 bottles). Samples delivered to the lab by NRA 20/11/09

Note: iron bacteria can sometimes form a film on the water surface that can be confused with hydrocarbons. The film caused by iron breaks up into smaller “plates” when disturbed (such as by running a stick through it), where as a hydrocarbon film will be fluid and will produce a swirling pattern or will remain unbroken.

* This may include any unusual activity that may have a site specific effect at the time of sampling, such as construction work.

Field Photos November 2009



C1 001 – 20 upstream



C1 002 – 20 downstream



C1 003 – 140 upstream



C1 004 – 140 downstream



C1 005 – 0 upstream



C1 006 – 0 downstream



C1 010 – 15 upstream



C1 011 – 15 downstream



C1 012 – 27 downstream



C1 013 – 27 downstream



C1 014 – 27 upstream



C1 015 – 33 upstream



C1 016 – 33 downstream



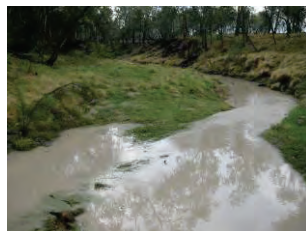
C1 017 – 17 downstream



C1 018 – 17 downstream



C1 019 – 17 upstream from bridge



C1 020 – 17 downstream from bridge



C1 021 – 16 downstream



C1 022 – 16 upstream



C1 023 – 16 upstream



C1 024 – 16 upstream



C1 025 – 16 upstream from sample point



C1 028 – 26 upstream



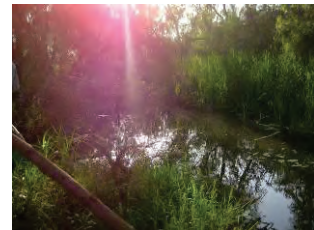
C1 029 – 26 downstream



C1 030 – 26 downstream



C1 031 – 8 downstream



C1 032 – 8 upstream



C1 033 – 8 upstream



C1 034 – 8 upstream



C1 035 – A5 upstream



C1 036 – A5 downstream



C1 037 – A5 downstream



C1 052 – 137 upstream



C1 053 – 137 upstream



C1 054 – A5 downstream



C1 094 – 78 downstream



C1 095 – 78 upstream



C1 096 – 78 upstream



C1 097 – 4 upstream



C1 098 – 4 downstream



C1 099 – 4 downstream



C1 100 – 79 downstream



C1 101 – 79 upstream



C1 104 – 88 downstream



C1 105 – 88 upstream



C1 106 – 88 upstream



C1 107 – 88 upstream



C1 108 – 88 upstream



C1 109 – B (Domville) upstream



C1 110 – B (Domville) upstream



C1 111 – B (Domville) upstream



C1 112 – B (Domville) downstream



C1 113 – B (Domville) downstream



C1 114 – 109 upstream



C2 001 – 109 downstream



C2 002 – 109 downstream



C2 003 – 109 upstream of bridge



C2 004 – 119 upstream



C2 005 – 119 downstream



C2 006 – 119 upstream



C2 007 – 120 downstream



C2 008 – 120 downstream



C2 009 – 120 upstream



C2 010 – 125 upstream



C2 011 – 125 downstream



C2 012 – 127 downstream



C2 013 – 127 orange line at watermark



C2 014 – 127 upstream

March 2010 – Water Quality Assessment	Location: _____ Surat Gas Project _____ Date: 16/03/10 _____						
	Inspection by: AMC & MA _____ Sheet 1 of 4 _____						
Meter Calibrated (please tick the box) pH <input checked="" type="checkbox"/> EC <input checked="" type="checkbox"/> DO <input checked="" type="checkbox"/> Turbidity <input checked="" type="checkbox"/>							
Site used for QA duplicate 0 _____							
Comments or general observations (such as weather conditions) Fine, clear day. Blank (B) sample at 7:00am 16/03/10 Samples B, 27, 15B, 0 and QA were sent to SGS from Chinchilla via courier on 16/03/10. Samples 20, 33 and 17 (and soluble metal bottles for sites 15B and 27) were sent to SGS from Dalby via courier on 17/03/10.							
Field data and observations	SITE REFERENCE NUMBER						
	27	15B	0	20	33	17	
GPS co-ordinates (WGS 84)	7046515N 237102E	7073776N 207488E	7006407N 310085E	7075632N 237168E	7040275N 263434E	7022184N 280536E	
FIELD Physico-Chemical							
pH	6.52	6.34	7.44	6.09	6.68	7.39	
EC (mS/cm)	0.13	0.22	0.29	0.11	0.14	0.11	
Temperature (°C)	21.3	20.0	26.5	23.9	24.5	25.2	
DO (% satn.)	64.0	82.3	65.0	52	22	98.2	
Turbidity (NTU)	950	448	39.1	107	40.8	207	
Time of sampling	7:40am	9:40am	11:40am	3:00pm	4:30pm	5:50pm	
FIELD Observations							
Photo taken (tick and No.)	001 downstream 002 upstream	003 upstream 004, 005 downstream	006 upstream 007 downstream	008 upstream 009 downstream 010 oily sheen	011 downstream 012 upstream	013 downstream 014 upstream	
Floating litter, debris, scum, foam, objectionable matter	None	Lots of debris on banks and in channel	None	Debris in trees and channel	None	Debris on bank and in channel	
Oil/petrochem (film/odour)#	None	None	Thin oily film on surface (considered to be natural)	Oily sheen on surface (considered to be natural)	None	None	
Objectionable odour	None	None	None	None	Anoxic smell	Anoxic smell	
Algal blooms or floating vegetation mats	None	None	None	None	waterlily	None	

March 2010 – Water Quality Assessment	Location: <u>Surat Gas Project</u> Date: <u>16/03/10</u>							
	Inspection by: <u>AMC & MA</u> Sheet <u>1</u> of <u>4</u>							
Meter Calibrated (please tick the box) pH <input checked="" type="checkbox"/> EC <input checked="" type="checkbox"/> DO <input checked="" type="checkbox"/> Turbidity <input checked="" type="checkbox"/>								
Site used for QA duplicate <u>0</u>								
Comments or general observations (such as weather conditions) Fine, clear day. Blank (B) sample at 7:00am 16/03/10								
Samples B, 27, 15B, 0 and QA were sent to SGS from Chinchilla via courier on 16/03/10.								
Samples 20, 33 and 17 (and soluble metal bottles for sites 15B and 27) were sent to SGS from Dalby via courier on 17/03/10.								
Field data and observations	SITE REFERENCE NUMBER							
	27	15B	0	20	33	17		
Dead fauna/flora	None	None	None	None	None	None		
Other observations/notes *	Very turbid. Very low flow (not apparent but all connected). Reduced analyte suite and TEG/OP.	Stericup filter was topped up after filling the metals bottle. At low flow. Very turbid. Frogs observed. Full analyte suite.	Not flowing. Turbid water. Oily film was considered to be natural as the film broke apart when poked. Full analyte suite.	Flowing, turbid water. Oily sheen was considered to be natural as the sheen broke apart when poked. Reduced analyte suite and TEG/OP.	Does not appear to be flowing. Smells anoxic. Construction going on adjacent to where the sample was collected. Reduced analyte suite.	Flowing, turbid water. Rapids downstream. Lots of sediment deposit on banks. Full analyte suite.		

Note: iron bacteria can sometimes form a film on the water surface that can be confused with hydrocarbons. The film caused by iron breaks up into smaller “plates” when disturbed (such as by running a stick through it), where as a hydrocarbon film will be fluid and will produce a swirling pattern or will remain unbroken.

* This may include any unusual activity that may have a site specific effect at the time of sampling, such as construction work.

March 2010 – Water Quality Assessment	Location: <u>Surat Gas Project</u> Date: <u>17/03/10</u>							
	Inspection by: <u>AMC & MA</u> Sheet <u>2</u> of <u>4</u>							
Meter Calibrated (please tick the box) pH <input checked="" type="checkbox"/> EC <input checked="" type="checkbox"/> DO <input checked="" type="checkbox"/> Turbidity <input checked="" type="checkbox"/>								
Site used for QA duplicate <u>0</u>								
Comments or general observations (such as weather conditions) Sunny, clear sky. Blank (B) sample at 7:00am 16/03/10 Samples 9, 16, 14, A7, 8, 20, 33, 17, 33 (and soluble metal bottles for sites 15B and 27) were sent to SGS from Dalby via courier on 17/03/10. A5 was not sampled as there was no access. Tree down on track (photo 027)								
Field data and observations	SITE REFERENCE NUMBER (please insert below)							
	9	15C	16	14	A7	8	137	A4
GPS co-ordinates (WGS 84)	7006407N 310085E	7027606N 302555E	7019709N 293194E	7004153N 288318E	7001348N 300080E	6991451N 327102E	6965603N 297549E	6986992N 302831E
FIELD Physico-Chemical								
pH	7.35	-	7.34	6.42	6.53	7.08	6.06	6.33
EC (mS/cm)	0.30	-	0.18	0.16	0.15	0.26	0.13	0.14
Temperature (°C)	20.2	-	22.1	22.6	24.1	22.3	26.8	25.0
DO (% satn.)	40.5	-	49.2	31.4	30.3	41.9	51	46.0
Turbidity (NTU)	53.4	-	237	233	71.2	107	39.8	27.9
Time of sampling	6:30am	-	8:40am	9:40pm	10:15pm	11:45am	2:10pm	3:25pm
FIELD Observations								
Photo taken (tick and No.)	015 upstream 016 downstream	-	018 upstream 017 downstream	020 upstream 019 downstream	021 upstream 022 downstream	023 downstream 024 upstream	025 upstream 026 downstream	028 upstream 029 downstream
Floating litter, debris, scum, foam, objectionable matter	None	-	Debris in trees. Foam from flow.	Debris on bank and in channel	Debris in channel and trees	None	None	Foaming water at culvert. Debris in channel and on banks.
Oil/petrochem (film/odour)#	None	-	None	None	None	None	Oily film (considered to be natural)	None
Objectionable odour	None	-	None	None	Anoxic smell	None	None	None
Algal blooms or floating vegetation mats	None	-	None	None	None	None	None	None
Dead fauna/flora	None	-	None	None	None	None	None	None

March 2010 – Water Quality Assessment	Location: <u>Surat Gas Project</u> Date: <u>17/03/10</u> Inspection by: <u>AMC & MA</u> Sheet <u>2</u> of <u>4</u> Meter Calibrated (please tick the box) pH <input checked="" type="checkbox"/> EC <input checked="" type="checkbox"/> DO <input checked="" type="checkbox"/> Turbidity <input checked="" type="checkbox"/> Site used for QA duplicate <u>0</u>							
	Comments or general observations (such as weather conditions) Sunny, clear sky. Blank (B) sample at 7:00am 16/03/10 Samples 9, 16, 14, A7, 8, 20, 33, 17, 33 (and soluble metal bottles for sites 15B and 27) were sent to SGS from Dalby via courier on 17/03/10. A5 was not sampled as there was no access. Tree down on track (photo 027)							
Field data and observations	SITE REFERENCE NUMBER (please insert below)							
	9	15C	16	14	A7	8	137	A4
Other observations/notes *	Some debris collected behind pylon. Flowing water.	Not sampled	Flowing water	Turbid water. Slow flowing.	Turbid water. Slow flowing.	Slow flowing. Channel choked with reeds. Reeds flattened by flow.	Tannin stained. Slow flowing	Slow flowing

Note: iron bacteria can sometimes form a film on the water surface that can be confused with hydrocarbons. The film caused by iron breaks up into smaller “plates” when disturbed (such as by running a stick through it), where as a hydrocarbon film will be fluid and will produce a swirling pattern or will remain unbroken.

