Papua LNG Project – Downstream

Groundwater Baseline

ExxonMobil PNG Antelope Limited

Reference: 754-MELEN300733_R06

June 2023

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1. INTRODUCTION

Tetra Tech Coffey has been commissioned by ExxonMobil PNG Antelope Limited (EMPNGA) to prepare an environmental impact statement (EIS) for the Papua LNG Project – Downstream (the Project). This groundwater baseline report has been prepared by Tetra Tech Coffey as part of the EIS for the Project.

ExxonMobil PNG Limited (EMPNG) is the operator of the PNG LNG Project, an integrated development that is commercialising the gas resources of Papua New Guinea. The Papua LNG Project is a gas development project for the Papua LNG Project Joint Venture participants, which are:

- TotalEnergies EP PNG Limited (TotalEnergies, an affiliate of TotalEnergies SA)
- ExxonMobil PNG Antelope Limited (EMPNGA) and ExxonMobil PNG Elk Limited
- Pac LNG Assets Limited, Pac LNG International Limited, Pac LNG Investments Limited, Pac LNG Overseas Limited and Pac LNG Holdings Limited (affiliates of Santos Limited)
- JX Nippon Oil and Gas Exploration Pty Ltd.

ExxonMobil PNG Antelope Limited is the Project proponent and the ExxonMobil affiliate responsible for the construction of the Project. Niugini LNG Operating Company Limited (NLOC) is the ExxonMobil affiliate responsible for the Project once it has been constructed and commissioned.

The Papua LNG Project will involve producing and processing the gas and condensate from the Elk and Antelope gas reserves in Petroleum Retention License 15 (PRL-15), located in Gulf Province, Papua New Guinea and piping them overland, then offshore in the Gulf of Papua, to the existing Papua New Guinea Liquefied Natural Gas Project (PNG LNG Project) producing and exporting facility (LNG Plant) located in Caution Bay (Central Province) approximately 20 km north-west of Port Moresby.

The existing PNG LNG Project commercialises gas reserves in the Hela, Western and Southern Highlands provinces of Papua New Guinea. The gas is transported to the LNG Plant via pipeline, where it is liquefied and exported as LNG by ship to international gas markets. The LNG Plant also currently supplies gas to the NiuPower Port Moresby Power Station and the Dirio Central Province Power Station (DCPPS) for the domestic electricity market. The LNG Plant layout is shown on Figure 1.1.

An environmental impact statement (EIS) and supporting environmental and social management plans (ESMPs) were prepared for the PNG LNG Project in 2009. The EIS assessed the proposed activities and their potential environmental impacts, and proposed management measures associated with the construction and operation of the LNG Plant. The LNG Plant was approved and constructed during 2012 and 2013 and currently operates under the conditions and criteria set out in the Environment Permit EP L3(210) and in accordance with the approved production phase EMPs.

The Papua LNG Project involves two components:

- The Papua LNG Project – Upstream (referred to as the Upstream component)
- The Papua LNG Project – Downstream (referred to as the Downstream component, hereafter referred to as ‘the Project’ and the is component addressed in this document).

Execution of the Upstream component and the Project is delimited in Caution Bay, with the approximate boundary (i.e., the scope break) between the components located near the fence of the LNG Plant, south of the existing jetty.

Collection and assessment of baseline environmental data will be required to support the impact assessment, including baseline groundwater data. This report presents the results of the groundwater quality sampling undertaken at the LNG Plant by ExxonMobil and Tetra Tech Coffey (then known as Coffey) to support the preparation of the Project EIS.

The proposed activities during the construction and operation of the Project that may impact the groundwater quality around the LNG Plant include:

- Construction and operation of the new LNG trains and associated production equipment.
- Construction and operation of an accommodation camp to house personnel associated with the construction and operation of the expanded plant.