* This may include any unusual activity that may have a site specific effect at the time of sampling, such as construction work.

March 2010 – Water Quality Assessment	Location: <u>Surat Gas Project</u> Date: <u>17/03/10</u>							
	Inspection by: <u>AMC & MA</u> Sheet <u>3</u> of <u>4</u>							
Meter Calibrated (please tick the box) pH <input checked="" type="checkbox"/> EC <input checked="" type="checkbox"/> DO <input checked="" type="checkbox"/> Turbidity <input checked="" type="checkbox"/>								
Site used for QA duplicate <u>0</u>								
Comments or general observations (such as weather conditions) Fine, clear sky with some low clouds. Windy at site 10 (Broadwater Lagoon). Blank (B) sample at 7:00am 16/03/10. Samples 10 and 6 dropped off at SGS Brisbane 19/03/10.								
Field data and observations	SITE REFERENCE NUMBER (please insert below)							
	10	6						
GPS co-ordinates (WGS 84)	6973068N 311377E	6979588N 327460E						
FIELD Physico-Chemical								
pH	6.87	7.46						
EC (mS/cm)	0.11	0.32						
Temperature (°C)	26.5	23.3						
DO (% satn.)	72.8	62.3						
Turbidity (NTU)	49.8	174						
Time of sampling	4:15pm	5:25pm						
FIELD Observations								
Photo taken (tick and No.)	030 N, 031 NE, 032 E, 033 E, 034 SE, 035 SE, 036 E, 037 grass seeds, 038 S	039 upstream 040 downstream						
Floating litter, debris, scum, foam, objectionable matter	Grass seeds (photo 037)	Debris in channel and on banks.						
Oil/petrochem (film/odour)#	None	None						
Objectionable odour	Slight rotting vegetation smell on banks	None						
Algal blooms or floating vegetation mats	None	None						

March 2010 – Water Quality Assessment	Location: <u>Surat Gas Project</u> Date: <u>17/03/10</u>							
	Inspection by: <u>AMC & MA</u> Sheet <u>3</u> of <u>4</u>							
Meter Calibrated (please tick the box) pH <input checked="" type="checkbox"/> EC <input checked="" type="checkbox"/> DO <input checked="" type="checkbox"/> Turbidity <input checked="" type="checkbox"/>								
Site used for QA duplicate <u>0</u>								
Comments or general observations (such as weather conditions) Fine, clear sky with some low clouds. Windy at site 10 (Broadwater Lagoon). Blank (B) sample at 7:00am 16/03/10. Samples 10 and 6 dropped off at SGS Brisbane 19/03/10.								
Field data and observations	SITE REFERENCE NUMBER (please insert below)							
	10	6						
Dead fauna/flora	None	None						
Other observations/notes *	Plant material (grass seeds) washed up on banks. Water level approx. 10m from 'edge' of lake. Full analyte suite.	Flowing, turbid water. Sample collected upstream of the bridge. Reduced analyte suite.						

Note: iron bacteria can sometimes form a film on the water surface that can be confused with hydrocarbons. The film caused by iron breaks up into smaller "plates" when disturbed (such as by running a stick through it), where as a hydrocarbon film will be fluid and will produce a swirling pattern or will remain unbroken.

* This may include any unusual activity that may have a site specific effect at the time of sampling, such as construction work.

March 2010 – Water Quality Assessment	Location: _____ Surat Gas Project _____ Date: 18/03/10 _____							
	Inspection by: AMC & MA _____ Sheet 4 of 4 _____							
Meter Calibrated (please tick the box) pH <input checked="" type="checkbox"/> EC <input checked="" type="checkbox"/> DO <input checked="" type="checkbox"/> Turbidity <input checked="" type="checkbox"/>								
Site used for QA duplicate 0 _____								
Comments or general observations (such as weather conditions) Fine, clear sky. Blank (B) sample at 7:00am 16/03/10. Samples 88, 1, 4, 79, 109, 119, 120, 127 dropped off at SGS Brisbane 19/03/10.								
Field data and observations	SITE REFERENCE NUMBER (please insert below)							
	88	1	4	79	109	119	120	127
GPS co-ordinates (WGS 84)	6915697N 330481E	6935920N 338242E	6953318N 322793E	6943624N 319050E	6889868N 319654E	6883087N 270380E	6872959N 282183E	6851196N 264553E
FIELD Physico-Chemical								
pH	7.03	7.39	7.56	6.64	7.16	7.21	7.59	7.44
EC (mS/cm)	0.15	0.17	0.17	0.21	0.18	0.17	0.17	0.18
Temperature (°C)	20.7	18.8	22.6	22.1	22.8	30.7	30.7	28.7
DO (% satn.)	28.2	61.0	82.8	7.4	36.6	87.4	87.4	91.8
Turbidity (NTU)	150	203	128	133	75.6	153	153	108
Time of sampling	6:35am	8:10am	9:00am	9:30am	11:15am	1:00pm	1:00pm	1:50pm
FIELD Observations								
Photo taken (tick and No.)	047 upstream 048 downstream	050 upstream 049 downstream	053 upstream 054 downstream	056-058 upstream 055 downstream	059 upstream 060 downstream	061 upstream 062 downstream	063 downstream 064 upstream	065 upstream 066 downstream
Floating litter, debris, scum, foam, objectionable matter	None	None.	None	Debris in channel and on banks.	Few leaves, debris in channel downstream.	Debris in channel.	Debris in channel and on banks.	Debris in channel.
Oil/petrochem (film/odour)#	None	None	Rotting vegetation smell	Oil film on surface (considered to be natural)	None	None	Oil film (considered to be natural)	None
Objectionable odour	None	None	Floating macrophytes	None	None	None	None	None
Algal blooms or floating vegetation mats	None	None	None	None	None	None	Brown algae in puddle.	None

March 2010 – Water Quality Assessment	Location: <u>Surat Gas Project</u> Date: <u>18/03/10</u>
	Inspection by: <u>AMC & MA</u> Sheet <u>4</u> of <u>4</u>
	Meter Calibrated (please tick the box) pH <input checked="" type="checkbox"/> EC <input checked="" type="checkbox"/> DO <input checked="" type="checkbox"/> Turbidity <input checked="" type="checkbox"/>
	Site used for QA duplicate <u>0</u>

Comments or general observations (such as weather conditions) Fine, clear sky. Blank (B) sample at 7:00am 16/03/10.
 Samples 88, 1, 4, 79, 109, 119, 120, 127 dropped off at SGS Brisbane 19/03/10.

Field data and observations	SITE REFERENCE NUMBER (please insert below)							
	88	1	4	79	109	119	120	127
Dead fauna/flora	None	None	None	None	None	None	None	None
Other observations/notes *	Low flow. TEG/OP analysis only.	Slight flow. Reduced analyte suite.	Water sample collected upstream of bridge, from the right bank (looking downstream). Reduced analyte suite.	Low flow. Orange precipitate (expected to be ferric hydroxide). Reduced analyte suite.	Low flow – trickling water. Large debris against trees on banks. Reduced analyte suite.	Low flow. TEG/OP analysis only.	Low flow. Sand and bedrock in channel. Orange coloured precipitate observed (expected to be ferric hydroxide). Commoron Creek. Reduced analyte suite.	Low flow. Sample collected upstream of road. TEG/OP analysis only.

Note: iron bacteria can sometimes form a film on the water surface that can be confused with hydrocarbons. The film caused by iron breaks up into smaller “plates” when disturbed (such as by running a stick through it), where as a hydrocarbon film will be fluid and will produce a swirling pattern or will remain unbroken.
 * This may include any unusual activity that may have a site specific effect at the time of sampling, such as construction work.

Field Photos March 2010



001 – 27 downstream



002 – 27 upstream



003 – 15B upstream



005 – 15B downstream



006 – 0 upstream



007 – 0 downstream



008 – 20 upstream



009 – 20 downstream



010 – 20 oily sheen



011 – 33 downstream



012 – 33 upstream



013 – 17 downstream



014 – 17 upstream



015 – 9 upstream



016 – 9 downstream



017 – 16 downstream



018 – 16 upstream



019 – 14 downstream



020 – 14 upstream



021 – A7 upstream



022 – A7 downstream



023 – 8 downstream



024 – 8 upstream



025 – 137 upstream



026 – 137 downstream



028 – A4 upstream



029 – A4 downstream



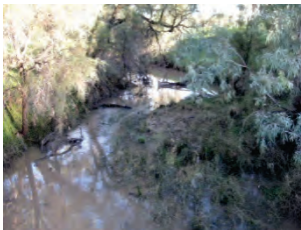
030 – 10 North



036 – 10 East



035 – 10 South-east



039 – 6 upstream



040 – 6 downstream



047 – 88 upstream



048 – 88 downstream



049 – 1 downstream



050 – 1 upstream



053 – 4 upstream



054 – 4 downstream



055 – 79 downstream



058 – 79 upstream



059 – 109 upstream



060 – 109 downstream



061 – 119 upstream



062 – 119 downstream



063 – 120 downstream



064 – 120 upstream



065 – 127 upstream



066 – 127 downstream

**Attachment E
Field Survey Results –
Water Quality**

Table AE1-1. October 2009 Baseline Field Survey - Dalby Area Water Quality

Analyte grouping/Analyte	Units	LOR	Site	1	3	4	6	8	A5	11	A4	A7	14	15C ¹	16	17
			Date	15/10/2009	15/10/2009	15/10/2009	14/10/2009	14/10/2009	15/10/2009	15/10/2009	15/10/2009	16/10/2009	16/10/2009	16/10/2009	16/10/2009	16/10/2009
Field																
pH				7.44	6.85	7.96	7.74	7.36	7.03	7.22	6.81	7.86	6.58	7.72	7.87	7.5
Electrical Conductivity	µS/cm		330	170	330	1070	900	140	930	210	180	100	310	310	350	
Dissolved Oxygen	% Satn.		36.9	29.9	94.4	22.8	65.9	82.3	68.9	73	120.3	38.8	71.7	71.2	35.2	
Temperature	°C		17.2	16.9	22.1	18.5	20.9	22.6	22.4	17.3	27.3	19.0	15.6	16.2	15.2	
Miscellaneous																
Turbidity	NTU	0.1	303	755	24.1	353	28.5	1000	257	700	284	534	1600	537	2100	
Sodium Absorption Ratio (SAR)	-	0.01	1.1	-	0.97	3.85	5.7	2.5	-	1.99	2.04	2.64	2.8	1.94	2.01	
Suspended Solids (SS)	mg/L	5	183	-	26	378	34	1260	-	39	210	36	690	76	1420	
Total Hardness as CaCO3	mg/L	1	120	-	115	229	134	28	-	40	32	11	52	77	82	
Major Ions																
Sulfate as SO ₄ ²⁻	mg/L	1	4	-	3	86	45	4	-	4	2	2	8	9	9	
Chloride	mg/L	1	25	-	24	148	152	33	-	26	24	16	24	19	25	
Calcium	mg/L	1	24	-	25	45	26	6	-	4	7	2	10	17	19	
Fluoride	mg/L	0.1	0.2	-	0.2	0.3	0.4	<0.1	-	<0.1	0.1	<0.1	0.3	0.2	0.3	
Magnesium	mg/L	1	14	-	13	28	17	3	-	7	3	2	7	8	8	
Sodium	mg/L	1	28	-	24	134	151	30	-	29	26	20	46	39	42	
Trace Elements																
Mercury (dissolved)	mg/L	0.0001	<0.0001	-	<0.0001	<0.0001	<0.0001	<0.0001	-	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	
Mercury (total)	mg/L	0.0001	<0.0001	-	<0.0001	<0.0001	<0.0001	<0.0001	-	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	
Selenium (dissolved)	µg/L	0.2	<0.2	-	<0.2	<0.2	0.4	0.3	-	0.4	0.2	0.2	0.4	0.2	0.3	
Arsenic (dissolved)	µg/L	0.2	0.7	-	0.6	1.4	0.9	0.6	-	0.8	1.1	1.2	0.6	0.9	0.9	
Boron (dissolved)	µg/L	5	30	-	22	163	80	55	-	24	41	19	61	43	74	
Cadmium (dissolved)	µg/L	0.05	<0.05	-	<0.05	<0.05	<0.05	<0.05	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	
Cobalt (dissolved)	µg/L	0.1	1.4	-	0.2	2	1.2	1.3	-	0.8	1.6	1.8	0.4	0.5	0.4	
Copper (dissolved)	µg/L	0.5	1.8	-	1	0.7	2	2.3	-	1	1.4	1.6	6.2	5.6	5.3	
Free Cyanide	mg/L	0.004	<0.004	-	<0.004	<0.004	<0.004	<0.004	-	<0.004	<0.004	<0.004	<0.004	<0.004	<0.004	

Analyte grouping/Analyte	Units	LOR	Site	1	3	4	6	8	A5	11	A4	A7	14	15C ¹	16	17
			Date	15/10/2009	15/10/2009	15/10/2009	14/10/2009	14/10/2009	15/10/2009	15/10/2009	15/10/2009	16/10/2009	16/10/2009	16/10/2009	16/10/2009	16/10/2009
Lead (dissolved)	µg/L	0.1	<0.1	-	<0.1	<0.1	0.2	<0.1	-	0.2	0.3	0.9	<0.1	<0.1	<0.1	
Nickel (dissolved)	µg/L	0.5	6.9	-	3.4	12.3	2.7	2.9	-	1.4	3.4	2.3	12.7	8.6	9.7	
Vanadium (dissolved)	µg/L	0.2	8.3	-	5.1	6.9	4.0	2.1	-	3.0	3.2	-	6.0	11.7	-	
Zinc (dissolved)	µg/L	1	<1	-	3	9	26	8	-	15	<1	4	<1	<1	<1	
Selenium (total)	µg/L	0.2	0.2	-	<0.2	0.3	0.4	1.2	-	1.1	0.4	0.7	0.8	0.4	0.9	
Arsenic (total)	µg/L	0.2	1.2	-	0.7	2.1	2.6	4.8	-	7.6	2.9	6	2.9	1.6	3.5	
Boron (total)	µg/L	5	29	-	22	180	119	61	-	31	44	20	71	48	78	
Cadmium (total)	µg/L	0.05	<0.05	-	<0.05	<0.05	<0.05	<0.05	-	<0.05	<0.05	<0.05	<0.05	<0.05	0.05	
Cobalt (total)	µg/L	0.1	7.4	-	1.6	10.4	1.7	31.4	-	18.5	9.4	10.4	55.1	10.6	38.5	
Copper (total)	µg/L	0.5	7.4	-	1.6	12.5	5.1	21.4	-	7.5	4.4	7.3	27.5	13.3	34.2	
Lead (total)	µg/L	0.1	2.1	-	0.3	2.7	1.4	28.9	-	23	7.1	9.4	18.5	4.9	14.5	
Nickel (total)	µg/L	0.5	21.4	-	4.6	40.4	3.5	34.1	-	13.6	10.3	8	71.7	26	79.8	
Zinc (total)	µg/L	1	23	-	3	32	65	63	-	57	19	42	88	44	148	
Nutrients																
Ammonia as N	mg/L	0.01	0.13	-	0.03	0.81	0.12	0.12	-	0.02	0.03	0.13	0.07	0.06	0.08	
Nitrite as N	mg/L	0.01	<0.01	-	<0.01	<0.01	<0.01	0.04	-	0.02	<0.01	<0.01	<0.01	<0.01	<0.01	
Nitrate as N	mg/L	0.01	0.08	-	0.02	0.04	0.04	0.58	-	0.03	0.03	0.06	0.36	0.08	0.27	
Total Oxidised Nitrogen (NOx) as N	mg/L	0.01	0.08	-	0.02	0.04	0.04	0.62	-	0.05	0.03	0.06	0.36	0.08	0.27	
Total Nitrogen as N	mg/L	0.05	0.64	-	0.34	2.29	1.41	2.63	-	2.45	1.73	1.11	1.97	0.99	2.89	
Total Phosphorus as P	mg/L	0.005	0.122	-	0.03	0.262	0.387	0.944	-	0.728	0.388	0.431	0.554	0.429	1.47	
Monocyclic Aromatic Hydrocarbons																
Benzene	µg/L	1	<1	-	<1	<1	<1	<1	-	<1	<1	<1	<1	<1	<1	
Toluene	µg/L	2	<2	-	<2	<2	<2	<2	-	<2	<2	<2	<2	<2	<2	
Ethylbenzene	µg/L	2	<2	-	<2	<2	<2	<2	-	<2	<2	<2	<2	<2	<2	
meta- & para-Xylene	µg/L	2	<2	-	<2	<2	<2	<2	-	<2	<2	<2	<2	<2	<2	
Styrene	µg/L	5	<5	-	<5	<5	<5	<5	-	<5	<5	<5	<5	<5	<5	
ortho-Xylene	µg/L	2	<2	-	<2	<2	<2	<2	-	<2	<2	<2	<2	<2	<2	
Isopropylbenzene	µg/L	5	<5	-	<5	<5	<5	<5	-	<5	<5	<5	<5	<5	<5	

Analyte grouping/Analyte	Units	LOR	Site	1	3	4	6	8	A5	11	A4	A7	14	15C ¹	16	17
			Date	15/10/2009	15/10/2009	15/10/2009	14/10/2009	14/10/2009	15/10/2009	15/10/2009	15/10/2009	16/10/2009	16/10/2009	16/10/2009	16/10/2009	16/10/2009
n-Propylbenzene	µg/L	5	<5	-	<5	<5	<5	<5	<5	-	<5	<5	<5	<5	<5	<5
1.3.5-Trimethylbenzene	µg/L	5	<5	-	<5	<5	<5	<5	<5	-	<5	<5	<5	<5	<5	<5
sec-Butylbenzene	µg/L	5	<5	-	<5	<5	<5	<5	<5	-	<5	<5	<5	<5	<5	<5
1.2.4-Trimethylbenzene	µg/L	5	<5	-	<5	<5	<5	<5	<5	-	<5	<5	<5	<5	<5	<5
tert-Butylbenzene	µg/L	5	<5	-	<5	<5	<5	<5	<5	-	<5	<5	<5	<5	<5	<5
p-Isopropyltoluene	µg/L	5	<5	-	<5	<5	<5	<5	<5	-	<5	<5	<5	<5	<5	<5
n-Butylbenzene	µg/L	5	<5	-	<5	<5	<5	<5	<5	-	<5	<5	<5	<5	<5	<5
Polynuclear Aromatic Hydrocarbons																
Naphthalene	µg/L	0.02	<0.02	-	<0.02	<0.02	<0.02	<0.02	<0.02	-	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02
Acenaphthylene	µg/L	0.02	<0.02	-	<0.02	<0.02	<0.02	<0.02	<0.02	-	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02
Acenaphthene	µg/L	0.02	<0.02	-	<0.02	<0.02	<0.02	<0.02	<0.02	-	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02
Fluorene	µg/L	0.02	<0.02	-	<0.02	<0.02	<0.02	<0.02	<0.02	-	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02
Phenanthrene	µg/L	0.02	<0.02	-	<0.02	<0.02	<0.02	<0.02	<0.02	-	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02
Anthracene	µg/L	0.02	<0.02	-	<0.02	<0.02	<0.02	<0.02	<0.02	-	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02
Fluoranthene	µg/L	0.02	<0.02	-	<0.02	<0.02	<0.02	<0.02	<0.02	-	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02
Pyrene	µg/L	0.02	<0.02	-	<0.02	<0.02	<0.02	<0.02	<0.02	-	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02
Benzo(a)anthracene	µg/L	0.02	<0.02	-	<0.02	<0.02	<0.02	<0.02	<0.02	-	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02
Chrysene	µg/L	0.02	<0.02	-	<0.02	<0.02	<0.02	<0.02	<0.02	-	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02
Benzo(b)fluoranthene	µg/L	0.02	<0.02	-	<0.02	<0.02	<0.02	<0.02	<0.02	-	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02
Benzo(k)fluoranthene	µg/L	0.02	<0.02	-	<0.02	<0.02	<0.02	<0.02	<0.02	-	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02
Benzo(a)pyrene	µg/L	0.005	<0.005	-	<0.005	<0.005	<0.005	<0.005	<0.005	-	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Indeno(1.2.3.cd) pyrene	µg/L	0.02	<0.02	-	<0.02	<0.02	<0.02	<0.02	<0.02	-	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02
Dibenzo(a,h) anthracene	µg/L	0.02	<0.02	-	<0.02	<0.02	<0.02	<0.02	<0.02	-	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02
Benzo(g,h,i)perylene	µg/L	0.02	<0.02	-	<0.02	<0.02	<0.02	<0.02	<0.02	-	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02
Total PAH	µg/L	0.005	<0.005	-	<0.005	<0.005	<0.005	<0.005	<0.005	-	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Total Petroleum Hydrocarbons																
C6 - C9 Fraction	µg/L	20	<20	-	<20	<20	<20	<20	<20	-	<20	<20	<20	<20	<20	<20
C10 - C14 Fraction	µg/L	50	<50	-	<50	<50	<50	<50	<50	-	<50	<50	<50	<50	<50	<50
C15 - C28 Fraction	µg/L	100	<100	-	<100	150	120	160	-	290	120	<100	<100	<100	<100	100

Analyte grouping/Analyte	Units	LOR	Site	1	3	4	6	8	A5	11	A4	A7	14	15C ¹	16	17
			Date	15/10/2009	15/10/2009	15/10/2009	14/10/2009	14/10/2009	15/10/2009	15/10/2009	15/10/2009	16/10/2009	16/10/2009	16/10/2009	16/10/2009	16/10/2009
C29 - C36 Fraction	µg/L	50	<50	-	<50	120	60	70	-	90	<50	<50	<50	<50	<50	
C10 - C36 Fraction (sum)	µg/L	50	<50	-	<50	270	180	230	-	380	120	<50	<50	<50	100	