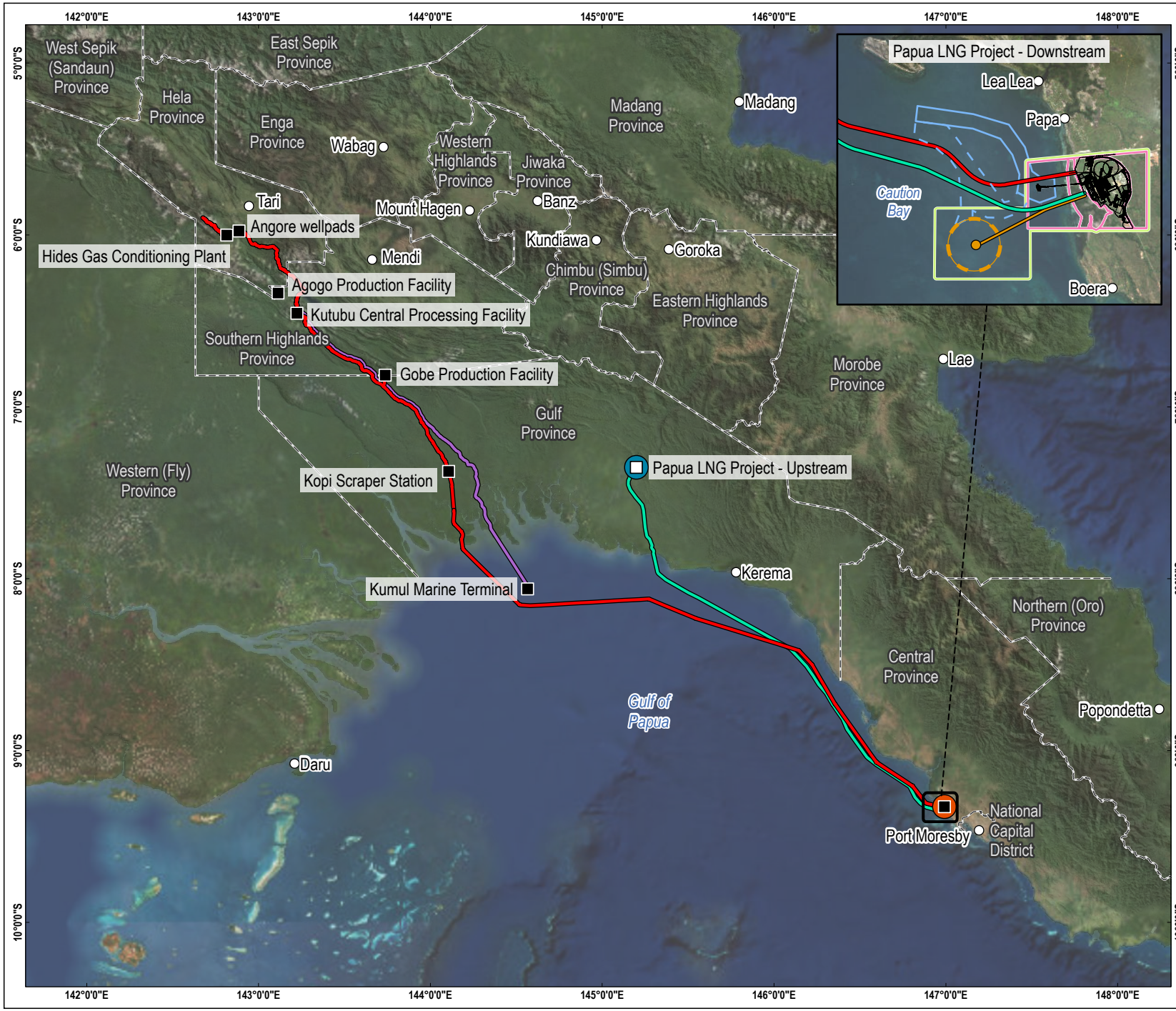
Construction and operation of support infrastructure, including a proposed laydown area for temporary construction.

These activities have the potential to impact the volume and quality of groundwater resources through ground disturbance leading to reduction in water quality or altered recharge rates. Project activities could also lead to accidental spills of hazardous materials which could contaminate groundwater. Assessment of these potential impacts is not the focus of this report. This report provides a summary of groundwater quality monitoring results, including historical monitoring results provided by ExxonMobil and recent groundwater monitoring completed by Tetra Tech Coffey, and limited interpretative assessment to support characterisation of existing groundwater conditions.

1.1 OBJECTIVE

The objective of this report is to characterise existing groundwater conditions in the vicinity of the LNG Plant site, based on the available current and historical groundwater monitoring dataset provided by ExxonMobil.