**Organo-phosphorus
Pesticides (Ultra-trace)**

Bromophos-ethyl	µg/L	0.1	<0.10	-	<0.10	<0.10	<0.10	<0.10	-	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10
Carbophenothion	µg/L	0.1	<0.10	-	<0.10	<0.10	<0.10	<0.10	-	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10
Chlorfenvinphos (E)	µg/L	0.1	<0.10	-	<0.10	<0.10	<0.10	<0.10	-	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10
Chlorfenvinphos (Z)	µg/L	0.1	<0.10	-	<0.10	<0.10	<0.10	<0.10	-	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10
Chlorpyrifos	µg/L	0.05	<0.050	-	<0.050	<0.050	<0.050	<0.050	-	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050
Chlorpyrifos-methyl	µg/L	0.1	<0.10	-	<0.10	<0.10	<0.10	<0.10	-	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10
Demeton-S-methyl	µg/L	0.1	<0.10	-	<0.10	<0.10	<0.10	<0.10	-	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10
Diazinon	µg/L	0.1	<0.10	-	<0.10	<0.10	<0.10	<0.10	-	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10
Dichlorvos	µg/L	0.1	<0.10	-	<0.10	<0.10	<0.10	<0.10	-	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10
Dimethoate	µg/L	0.1	<0.10	-	<0.10	<0.10	<0.10	<0.10	-	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10
Ethion	µg/L	0.1	<0.10	-	<0.10	<0.10	<0.10	<0.10	-	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10
Fenamiphos	µg/L	0.1	<0.10	-	<0.10	<0.10	<0.10	<0.10	-	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10
Fenthion	µg/L	0.1	<0.10	-	<0.10	<0.10	<0.10	<0.10	-	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10
Malathion	µg/L	0.1	<0.10	-	<0.10	<0.10	<0.10	<0.10	-	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10
Azinphos Methyl	µg/L	0.1	<0.10	-	<0.10	<0.10	<0.10	<0.10	-	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10
Monocrotophos	µg/L	0.1	<0.10	-	<0.10	<0.10	<0.10	<0.10	-	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10
Parathion	µg/L	0.1	<0.10	-	<0.10	<0.10	<0.10	<0.10	-	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10
Parathion-methyl	µg/L	0.1	<0.10	-	<0.10	<0.10	<0.10	<0.10	-	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10
Pirimphos-ethyl	µg/L	0.1	<0.10	-	<0.10	<0.10	<0.10	<0.10	-	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10
Prothiofos	µg/L	0.1	<0.10	-	<0.10	<0.10	<0.10	<0.10	-	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10

**Organo-chlorine
Pesticides**

Aldrin	µg/L	0.002	<0.002	-	<0.002	<0.002	<0.002	<0.002	-	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002
alpha-BHC	µg/L	0.002	<0.002	-	<0.002	<0.002	<0.002	<0.002	-	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002
beta-BHC	µg/L	0.002	<0.002	-	<0.002	<0.002	<0.002	<0.002	-	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002
delta-BHC	µg/L	0.002	<0.002	-	<0.002	<0.002	<0.002	<0.002	-	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002
4,4'-DDD	µg/L	0.002	<0.002	-	<0.002	<0.002	<0.002	<0.002	-	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002

Analyte grouping/Analyte	Units	Site Date	1	3	4	6	8	A5	11	A4	A7	14	15C ¹	16	17
			15/10/2009	15/10/2009	15/10/2009	14/10/2009	14/10/2009	15/10/2009	15/10/2009	15/10/2009	16/10/2009	16/10/2009	16/10/2009	16/10/2009	16/10/2009
	LOR														
4.4'-DDE	µg/L	0.002	<0.002	-	<0.002	<0.002	<0.002	<0.002	-	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002
4.4'-DDT	µg/L	0.002	<0.002	-	<0.002	<0.002	<0.002	<0.002	-	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002
DDT (total)	µg/L	0.002	<0.002	-	<0.002	<0.002	<0.002	<0.002	-	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002
Dieldrin	µg/L	0.002	<0.002	-	<0.002	<0.002	<0.002	<0.002	-	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002
alpha-Endosulfan	µg/L	0.002	<0.002	-	<0.002	<0.002	<0.002	<0.002	-	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002
beta-Endosulfan	µg/L	0.002	<0.002	-	<0.002	<0.002	<0.002	<0.002	-	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002
Endosulfan sulfate	µg/L	0.002	<0.002	-	<0.002	<0.002	<0.002	<0.002	-	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002
Endosulfan (sum)	µg/L	0.002	<0.002	-	<0.002	<0.002	<0.002	<0.002	-	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002
Endrin	µg/L	0.002	<0.002	-	<0.002	<0.002	<0.002	<0.002	-	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002
Endrin aldehyde	µg/L	0.002	<0.002	-	<0.002	<0.002	<0.002	<0.002	-	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002
Endrin ketone	µg/L	0.002	<0.002	-	<0.002	<0.002	<0.002	<0.002	-	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002
Heptachlor	µg/L	0.001	<0.001	-	<0.001	<0.001	<0.001	<0.001	-	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Heptachlor epoxide	µg/L	0.002	<0.002	-	<0.002	<0.002	<0.002	<0.002	-	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002
Hexachlorobenzene (HCB)	µg/L	0.002	<0.002	-	<0.002	<0.002	<0.002	<0.002	-	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002
gamma-BHC	µg/L	0.002	<0.002	-	<0.002	<0.002	<0.002	<0.002	-	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002
Methoxychlor	µg/L	0.002	<0.002	-	<0.002	<0.002	<0.002	<0.002	-	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002
cis-Chlordane	µg/L	0.002	<0.002	-	<0.002	<0.002	<0.002	<0.002	-	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002
trans-Chlordane	µg/L	0.002	<0.002	-	<0.002	<0.002	<0.002	<0.002	-	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002
Total Chlordane (sum)	µg/L	0.002	<0.002	-	<0.002	<0.002	<0.002	<0.002	-	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002
Oxychlordane	µg/L	0.002	<0.002	-	<0.002	<0.002	<0.002	<0.002	-	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002
Polychlorinated Biphenyls (as Aroclors)															
Total Polychlorinated biphenyls	µg/L	0.05	<0.05	-	<0.05	<0.05	<0.05	<0.05	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Aroclor 1016	µg/L	0.05	<0.05	-	<0.05	<0.05	<0.05	<0.05	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Aroclor 1221	µg/L	0.05	<0.05	-	<0.05	<0.05	<0.05	<0.05	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Aroclor 1232	µg/L	0.05	<0.05	-	<0.05	<0.05	<0.05	<0.05	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Aroclor 1242	µg/L	0.05	<0.05	-	<0.05	<0.05	<0.05	<0.05	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Aroclor 1248	µg/L	0.05	<0.05	-	<0.05	<0.05	<0.05	<0.05	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Aroclor 1254	µg/L	0.05	<0.05	-	<0.05	<0.05	<0.05	<0.05	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Aroclor 1260	µg/L	0.05	<0.05	-	<0.05	<0.05	<0.05	<0.05	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05

Analyte grouping/Analyte	Units	LOR	Site	1	3	4	6	8	A5	11	A4	A7	14	15C ¹	16	17
			Date	15/10/2009	15/10/2009	15/10/2009	14/10/2009	14/10/2009	15/10/2009	15/10/2009	15/10/2009	16/10/2009	16/10/2009	16/10/2009	16/10/2009	16/10/2009
Phenols																
Phenol	mg/L	0.05	<0.05	-	0.20	0.12	0.10	<0.05	-	0.38	0.16	0.18	0.14	<0.05	0.23	

¹ Referred to as Site 15 in laboratory documents from October 2009 survey, name changed to 15C to avoid confusion with site 15 (15B) sampled during November 2009 survey.

Table AE1-2. November 2009 Baseline Field Survey - Surat Gas Project Water Quality

Analyte grouping/Analyte	Units	LOR	Site	4	8	15B ¹	16	17	20	27	33	A5	78	79	88	109	119	120	127	137	140
			Date	19/11/ 09	18/11/ 09	17/11/ 09	17/11/ 09	17/11/ 09	17/11/0 9	17/11/ 09	17/11/ 09	18/11/ 09	19/11/ 09	19/11/ 09	19/11/0 9	19/11/ 09	19/11/0 9	19/11/ 09	19/11/0 9	19/11/ 09	18/11/ 09
Field																					
pH	-	-	7.64	7.07	6.67	6.89	6.86	6.44	6.17	6.57	6.89	7.29	6.87	7.01	7.31	6.69	7.45	8.68	6.39	6.36	
Electrical																					
Conductivity	µS/cm	-	370	600	150	150	100	230	70	50	200	480	160	120	180	120	300	180	180	200	
Temperature	C	-	24.3	23.5	23.3	26.9	26.8	21.4	24.7	30.7	21.1	20.5	23.3	26.2	30.3	31.4	27.5	35.2	26.5	21.1	
Dissolved Oxygen	%Satn	-	62.1	5.7	19.9	43.8	66	40.1	22.8	87.3	23.0	12.1	19-30	74.6	90.4	55.1	70.4	135.6	6.6	3.4	
Turbidity	NTU	-	23	29	894*	691	860	705	787	39	882	363	326	13.36	469	195	477	666	765	779	
Miscellaneous																					
Sodium Absorption																					
Ratio	-	0.01	0.97	3.53	<0.01	1.03	1.04	3.94	2.82	0.72	3.26	1.9	1.38	0.89	1.24	1.13	7.54	2.58	3.81	NT	
Suspended Solids																					
(SS)	mg/L	5	23	24	64	460	757	131	172	21	144	189	300	15	164	104	203	628	1320	NT	
Turbidity (Lab)	NTU	0.1	NT	NT	950	NT	700	NT	NT	NT	900	NT	NT	NT	NT	NT	NT	NT	NT	NT	
Total Hardness as																					
CaCO ₃	mg/L	1	126	91	<1	40	28	22	4	14	18	26	144	34	49	26	11	22	11	NT	
Major Ions																					
Sulfate as SO ₄ ²⁻	mg/L	1	2	20	6	4	6	13	3	2	6	2	6	2	2	2	8	7	2	NT	
Chloride	mg/L	1	30	112	18	8	7	46	15	4	24	18	46	8	4	7	33	19	31	NT	
Fluoride	mg/L	0.1	0.2	0.4	<0.1	0.2	0.2	<0.1	<0.1	<0.1	<0.1	<0.1	0.4	0.1	0.2	<0.1	0.1	0.1	<0.1	NT	
Calcium	mg/L	1	27	19	<1	9	6	2	<1	3	3	4	28	8	14	6	1	5	2	NT	
Magnesium	mg/L	1	14	10	<1	4	3	4	1	2	2	4	18	3	4	2	2	2	2	NT	
Sodium	mg/L	1	25	77	31	15	12	42	14	6	32	22	38	12	20	13	57	28	29	NT	
Tri-Ethylene Glycol																					
(TEG)	mg/L	5	NT	NT	NT	NT	NT	<5	<5	NT	NT	NT	NT	NT	<5	NT	<5	NT	<5	NT	NT
Trace Elements –																					
Dissolved																					
Arsenic - Dissolved	µg/L	0.2	0.9	0.7	1.8	0.9	0.7	0.5	1.3	1.6	1.1	1.6	1.7	1.1	1.5	2.7	5.2	2.2	4.6	NT	
Boron - Dissolved	µg/L	5	18	47	11	45	28	15	18	15	30	26	44	16	26	22	41	111	57	NT	
Cadmium - Dissolved	µg/L	0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	NT
Cobalt - Dissolved	µg/L	0.1	0.5	1	0.8	0.5	0.3	0.7	1.3	0.8	1.4	1.6	2.8	0.2	0.5	3.2	7.9	1.6	3.7	NT	

Analyte grouping/Analyte	Units	LOR	Site	4	8	15B ¹	16	17	20	27	33	A5	78	79	88	109	119	120	127	137	140
			Date	19/11/09	18/11/09	17/11/09	17/11/09	17/11/09	17/11/09	17/11/09	17/11/09	17/11/09	17/11/09	18/11/09	19/11/09	19/11/09	19/11/09	19/11/09	19/11/09	19/11/09	19/11/09
Copper - Dissolved	µg/L	0.5	0.6	0.9	1.5	4.8	3.8	<0.5	0.9	1.8	0.9	0.7	<0.5	1.5	2.2	1.1	8.2	2	0.8	NT	
Lead - Dissolved	µg/L	0.1	<0.1	0.3	0.4	0.1	0.1	<0.1	0.8	1	0.2	1	<0.1	0.2	<0.1	0.1	19	0.4	0.4	NT	
Mercury - Dissolved	µg/L	0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	0.1	<0.1	<0.1	NT	
Nickel - Dissolved	µg/L	0.5	3.5	1.9	1.2	6.9	4.4	<0.5	1.7	2.7	1.8	1.7	8.5	2.4	2	3.2	14	2.7	3.9	NT	
Selenium - Dissolved	µg/L	0.2	<0.2	0.3	0.5	0.3	0.2	<0.2	0.4	<0.2	0.5	0.5	<0.2	<0.2	0.3	0.2	1.1	0.7	0.8	NT	
Vanadium - Dissolved	µg/L	0.2	4.8	2.6	6.4	9.7	10.6	0.4	6.3	4.4	2.6	1.5	6	1.6	1.9	3	60.1	10.1	2.6	NT	
Zinc - Dissolved	µg/L	1	4	22	7	15	15	2	8	9	16	84	6	7	5	9	20	5	15	NT	
Trace Elements - Total																					
Arsenic – Total	µg/L	0.2	1	0.8	10.4	1.4	1.5	1.3	4.6	1.9	15.6	7.2	2.3	1.4	6	4.9	11.8	9.1	15.8	NT	
Boron – Total	µg/L	5	16	45	6	40	25	10	13	11	28	24	41	15	23	20	39	101	42	NT	
Cadmium – Total	µg/L	0.05	<0.05	<0.05	0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	0.07	0.06	<0.05	<0.05	NT	
Cobalt – Total	µg/L	0.1	1.2	1.2	29.2	12.1	14	4.3	16.9	1.1	35.4	11.7	10.3	0.7	8.1	6.9	96.8	17.4	64.1	NT	
Copper – Total	µg/L	0.5	1.2	2.2	22.6	14.6	17.4	4	8.5	2.1	11.2	3.6	9.2	1.8	11.2	4.2	55.2	7.9	15.8	NT	
Lead – Total	µg/L	0.1	0.4	1.5	27.4	5.1	7.4	6.3	21.5	2.2	49	13.4	3.1	0.8	15.3	4.5	172	49.6	55.5	NT	
Mercury – Total	µg/L	0.1	<0.1	<0.1	0.1	<0.1	0.1	<0.1	0.2	<0.1	0.2	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	NT	
Nickel – Total	µg/L	0.5	4.7	2.6	18	25.6	30.4	1.9	11.7	2.8	21.8	7.5	27	2.7	10.9	6.9	81.2	11.3	26.5	NT	
Selenium – Total	µg/L	0.2	<0.2	0.3	1.5	0.5	0.5	0.3	1.1	<0.2	2	1	0.3	<0.2	0.6	0.4	3.6	1.4	2.7	NT	
Vanadium – Total	µg/L	0.2	6.4	4.1	116	33.8	43.9	21.4	60.6	5.7	124	28.2	25.3	2.8	30.2	15.5	190	99	153	NT	
Zinc – Total	µg/L	1	2	29	91	39	52	14	40	8	81	11	29	4	40	48	144	20	54	NT	
Nutrients																					
Nitrite as N	mg/L	0.01	<0.01	0.06	<0.01	0.03	0.08	<0.01	0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	0.05	<0.01	<0.01	NT	
Nitrate as N	mg/L	0.01	0.02	<0.01	0.03	0.54	1.76	0.07	0.06	0.02	0.1	<0.01	0.02	0.01	0.03	0.03	0.35	0.2	0.02	NT	
Nitrite + Nitrate as N	mg/L	0.01	0.02	0.04	0.03	0.57	1.84	0.07	0.08	0.02	0.1	<0.01	0.02	0.01	0.03	0.03	0.4	0.2	0.02	NT	
Ammonia as N	mg/L	0.005	0.046	0.069	0.099	0.061	0.07	0.12	0.095	0.033	0.113	0.244	0.017	0.243	0.011	0.152	0.806	0.551	0.072	NT	
Total Nitrogen as N	mg/L	0.05	0.57	0.89	0.9	1.76	2.4	0.43	0.88	0.25	2.7	2.57	2.54	0.56	0.6	0.7	0.95	3.79	3.68	NT	
Total Phosphorus as P	mg/L	0.005	0.066	0.402	0.73	0.354	0.353	1.08	0.438	0.17	1.08	1.04	0.357	0.058	0.199	0.317	0.656	0.698	0.434	NT	

		Site	4	8	15B ¹	16	17	20	27	33	A5	78	79	88	109	119	120	127	137	140	
		Date	19/11/09	18/11/09	17/11/09	17/11/09	17/11/09	17/11/09	17/11/09	17/11/09	18/11/09	19/11/09	19/11/09	19/11/09	19/11/09	19/11/09	19/11/09	19/11/09	18/11/09	17/11/09	
Analyte	Units	LOR																			
grouping/Analyte																					
Monocyclic Aromatic Hydrocarbons																					
Benzene	µg/L	1	NT	NT	NT	NT	NT	<1	<1	NT	NT	NT	NT	<1	NT	<1	NT	<1	NT	NT	
Toluene	µg/L	2	NT	NT	NT	NT	NT	<2	<2	NT	NT	NT	NT	<2	NT	<2	NT	<2	NT	NT	
Ethylbenzene	µg/L	2	NT	NT	NT	NT	NT	<2	<2	NT	NT	NT	NT	<2	NT	<2	NT	<2	NT	NT	
meta- & para-Xylene	µg/L	2	NT	NT	NT	NT	NT	<2	<2	NT	NT	NT	NT	<2	NT	<2	NT	<2	NT	NT	
Styrene	µg/L	5	NT	NT	NT	NT	NT	<5	<5	NT	NT	NT	NT	<5	NT	<5	NT	<5	NT	NT	
ortho-Xylene	µg/L	2	NT	NT	NT	NT	NT	<2	<2	NT	NT	NT	NT	<2	NT	<2	NT	<2	NT	NT	
Isopropylbenzene	µg/L	5	NT	NT	NT	NT	NT	<5	<5	NT	NT	NT	NT	<5	NT	<5	NT	<5	NT	NT	
n-Propylbenzene	µg/L	5	NT	NT	NT	NT	NT	<5	<5	NT	NT	NT	NT	<5	NT	<5	NT	<5	NT	NT	
1.3.5-																					
Trimethylbenzene	µg/L	5	NT	NT	NT	NT	NT	<5	<5	NT	NT	NT	NT	<5	NT	<5	NT	<5	NT	NT	
sec-Butylbenzene	µg/L	5	NT	NT	NT	NT	NT	<5	<5	NT	NT	NT	NT	<5	NT	<5	NT	<5	NT	NT	
1.2.4-																					
Trimethylbenzene	µg/L	5	NT	NT	NT	NT	NT	<5	<5	NT	NT	NT	NT	<5	NT	<5	NT	<5	NT	NT	
tert-Butylbenzene	µg/L	5	NT	NT	NT	NT	NT	<5	<5	NT	NT	NT	NT	<5	NT	<5	NT	<5	NT	NT	
p-Isopropyltoluene	µg/L	5	NT	NT	NT	NT	NT	<5	<5	NT	NT	NT	NT	<5	NT	<5	NT	<5	NT	NT	
n-Butylbenzene	µg/L	5	NT	NT	NT	NT	NT	<5	<5	NT	NT	NT	NT	<5	NT	<5	NT	<5	NT	NT	
Polynuclear Aromatic Hydrocarbons																					
Naphthalene	µg/L	0.02	NT	NT	NT	NT	NT	0.08	<0.02	NT	NT	NT	NT	<0.02	NT	<0.02	NT	0.03	NT	NT	
Acenaphthylene	µg/L	0.02	NT	NT	NT	NT	NT	<0.02	<0.02	NT	NT	NT	NT	<0.02	NT	<0.02	NT	<0.02	NT	NT	
Acenaphthene	µg/L	0.02	NT	NT	NT	NT	NT	<0.02	<0.02	NT	NT	NT	NT	<0.02	NT	<0.02	NT	<0.02	NT	NT	
Fluorene	µg/L	0.02	NT	NT	NT	NT	NT	<0.02	<0.02	NT	NT	NT	NT	<0.02	NT	<0.02	NT	<0.02	NT	NT	
Phenanthrene	µg/L	0.02	NT	NT	NT	NT	NT	<0.02	<0.02	NT	NT	NT	NT	<0.02	NT	<0.02	NT	<0.02	NT	NT	
Anthracene	µg/L	0.02	NT	NT	NT	NT	NT	<0.02	<0.02	NT	NT	NT	NT	<0.02	NT	<0.02	NT	<0.02	NT	NT	
Fluoranthene	µg/L	0.02	NT	NT	NT	NT	NT	<0.02	<0.02	NT	NT	NT	NT	<0.02	NT	<0.02	NT	<0.02	NT	NT	
Pyrene	µg/L	0.02	NT	NT	NT	NT	NT	<0.02	<0.02	NT	NT	NT	NT	<0.02	NT	<0.02	NT	<0.02	NT	NT	
Benz(a) anthracene	µg/L	0.02	NT	NT	NT	NT	NT	<0.02	<0.02	NT	NT	NT	NT	<0.02	NT	<0.02	NT	<0.02	NT	NT	
Chrysene	µg/L	0.02	NT	NT	NT	NT	NT	<0.02	<0.02	NT	NT	NT	NT	<0.02	NT	<0.02	NT	<0.02	NT	NT	