The assessment will be used in the EIS main report to characterise the existing groundwater conditions and to support the assessment of potential impacts from the Project construction and operation activities at the LNG Plant.



LEGEND

- Papua LNG Project - Downstream
- Papua LNG Project - Upstream
- Existing facility
- Province capital
- PNG LNG pipeline
- Proposed Papua LNG pipelines
- Santos oil pipeline
- Existing and proposed plant layout
- PPFL2 boundary
- APPFL boundary
- Province boundary
- Current navigational channel
- Proposed navigational channel

Proposed CALM buoy components

- CALM buoy
- Naphtha and condensate pipelines
- CALM buoy navigational area

SOURCE
Infrastructure data from EMPNGA and Tetra Tech Coffey (indicative only).
Place names from NGIA.
Provinces from NSO.
Imagery from ArcGIS Online.

0 50 100 km

SCALE **1:3,500,000**
PAGE SIZE: **A4**
PROJECTION: **GCS WGS 1984**

EXXONMOBIL PNG ANTELOPE LIMITED

PAPUA LNG PROJECT – DOWNSTREAM

FIGURE 1.1

Papua LNG Project – Downstream Project location

TETRA TECH COFFEY

DATE: **18.07.23** PROJECT: **754-MELEN300733** FILE: **300733_06_F01.01_GIS**

2. BACKGROUND

2.1 PROJECT OVERVIEW

The Project incorporates the expansion of the LNG Plant's existing onshore and marine facilities in Caution Bay, including, new LNG processing trains, two new offshore feed gas pipelines to the landfall and a pipeline tie-in point, and installation of a CALM buoy with dual pipelines.

The Project will construct gas treatment facilities and new liquefaction trains at the existing LNG Plant adjacent to the existing PNG LNG liquefaction Trains 1 and 2. The new LNG processing trains will expand the capacity of the LNG Plant by approximately 4 million tonnes per annum (mtpa) stream day capacity (SDC), while also providing gas to utilise up to 2 mtpa of latent capacity of the existing LNG trains. This expansion will bring the total capacity of the integrated LNG Plant to approximately 12.8 Mtpa SDC. The feed gas from the Project will undergo acid gas removal, dehydration, and dewpoint control at the Papua LNG Project – Upstream gas processing facility, which is to be constructed and operated by TotalEnergies. An additional two Mtpa will be routed to the foundation LNG trains to replace diminished production.

A new Combined Cycle Power Plant (CCPP) will be utilised to provide electric power for the LNG plant. The CCPP will consist of four gas turbine generators (GTGs), four Heat Recovery Steam Generators (HRSGs) and two steam turbine generators. The CCPP will provide sufficient power to the integrated LNG Plant, therefore three of the seven PNG LNG GTGs will be repurposed as cold standby for the integrated LNG Plant.

2.2 EXISTING SITE INFRASTRUCTURE

The existing site is comprised of an LNG Plant and associated Marine Facilities for the loading of liquefied natural gas to ships for export (ExxonMobil PNG Limited. 2019). Located approximately 20 kilometres north-west of Port Moresby, Papua New Guinea, the site operates both onshore and offshore infrastructure, including:

- LNG feed gas pipeline
- LNG processing and support systems
- Power generation system
- LNG storage tanks
- Operations camp
- Retention pond
- Sedimentation pond
- Waste management facility
- Wastewater treatment system
- Jetty & sea berth.

This infrastructure forms part of the existing site infrastructure and may influence existing groundwater conditions characterised by the assessment.

2.3 PERMIT REQUIREMENTS

The LNG Plant currently operates in accordance with the approved ESMPs and under the conditions and groundwater compliance criteria set out in the Environment Permit EP L3(210).

The Environment Permit includes the requirement to complete a period of baseline monitoring, which would provide the basis for establishing the ongoing compliance criteria. The permit does not specify groundwater

quality criteria, however, baseline monitoring conducted under EMPNG's environmental and social management plan (ESMP) was used to develop groundwater criteria for the site. EMPNG has provided the baseline monitoring dataset and specified the historical range of groundwater quality results, which EMPNG has adopted as the "Baseline Range (EMP criteria)". The Baseline Range EMP criteria are based on the background ranges from sampling and analysis conducted in 2010, 2012 and 2013. These compliance criteria are reproduced in Table 7.2 and Table 2 of Appendix A and, as advised by EMPNG, have been adopted as the relevant compliance criteria when screening the 2019 groundwater monitoring results.