Analyte grouping/Analyte	Units	LOR	Site	4	8	15B ¹	16	17	20	27	33	A5	78	79	88	109	119	120	127	137	140
			Date	19/11/ 09	18/11/ 09	17/11/ 09	17/11/ 09	17/11/ 09	17/11/0 9	17/11/ 09	17/11/ 09	18/11/ 09	19/11/ 09	19/11/ 09	19/11/0 9	19/11/ 09	19/11/0 9	19/11/ 09	19/11/0 9	18/11/ 09	17/11/ 09
Benzo(b) fluoranthene	µg/L	0.02	NT	NT	NT	NT	NT	NT	<0.02	<0.02	NT	NT	NT	NT	<0.02	NT	<0.02	NT	<0.02	NT	NT
Benzo(k) fluoranthene	µg/L	0.02	NT	NT	NT	NT	NT	NT	<0.02	<0.02	NT	NT	NT	NT	<0.02	NT	<0.02	NT	<0.02	NT	NT
Benzo(a)pyrene	µg/L	0.005	NT	NT	NT	NT	NT	NT	<0.005	<0.005	NT	NT	NT	NT	<0.005	NT	<0.005	NT	<0.005	NT	NT
Indeno(1.2.3.cd) pyrene	µg/L	0.02	NT	NT	NT	NT	NT	NT	<0.02	<0.02	NT	NT	NT	NT	<0.02	NT	<0.02	NT	<0.02	NT	NT
Dibenz(a,h) anthracene	µg/L	0.02	NT	NT	NT	NT	NT	NT	<0.02	<0.02	NT	NT	NT	NT	<0.02	NT	<0.02	NT	<0.02	NT	NT
Benzo(g,h,i) perylene	µg/L	0.02	NT	NT	NT	NT	NT	NT	<0.02	<0.02	NT	NT	NT	NT	<0.02	NT	<0.02	NT	<0.02	NT	NT
Total PAH	µg/L	0.005	NT	NT	NT	NT	NT	NT	<0.005	<0.005	NT	NT	NT	NT	<0.005	NT	<0.005	NT	<0.005	NT	NT
Phenolic Compounds																					
Phenol	µg/L	2 / 1	NT	NT	NT	NT	NT	NT	<2	<2	NT	NT	NT	NT	<1.0	NT	<1.0	NT	<1.0	NT	NT
2-Chlorophenol	µg/L	2 / 1	NT	NT	NT	NT	NT	NT	<2	<2	NT	NT	NT	NT	<1.0	NT	<1.0	NT	<1.0	NT	NT
2-Methylphenol	µg/L	2 / 1	NT	NT	NT	NT	NT	NT	<2	<2	NT	NT	NT	NT	<1.0	NT	<1.0	NT	<1.0	NT	NT
3- & 4-Methylphenol	µg/L	4 / 2	NT	NT	NT	NT	NT	NT	<4	<4	NT	NT	NT	NT	<2.0	NT	<2.0	NT	<2.0	NT	NT
2-Nitrophenol	µg/L	2 / 1	NT	NT	NT	NT	NT	NT	<2	<2	NT	NT	NT	NT	<1.0	NT	<1.0	NT	<1.0	NT	NT
2.4-Dimethylphenol	µg/L	2 / 1	NT	NT	NT	NT	NT	NT	<2	<2	NT	NT	NT	NT	<1.0	NT	<1.0	NT	<1.0	NT	NT
2.4-Dichlorophenol	µg/L	2 / 1	NT	NT	NT	NT	NT	NT	<2	<2	NT	NT	NT	NT	<1.0	NT	<1.0	NT	<1.0	NT	NT
2.6-Dichlorophenol	µg/L	2 / 1	NT	NT	NT	NT	NT	NT	<2	<2	NT	NT	NT	NT	<1.0	NT	<1.0	NT	<1.0	NT	NT
4-Chloro-3- Methylphenol	µg/L	2 / 1	NT	NT	NT	NT	NT	NT	<2	<2	NT	NT	NT	NT	<1.0	NT	<1.0	NT	<1.0	NT	NT
2.4.6- Trichlorophenol	µg/L	2 / 1	NT	NT	NT	NT	NT	NT	<2	<2	NT	NT	NT	NT	<1.0	NT	<1.0	NT	<1.0	NT	NT
2.4.5- Trichlorophenol	µg/L	2 / 1	NT	NT	NT	NT	NT	NT	<2	<2	NT	NT	NT	NT	<1.0	NT	<1.0	NT	<1.0	NT	NT
Pentachlorophenol	µg/L	4 / 2	NT	NT	NT	NT	NT	NT	<4	<4	NT	NT	NT	NT	<2.0	NT	<2.0	NT	<2.0	NT	NT
Total Petroleum Hydrocarbons																					
C6 - C9 Fraction	µg/L	20	<20	<20	<20	<20	<20	<20	<20	<20	<20	<20	<20	<20	<20	<20	<20	<20	<20	<20	NT

Analyte grouping/Analyte	Units	LOR	Site	4	8	15B ¹	16	17	20	27	33	A5	78	79	88	109	119	120	127	137	140	
			Date	19/11/09	18/11/09	17/11/09	17/11/09	17/11/09	17/11/09	17/11/09	17/11/09	17/11/09	17/11/09	18/11/09	19/11/09	19/11/09	19/11/09	19/11/09	19/11/09	19/11/09	19/11/09	18/11/09
C10 - C14 Fraction	µg/L	50	<50	60	<50	<50	50	<50	<50	70	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	NT
C15 - C28 Fraction	µg/L	100	<100	330	220	160	140	210	270	260	150	340	200	<100	150	180	110	1060	580	200	200	NT
C29 - C36 Fraction	µg/L	50	<50	120	90	90	60	80	80	80	80	130	80	<50	<50	60	<50	430	200	200	200	NT
C10 - C36 Fraction (sum)	µg/L	50	<50	510	310	250	250	290	350	410	230	470	280	<50	150	240	110	1490	780	780	780	NT

Organo-phosphorus

Pesticides																					
Bromophos-ethyl	µg/L	0.02	NT	NT	NT	NT	NT	NT	<0.02	<0.02	NT	NT	NT	NT	<0.02	NT	<0.02	NT	<0.02	NT	NT
Carbophenothion	µg/L	0.02	NT	NT	NT	NT	NT	NT	<0.02	<0.02	NT	NT	NT	NT	<0.02	NT	<0.02	NT	<0.02	NT	NT
Chlorfenvinphos (E)	µg/L	0.02	NT	NT	NT	NT	NT	NT	<0.02	<0.02	NT	NT	NT	NT	<0.02	NT	<0.02	NT	<0.02	NT	NT
Chlorfenvinphos (Z)	µg/L	0.02	NT	NT	NT	NT	NT	NT	<0.02	<0.02	NT	NT	NT	NT	<0.02	NT	<0.02	NT	<0.02	NT	NT
Chlorpyrifos	µg/L	0.010	NT	NT	NT	NT	NT	NT	<0.010	<0.010	NT	NT	NT	NT	<0.010	NT	<0.010	NT	<0.010	NT	NT
Chlorpyrifos-methyl	µg/L	0.02	NT	NT	NT	NT	NT	NT	<0.02	<0.02	NT	NT	NT	NT	<0.02	NT	<0.02	NT	<0.02	NT	NT
Demeton-S-methyl	µg/L	0.02	NT	NT	NT	NT	NT	NT	<0.02	<0.02	NT	NT	NT	NT	<0.02	NT	<0.02	NT	<0.02	NT	NT
Diazinon	µg/L	0.02	NT	NT	NT	NT	NT	NT	<0.02	<0.02	NT	NT	NT	NT	<0.02	NT	<0.02	NT	<0.02	NT	NT
Dichlorvos	µg/L	0.02	NT	NT	NT	NT	NT	NT	<0.02	<0.02	NT	NT	NT	NT	<0.02	NT	<0.02	NT	<0.02	NT	NT
Dimethoate	µg/L	0.02	NT	NT	NT	NT	NT	NT	<0.02	<0.02	NT	NT	NT	NT	<0.02	NT	<0.02	NT	<0.02	NT	NT
Ethion	µg/L	0.02	NT	NT	NT	NT	NT	NT	<0.02	<0.02	NT	NT	NT	NT	<0.02	NT	<0.02	NT	<0.02	NT	NT
Fenamiphos	µg/L	0.02	NT	NT	NT	NT	NT	NT	<0.02	<0.02	NT	NT	NT	NT	<0.02	NT	<0.02	NT	<0.02	NT	NT
Fenthion	µg/L	0.02	NT	NT	NT	NT	NT	NT	<0.02	<0.02	NT	NT	NT	NT	<0.02	NT	<0.02	NT	<0.02	NT	NT
Malathion	µg/L	0.02	NT	NT	NT	NT	NT	NT	<0.02	<0.02	NT	NT	NT	NT	<0.02	NT	<0.02	NT	<0.02	NT	NT
Azinphos Methyl	µg/L	0.02	NT	NT	NT	NT	NT	NT	<0.02	<0.02	NT	NT	NT	NT	<0.02	NT	<0.02	NT	<0.02	NT	NT
Monocrotophos	µg/L	0.02	NT	NT	NT	NT	NT	NT	<0.02	<0.02	NT	NT	NT	NT	<0.02	NT	<0.02	NT	<0.02	NT	NT
Parathion	µg/L	0.02	NT	NT	NT	NT	NT	NT	<0.02	<0.02	NT	NT	NT	NT	<0.02	NT	<0.02	NT	<0.02	NT	NT
Parathion-methyl	µg/L	0.02	NT	NT	NT	NT	NT	NT	<0.02	<0.02	NT	NT	NT	NT	<0.02	NT	<0.02	NT	<0.02	NT	NT
Pirimphos-ethyl	µg/L	0.02	NT	NT	NT	NT	NT	NT	<0.02	<0.02	NT	NT	NT	NT	<0.02	NT	<0.02	NT	<0.02	NT	NT
Prothiofos	µg/L	0.02	NT	NT	NT	NT	NT	NT	<0.02	<0.02	NT	NT	NT	NT	<0.02	NT	<0.02	NT	<0.02	NT	NT

Organo-chlorine

Pesticides																					
Aldrin	µg/L	0.002	NT	NT	NT	NT	NT	NT	<0.002	<0.002	NT	NT	NT	NT	<0.002	NT	<0.002	NT	<0.002	NT	NT
alpha-BHC	µg/L	0.002	NT	NT	NT	NT	NT	NT	<0.002	<0.002	NT	NT	NT	NT	<0.002	NT	<0.002	NT	<0.002	NT	NT
beta-BHC	µg/L	0.002	NT	NT	NT	NT	NT	NT	<0.002	<0.002	NT	NT	NT	NT	<0.002	NT	<0.002	NT	<0.002	NT	NT