2.4 GROUNDWATER MONITORING NETWORK

The site has an established groundwater monitoring network that has been progressively developed since commencement of the PNG LNG Project in 2009 to characterise the underlying groundwater conditions at the LNG Plant and determine the water quality of the site. Groundwater monitoring commenced in 2010 to assess the baseline water quality, measure aquifer hydraulic conductivity and estimate groundwater seepage velocity across the site. Additional groundwater monitoring wells were installed in 2012 and 2019 located within the LNG Plant and Landfill areas and have undergone intermittent monitoring by EMPNG between October 2013 and September 2019. These groundwater wells were utilised as part of this assessment as discussed further in Section 5.

3. ENVIRONMENTAL SETTING

This section provides an overview of the environmental site setting that is relevant to developing a conceptual understanding of the groundwater conditions at the site. The following sections have been summarised from available historical reports; primarily the Groundwater Impact Assessment for the onshore component of the site (SKM 2008) and the LNG Facilities Groundwater Monitoring Survey (Coffey Environments 2010). Please refer to these documents for further information.

3.1 TOPOGRAPHY

The LNG plant and surrounding area comprises flat to slightly undulating plains, with hills and ranges further to the northeast, which generally trend NNW-SSE. Locally, topography ranges from sea level along the coastal zone along the western site boundary and the banks of the Vaihua and North Vaihua rivers, rising eastwards across the site to elevations ranging between 5 m and 50 m above sea level across 75% of the site.

The topographic gradient is generally less than 1 degree, sloping from the hills in the east down to the coast in the west (Coffey Environments 2010).

3.2 HYDROLOGY

The LNG plant site and surrounding areas are dominated by poorly drained or swampy alluvial plains, traversed by meandering river channels with oxbow lakes and swamps. Towards the coast, tidal flats are interspersed with narrow bands of beach ridges and swales. Whilst there are several minor watercourses located near the site and surrounding areas, they have been identified as typically dry between wet seasons and therefore are thought to receive limited base flow during the dry season - the exception being the Lalokie River located north of the site near the town of Papa.

Vaihua River and Kauka Creek are the significant watercourses in close proximity to the site (SKM 2008).

3.3 GEOLOGY

The hills and bedrock across the site generally comprise siliceous argillites, cherts, calcarentites, mudstones, basalts and tuffs, along with gabbro intrusives in some areas (SKM 2008). The valleys and depressions have been in-filled by marine sediment and alluvial and colluvial deposits, during periods of progressive marine transgressions and regressions (SKM 2008).

Estuarine deposits have been observed in the area surrounding the town of Papa & Lea Lea to the north of the site, and along river and creek mouths closer to the site including Caution Bay where the Vaihua River discharges to. The unconsolidated (marine and alluvial) deposits have been reported as up to 25 m thick (SKM 2008).

Colluvial and talus deposits have been reported on the foothills and may be inter-bedded with alluvial clays on the coastal plains (SKM 2008).

3.4 HYDROGEOLOGY

The following sections provide a consolidated summary of the reporting provided in the Groundwater Impact Assessment for the onshore component of the site (SKM 2008) and the LNG Facilities Groundwater Monitoring Survey (Coffey Environments 2010).

3.4.1 Aquifers present

Previous site investigations including the drilling and installation of the groundwater monitoring network indicate the main groundwater aquifer for the site is alluvial deposits of the coastal plain (clayey and silty, sands and gravels). The alluvial aquifer is typically between 5 m to 15 m thick and is commonly overlain by 5 m to 10 m of low permeability clayey sediments (Coffey Environments 2010).

The alluvial aquifer has been previously conceptualised as containing two separate zones; a perched/shallower zone (comprised of residual clay material overlying bedrock) and a deeper aquifer zone (comprised of sandstone/gravel layers interbedded with siltstone and shale material).