Analyte grouping/Analyte	Units	LOR	Site	4	8	15B ¹	16	17	20	27	33	A5	78	79	88	109	119	120	127	137	140	
			Date	19/11/ 09	18/11/ 09	17/11/ 09	17/11/ 09	17/11/ 09	17/11/0 9	17/11/ 09	17/11/ 09	18/11/ 09	19/11/ 09	19/11/ 09	19/11/0 9	19/11/ 09	19/11/0 9	19/11/ 09	19/11/0 9	19/11/0 9	18/11/ 09	17/11/ 09
delta-BHC	µg/L	0.002	NT	NT	NT	NT	NT	NT	<0.002	<0.002	NT	NT	NT	NT	<0.002	NT	<0.002	NT	<0.002	NT	NT	NT
4.4'-DDD	µg/L	0.002	NT	NT	NT	NT	NT	NT	<0.002	<0.002	NT	NT	NT	NT	<0.002	NT	<0.002	NT	<0.002	NT	NT	NT
4.4'-DDE	µg/L	0.002	NT	NT	NT	NT	NT	NT	<0.002	<0.002	NT	NT	NT	NT	<0.002	NT	<0.002	NT	<0.002	NT	NT	NT
4.4'-DDT	µg/L	0.002	NT	NT	NT	NT	NT	NT	<0.002	<0.002	NT	NT	NT	NT	<0.002	NT	<0.002	NT	<0.002	NT	NT	NT
DDT (total)	µg/L	0.002	NT	NT	NT	NT	NT	NT	<0.002	<0.002	NT	NT	NT	NT	<0.002	NT	<0.002	NT	<0.002	NT	NT	NT
Dieldrin	µg/L	0.002	NT	NT	NT	NT	NT	NT	<0.002	<0.002	NT	NT	NT	NT	<0.002	NT	<0.002	NT	<0.002	NT	NT	NT
alpha-Endosulfan	µg/L	0.002	NT	NT	NT	NT	NT	NT	<0.002	<0.002	NT	NT	NT	NT	<0.002	NT	<0.002	NT	<0.002	NT	NT	NT
beta-Endosulfan	µg/L	0.002	NT	NT	NT	NT	NT	NT	<0.002	<0.002	NT	NT	NT	NT	<0.002	NT	<0.002	NT	<0.002	NT	NT	NT
Endosulfan sulfate	µg/L	0.002	NT	NT	NT	NT	NT	NT	<0.002	<0.002	NT	NT	NT	NT	<0.002	NT	<0.002	NT	<0.002	NT	NT	NT
Endosulfan (sum)	µg/L	0.002	NT	NT	NT	NT	NT	NT	<0.002	<0.002	NT	NT	NT	NT	<0.002	NT	<0.002	NT	<0.002	NT	NT	NT
Endrin	µg/L	0.002	NT	NT	NT	NT	NT	NT	<0.002	<0.002	NT	NT	NT	NT	<0.002	NT	<0.002	NT	<0.002	NT	NT	NT
Endrin aldehyde	µg/L	0.002	NT	NT	NT	NT	NT	NT	<0.002	<0.002	NT	NT	NT	NT	<0.002	NT	<0.002	NT	<0.002	NT	NT	NT
Endrin ketone	µg/L	0.002	NT	NT	NT	NT	NT	NT	<0.002	<0.002	NT	NT	NT	NT	<0.002	NT	<0.002	NT	<0.002	NT	NT	NT
Heptachlor	µg/L	0.001	NT	NT	NT	NT	NT	NT	<0.001	<0.001	NT	NT	NT	NT	<0.001	NT	<0.001	NT	<0.001	NT	NT	NT
Heptachlor epoxide	µg/L	0.002	NT	NT	NT	NT	NT	NT	<0.002	<0.002	NT	NT	NT	NT	<0.002	NT	<0.002	NT	<0.002	NT	NT	NT
Hexachlorobenzene (HCB)	µg/L	0.002	NT	NT	NT	NT	NT	NT	<0.002	<0.002	NT	NT	NT	NT	<0.002	NT	<0.002	NT	<0.002	NT	NT	NT
gamma-BHC	µg/L	0.002	NT	NT	NT	NT	NT	NT	<0.002	<0.002	NT	NT	NT	NT	<0.002	NT	<0.002	NT	<0.002	NT	NT	NT
Methoxychlor	µg/L	0.002	NT	NT	NT	NT	NT	NT	<0.002	<0.002	NT	NT	NT	NT	<0.002	NT	<0.002	NT	<0.002	NT	NT	NT
cis-Chlordane	µg/L	0.002	NT	NT	NT	NT	NT	NT	<0.002	<0.002	NT	NT	NT	NT	<0.002	NT	<0.002	NT	<0.002	NT	NT	NT
trans-Chlordane	µg/L	0.002	NT	NT	NT	NT	NT	NT	<0.002	<0.002	NT	NT	NT	NT	<0.002	NT	<0.002	NT	<0.002	NT	NT	NT
Total Chlordane (sum)	µg/L	0.002	NT	NT	NT	NT	NT	NT	<0.002	<0.002	NT	NT	NT	NT	<0.002	NT	<0.002	NT	<0.002	NT	NT	NT
Oxychlordane	µg/L	0.002	NT	NT	NT	NT	NT	NT	<0.002	<0.002	NT	NT	NT	NT	<0.002	NT	<0.002	NT	<0.002	NT	NT	NT

¹ Referred to as Site 15 in laboratory documents from November 2009 survey, name changed to 15B to avoid confusion with site 15 (15C) sampled during October 2009 survey.

Table AE1-3. March 2010 Baseline Field Survey - Surat Gas Project Water Quality

Analyte grouping/Analyte	Units	Site Date LOR	0 16/03/10	8 17/03/10	10 17/03/10	15B 16/03/10	17 16/03/10	20 16/03/10	27 16/03/10	88 18/03/10	119 18/03/10	127 18/03/10
Field												
pH	-	-	7.44	7.08	6.87	6.34	7.39	6.09	6.52	7.03	7.21	7.44
Electrical Conductivity	µS/cm	-	290	260	110	220	110	110	130	150	170	180
Temperature	C	-	26.5	22.3	26.5	20.0	25.2	23.9	21.3	20.7	30.7	28.7
Dissolved Oxygen	%Saturation	-	65.0	41.9	72.8	82.3	98.2	52	64.0	28.2	87.4	91.8
Turbidity	NTU	-	39.1	107	49.8	448	207	107	950	150	153	108
Miscellaneous												
Sodium Absorption Ratio	-	1	1	<1	1	4	1	2	2	NT	NT	NT
Suspended Solids (SS)	mg/L	5	6	75	<5	<5	160	17	49	NT	NT	NT
Total Hardness as CaCO ₃	mg/L	5	80	78	20	17	54	16	41	NT	NT	NT
Major Ions												
Sulfate as SO ₄ ²⁻	mg/L	2	5	10	8	5	5	7	5	NT	NT	NT
Chloride	mg/L	2	27	26	19	43	16	22	22	NT	NT	NT
Fluoride	mg/L	0.05	0.11	0.18	<0.05	<0.05	0.09	<0.05	<0.05	NT	NT	NT
Calcium	mg/L	0.05	24	17	4.0	2.4	11	2.9	3.3	NT	NT	NT
Magnesium	mg/L	0.05	5.0	8.7	2.4	2.8	6.4	2.1	8.0	NT	NT	NT
Sodium	mg/L	0.5	28	19	14	39	19	21	30	NT	NT	NT
Potassium	mg/L	0.05	12	8.6	5.4	6.2	4.7	3.9	3.9	NT	NT	NT
Tri-Ethylene Glycol (TEG) (NATA)	mg/L	5	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0
Tri-Ethylene Glycol (TEG) (non-NATA)	mg/L	0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Trace Elements – Dissolved												
Arsenic - Dissolved	µg/L	3	<3	<3	<3	<3	<3	<3	<3	NT	NT	NT
Boron - Dissolved	µg/L	2	40	52	29	46	25	42	23	NT	NT	NT
Cadmium - Dissolved	µg/L	0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	NT	NT	NT
Cobalt - Dissolved	µg/L	1	<1	<1	1	1	<1	3	1	NT	NT	NT
Copper - Dissolved	µg/L	1	2	3	1	1	3	1	1	NT	NT	NT
Lead - Dissolved	µg/L	1	<1	<1	<1	<1	<1	2	3	NT	NT	NT
Mercury - Dissolved	µg/L	0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	NT	NT	NT

Analyte grouping/Analyte	Units	Site Date LOR	0	8	10	15B	17	20	27	88	119	127
			16/03/10	17/03/10	17/03/10	16/03/10	16/03/10	16/03/10	16/03/10	16/03/10	18/03/10	18/03/10
Nickel - Dissolved	µg/L	2	<2	4	2	2	4	4	<2	NT	NT	NT
Selenium - Dissolved	µg/L	3	<3	<3	<3	<3	<3	<3	<3	NT	NT	NT
Vanadium - Dissolved	µg/L	5	8	10	<5	5	13	6	5	NT	NT	NT
Zinc - Dissolved	µg/L	5	5	<5	13	6	6	<5	6	NT	NT	NT
Trace Elements - Total												
Arsenic – Total	µg/L	3	<3	<3	<3	3	<3	3	5	NT	NT	NT
Boron – Total	µg/L	2	41	56	30	60	34	48	64	NT	NT	NT
Cadmium – Total	µg/L	0.1	<0.1	0.1	<0.1	<0.1	<0.1	<0.1	0.5	NT	NT	NT
Cobalt – Total	µg/L	1	1.0	3	2	8	5	6	27	NT	NT	NT
Copper – Total	µg/L	1	3	4	<1	3	6	1	11	NT	NT	NT
Lead – Total	µg/L	1	3	2	1	4	<1	2	18	NT	NT	NT
Mercury – Total	µg/L	0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	NT	NT	NT
Nickel – Total	µg/L	2	3	9	2	6	12	3	21	NT	NT	NT
Selenium – Total	µg/L	3	<3	<3	<3	<3	<3	<3	4	NT	NT	NT
Vanadium – Total	µg/L	5	10	16	5	28	23	18	99	NT	NT	NT
Zinc – Total	µg/L	5	8	20	12	24	13	10	43	NT	NT	NT
Nutrients												
Nitrite as N	mg/L	0.005	<0.005	0.018	<0.005	<0.005	<0.005	<0.005	<0.005	NT	NT	NT
Nitrate as N	mg/L	0.005	0.037	0.27	0.018	0.066	0.18	0.11	0.085	NT	NT	NT
Nitrite + Nitrate as N	mg/L	0.005	0.037	0.29	0.018	0.066	0.18	0.11	0.085	NT	NT	NT
Ammonia as N	mg/L	0.005	0.056	0.085	0.085	0.095	0.096	0.16	0.13	NT	NT	NT
Total Nitrogen as N	mg/L	0.05	1.3	1.6	2.0	2.2	1.2	1.5	3.9	NT	NT	NT
Total Phosphorus as P	mg/L	0.02	0.24	0.70	0.22	0.19	0.37	0.11	0.36	NT	NT	NT
Monocyclic Aromatic Hydrocarbons												
Benzene	µg/L	0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	NT	NT	NT
Toluene	µg/L	0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	NT	NT	NT
Ethyl Benzene	µg/L	0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	NT	NT	NT
meta- & para-Xylene	µg/L	1	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	NT	NT	NT
Styrene	µg/L	0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	NT	NT	NT
ortho-Xylene	µg/L	0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	NT	NT	NT
Isopropylbenzene	µg/L	0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	NT	NT	NT
n-Propylbenzene	µg/L	0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	NT	NT	NT

Analyte grouping/Analyte	Units	Site Date LOR	0	8	10	15B	17	20	27	88	119	127
			16/03/10	17/03/10	17/03/10	16/03/10	16/03/10	16/03/10	16/03/10	16/03/10	18/03/10	18/03/10
1,3,5-Trimethylbenzene	µg/L	0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	NT	NT	NT
sec-Butylbenzene	µg/L	0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	NT	NT	NT
1,2,4-Trimethylbenzene	µg/L	0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	NT	NT	NT
tert-Butylbenzene	µg/L	0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	NT	NT	NT
p-Isopropyltoluene	µg/L	0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	NT	NT	NT
n-Butylbenzene	µg/L	0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	NT	NT	NT
Polynuclear Aromatic Hydrocarbons												
Naphthalene	µg/L	0.2	<0.2	<0.2	<0.2	<0.2	<0.2	NT	NT	NT	NT	NT
Acenaphthylene	µg/L	0.2	<0.2	<0.2	<0.2	<0.2	<0.2	NT	NT	NT	NT	NT
Acenaphthene	µg/L	0.2	<0.2	<0.2	<0.2	<0.2	<0.2	NT	NT	NT	NT	NT
Fluorene	µg/L	0.2	<0.2	<0.2	<0.2	<0.2	<0.2	NT	NT	NT	NT	NT
Phenanthrene	µg/L	0.2	<0.2	<0.2	<0.2	<0.2	<0.2	NT	NT	NT	NT	NT
Anthracene	µg/L	0.2	<0.2	<0.2	<0.2	<0.2	<0.2	NT	NT	NT	NT	NT
Fluoranthene	µg/L	0.2	<0.2	<0.2	<0.2	<0.2	<0.2	NT	NT	NT	NT	NT
Pyrene	µg/L	0.2	<0.2	<0.2	<0.2	<0.2	<0.2	NT	NT	NT	NT	NT
Benzo(a)anthracene	µg/L	0.2	<0.2	<0.2	<0.2	<0.2	<0.2	NT	NT	NT	NT	NT
Chrysene	µg/L	0.2	<0.2	<0.2	<0.2	<0.2	<0.2	NT	NT	NT	NT	NT
Benzo(b,k)fluoranthene	µg/L	0.4	<0.4	<0.4	<0.4	<0.4	<0.4	NT	NT	NT	NT	NT
Benzo(a)pyrene	µg/L	0.005	<0.005	<0.005	<0.005	<0.005	<0.005	NT	NT	NT	NT	NT
Indeno(123-cd)pyrene	µg/L	0.2	<0.2	<0.2	<0.2	<0.2	<0.2	NT	NT	NT	NT	NT
Dibenz(ah)anthracene	µg/L	0.2	<0.2	<0.2	<0.2	<0.2	<0.2	NT	NT	NT	NT	NT
Benzo(ghi)perylene	µg/L	0.2	<0.2	<0.2	<0.2	<0.2	<0.2	NT	NT	NT	NT	NT
Total PAH	µg/L	3	<3.0	<3.0	<3.0	<3.0	<3.0	NT	NT	NT	NT	NT
Phenolic Compounds												
Total Phenol	µg/L	5	<5	20	22	<5	7	NT	NT	NT	NT	NT
Total Petroleum Hydrocarbons												
C6 - C9 Fraction	µg/L	20	<20	<20	<20	<20	<20	<20	<20	NT	NT	NT
C10 - C14 Fraction	µg/L	50	<50	<50	<50	<50	<50	<50	<50	NT	NT	NT
C15 - C28 Fraction	µg/L	100	<100	<100	<100	<100	<100	<100	<100	NT	NT	NT
C29 - C36 Fraction	µg/L	50	<50	<50	<50	<50	<50	<50	<50	NT	NT	NT
C10 - C36 Fraction (sum)	µg/L		<50	<50	<50	<50	<50	<50	<50			

Analyte grouping/Analyte	Units	Site Date LOR	0 16/03/10	8 17/03/10	10 17/03/10	15B 16/03/10	17 16/03/10	20 16/03/10	27 16/03/10	88 18/03/10	119 18/03/10	127 18/03/10
Organo-phosphorus Pesticides												
Bromophos-ethyl	µg/L	0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Chlorpyrifos	µg/L	0.009	<0.009	<0.009	<0.009	<0.009	<0.009	<0.009	<0.009	<0.009	<0.009	<0.009
Demeton-S-methyl	µg/L	0.5	<0.50	<0.50	<0.5	<0.50	<0.50	<0.50	<0.50	<0.5	<0.5	<0.05
Diazinon	µg/L	0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Dichlorvos	µg/L	0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.05
Dimethoate	µg/L	0.15	<0.15	<0.15	<0.15	<0.15	<0.15	<0.15	<0.15	<0.15	<0.15	<0.15
Ethion	µg/L	0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Malathion	µg/L	0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Azinphos Methyl	µg/L	0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Parathion-ethyl	µg/L	0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Parathion-methyl	µg/L	0.01	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010
Organo-chlorine Pesticides												
Aldrin	µg/L	0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
alpha-BHC	µg/L	0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
beta-BHC	µg/L	0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
delta-BHC	µg/L	0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
p,p`-DDD	µg/L	0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
p,p`-DDE	µg/L	0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
p,p`-DDT	µg/L	0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002
Dicofol	µg/L	0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
Dieldrin	µg/L	0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002
alpha-Endosulfan	µg/L	0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
beta-Endosulfan	µg/L	0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Endosulfan sulfate	µg/L	0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Endosulfan (sum)	µg/L	0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Endrin	µg/L	0.004	<0.004	<0.004	<0.004	<0.004	<0.004	<0.004	<0.004	<0.004	<0.004	<0.004
Endrin ketone	µg/L	0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Heptachlor	µg/L	0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Heptachlor epoxide	µg/L	0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02
Hexachlorobenzene (HCB)	µg/L	0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Methoxychlor	µg/L	0.1	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10
cis-Chlordane	µg/L	0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002

Analyte grouping/Analyte	Units	Site	0	8	10	15B	17	20	27	88	119	127
		Date LOR	16/03/10	17/03/10	17/03/10	16/03/10	16/03/10	16/03/10	16/03/10	18/03/10	18/03/10	18/03/10
trans-Chlordane	µg/L	0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002

Analyte grouping/Analyte	Units	Site Date LOR	1	4	6	9	A4	A7	14	16	33	79	109	120	137
			18/03/10	18/03/10	17/03/10	17/03/10	17/03/10	17/03/10	17/03/10	17/03/10	17/03/10	17/03/10	16/03/10	18/03/10	18/03/10
Field															
pH	-		7.39	7.56	7.46	7.35	6.33	6.53	6.42	7.34	6.68	6.64	7.16	7.59	6.06
Electrical Conductivity	µS/cm		170	170	320	300	140	150	160	180	140	210	180	170	130
Temperature	C		18.8	22.6	23.3	20.2	25.0	24.1	22.6	22.1	24.5	22.1	22.8	30.7	26.8
Dissolved Oxygen	%Satn.		61.0	82.8	62.3	40.5	46.0	30.3	31.4	49.2	22	7.4	36.6	87.4	51
Turbidity	NTU		203	128	174	53.4	27.9	71.2	233	237	40.8	133	75.6	153	39.8
Miscellaneous															
Sodium Absorption Ratio	-	1	<1	<1	1	<1	1	2	3	2	1	2	1	2	1
Suspended Solids (SS)	mg/L	5	110	74	110	16	7	15	17	40	15	66	<5	<5	8
Total Hardness as CaCO ₃	mg/L	5	60	57	100	100	22	28	15	42	43	36	45	30	22
Major Ions															
Sulfate as SO ₄ ²⁻	mg/L	2	4	4	15	10	10	8	9	5	2	7	5	6	10
Chloride	mg/L	2	14	14	21	20	24	24	28	8	14	35	8	20	20
Fluoride	mg/L	0.05	0.10	0.08	0.14	0.21	<0.05	<0.05	0.06	0.18	0.07	0.06	0.13	0.05	0.06
Calcium	mg/L	0.05	12	12	21	23	4.7	6.1	2.6	9.1	10	4.6	12	7.1	4.2
Magnesium	mg/L	0.05	7.2	6.5	12	11	2.6	3.2	2.0	4.6	4.3	5.9	3.7	3.1	2.7
Sodium	mg/L	0.5	12	13	26	22	15	19	27	23	17	30	20	21	15
Potassium	mg/L		3.3	3.0	8.9	9.1	4.4	5.6	5.9	5.7	7.1	6.0	7.7	5.8	3.5
Trace Elements – Dissolved															
Arsenic - Dissolved	µg/L	3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3
Boron - Dissolved	µg/L	2	19	19	64	67	24	35	42	57	43	27	35	47	25
Cadmium - Dissolved	µg/L	0.1	0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Cobalt - Dissolved	µg/L	1	<1	<1	<1	<1	1	2	2	<1	2	1	<1	<1	6
Copper - Dissolved	µg/L	1	3	2	4	2	1	2	2	4	1	2	3	1	<1
Lead - Dissolved	µg/L	1	<1	3	3	<1	1	<1	3	<1	<1	<1	<1	1	1
Mercury - Dissolved	µg/L	0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Nickel - Dissolved	µg/L	2	3	3	8	7	4	3	4	6	3	3	2	2	3
Selenium - Dissolved	µg/L	3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3
Vanadium - Dissolved	µg/L	5	13	10	14	9	5	5	<5	9	5	5	<5	6	5
Zinc - Dissolved	µg/L	5	<5	<5	<5	<5	11	<5	<5	<5	14	9	<5	5	6
Trace Elements - Total															

Analyte grouping/Analyte	Units	Site	1	4	6	9	A4	A7	14	16	33	79	109	120	137
		Date LOR	18/03/10	18/03/10	17/03/10	17/03/10	17/03/10	17/03/10	17/03/10	17/03/10	17/03/10	16/03/10	18/03/10	18/03/10	18/03/10
Arsenic – Total	µg/L	3	<3	<3	<3	<3	<3	<3	3	<3	<3	4	<3	<3	<3
Boron – Total	µg/L	2	25	22	73	70	24	40	47	61	44	36	37	48	25
Cadmium – Total	µg/L	0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Cobalt – Total	µg/L	1	3	3	3	2	2	4	8	5	3	9	1	2	6
Copper – Total	µg/L	1	5	4	17	3	<1	1	3	6	1	1	3	2	<1
Lead – Total	µg/L	1	3	3	9	3	1	1	4	1	2	5	4	2	1
Mercury – Total	µg/L	0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Nickel – Total	µg/L	2	9	8	17	9	3	6	6	12	5	4	3	2	2
Selenium – Total	µg/L	3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3
Vanadium – Total	µg/L	5	22	17	22	12	5	12	13	17	8	17	7	11	10
Zinc – Total	µg/L	5	8	12	13	<5	11	13	13	12	23	15	5	5	8
Nutrients															
Nitrite as N	mg/L	0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Nitrate as N	mg/L	0.005	0.14	0.071	0.21	0.029	0.021	0.068	0.088	0.11	0.056	0.019	0.031	0.036	0.025
Nitrite + Nitrate as N	mg/L	0.005	0.14	0.071	0.21	0.029	0.021	0.068	0.088	0.11	0.056	0.019	0.031	0.036	0.025
Ammonia as N	mg/L	0.005	0.061	0.060	0.051	0.040	0.11	0.14	0.14	0.077	0.22	0.030	0.097	0.056	0.045
Total Nitrogen as N	mg/L	0.05	1.1	0.91	1.7	1.5	2.3	1.9	2.2	1.5	1.6	2.2	1.6	1.2	3.2
Total Phosphorus as P	mg/L	0.02	0.30	0.25	0.62	1.0	0.20	0.21	0.17	0.36	0.17	0.30	0.18	0.08	0.23
Monocyclic Aromatic Hydrocarbons															
Benzene	µg/L	0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Toluene	µg/L	0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Ethyl Benzene	µg/L	0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
meta- & para-Xylene	µg/L	1	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Styrene	µg/L	0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
ortho-Xylene	µg/L	0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Isopropylbenzene	µg/L	0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
n-Propylbenzene	µg/L	0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
1,3,5-Trimethylbenzene	µg/L	0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
sec-Butylbenzene	µg/L	0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
1,2,4-Trimethylbenzene	µg/L	0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
tert-Butylbenzene	µg/L	0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
p-Isopropyltoluene	µg/L	0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
n-Butylbenzene	µg/L	0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5

Analyte grouping/Analyte	Units	Site	1	4	6	9	A4	A7	14	16	33	79	109	120	137
		Date LOR	18/03/10	18/03/10	17/03/10	17/03/10	17/03/10	17/03/10	17/03/10	17/03/10	17/03/10	16/03/10	18/03/10	18/03/10	18/03/10
Total Petroleum Hydrocarbons															
C6 - C9 Fraction	µg/L	20	<20	<20	<20	<20	<20	<20	<20	<20	<20	<20	<20	<20	<20
C10 - C14 Fraction	µg/L	50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50
C15 - C28 Fraction	µg/L	100	<100	<100	<100	<100	<100	<100	<100	<100	<100	<100	<100	<100	<100
C29 - C36 Fraction	µg/L	50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50
C10 - C36 Fraction (sum)	µg/L		<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50