A limited review of the available monitoring bore drilling logs from 2010 identified sandstone and claystone existed beneath the unconsolidated sediment (15 m thick in bore MW4a).

It is likely that two regionally extensive groundwater flow systems exist beneath the Project area; a shallow alluvial and a deeper siltstone/sandstone rock (or weathered rock) aquifer.

Perched aquifers

Prior to development of the LNG plant, 18 test pits were constructed across the site area in 2007. The pits were excavated up to a depth of 3.2 m, with two observed to fill with water at depths of between 2.3 m and 2.4 m (SKM 2008). A separate pit encountered 1.2 m of clayey silty calcareous sand above a stiff clay and noticeable water seepage at the sand-clay interface. The authors suggest this indicates a possible perched aquifer, limited in extent and groundwater abstraction viability.

A review of the groundwater monitoring bore logs from 2010 does suggest potential for perched groundwater to be present, consistent with the depositional environment of the sediments which would develop localised, low permeability clay lenses. As to whether these would be laterally continuous and represent a perched ‘aquifer system’ would require further investigation.

For the purpose of the assessment based on available groundwater data, perched aquifers above the watertable aquifer were not assumed to exist in the alluvial sediments to the extent that they would be laterally continuous.

3.4.2 Groundwater levels and flow directions

Groundwater levels and flow directions were assessed in the Coffey Environments (2010) report, where survey data was available for comparison of groundwater wells across the Project area. General statements were made about westerly groundwater flow from topographically higher elevations towards the coast.

An updated groundwater level and flow direction assessment has been completed for this report drawing on available depth to groundwater measurements over multiple rounds and making efforts to fill data gaps with reasonable assumptions where possible. The following is noted with regards to the groundwater level assessment:

1. Due to the loss of different monitoring wells over time, and data gaps in the level monitoring record, measured levels from 2010 to 2014 were adopted due to the greatest coverage provided during this period. This approach can incorporate errors associated with natural fluctuations over time.
2. Where survey data was missing for individual wells, ground surface elevations have been estimated based on Google Earth topographic data. While the resolution of this data is notably coarse, the error introduced (which could be in the order of several metres) is acceptable for the purpose of regional flow interpretation.
3. The well casing height above ground was not known for all wells. A 0.5 m length was assumed and subtracted from each depth to groundwater measurement.

4. All groundwater levels were adopted for the groundwater flow direction assessment irrespective of the aquifer that they represent (if this was known). This may introduce errors (in the order of 1 to 2 m) where deeper aquifers are confined.

The resulting calculated groundwater elevations (relative to mean sea level, or RLs) may have an associated error range that could be up to several metres. This error range is acceptable in the absence of accurate data and when comparing groundwater levels at a regional scale.

Figure 3.1 provides the estimated groundwater levels across the site ranging from maximums of approximately 29 m RL in the east (MW-1, MW-2, GW-16) to minimums of between 2 and 5 m RL along the western site margin and coastal zone. Wells MW-1, MW-2 and GW-16 are likely to represent background groundwater entering the site from the east, which migrate beneath the site to the east and southeast towards the coast (Figure 4.1).

Measured groundwater levels at bores MW-4 (screening the shallow unconsolidated aquifer) and MW-4a (screening the deeper aquifer) show an approximately 2 m vertical head difference (see Figure 3.1). This suggests the presence of a downward hydraulic gradient, which may promote the vertical flow of groundwater from the shallow alluvial aquifer downwards, recharging the deeper aquifer.

3.4.3 Aquifer hydraulic properties

Coffey Environments (2010) undertook rising head tests on four wells screened in the shallow groundwater zone and three wells screened in the deeper groundwater zone across the PNG LNG Plant. Hydraulic conductivity values and maximum seepage velocities were then estimated for the two groundwater zones:

- Shallow groundwater zone: Hydraulic conductivity ranging from 0.001 m/day to 0.1 m/day, with a maximum seepage velocity of 0.01 to 1 m/year to the west and southwest. These are within typical values for clay and sandy clay lithologies.
- Deeper groundwater zone: Hydraulic conductivity ranging from 0.0002 m/day to 0.66 m/day, with a maximum seepage velocity of 48 m/year to the west and southwest. These are within typical values for sandstone lithologies.

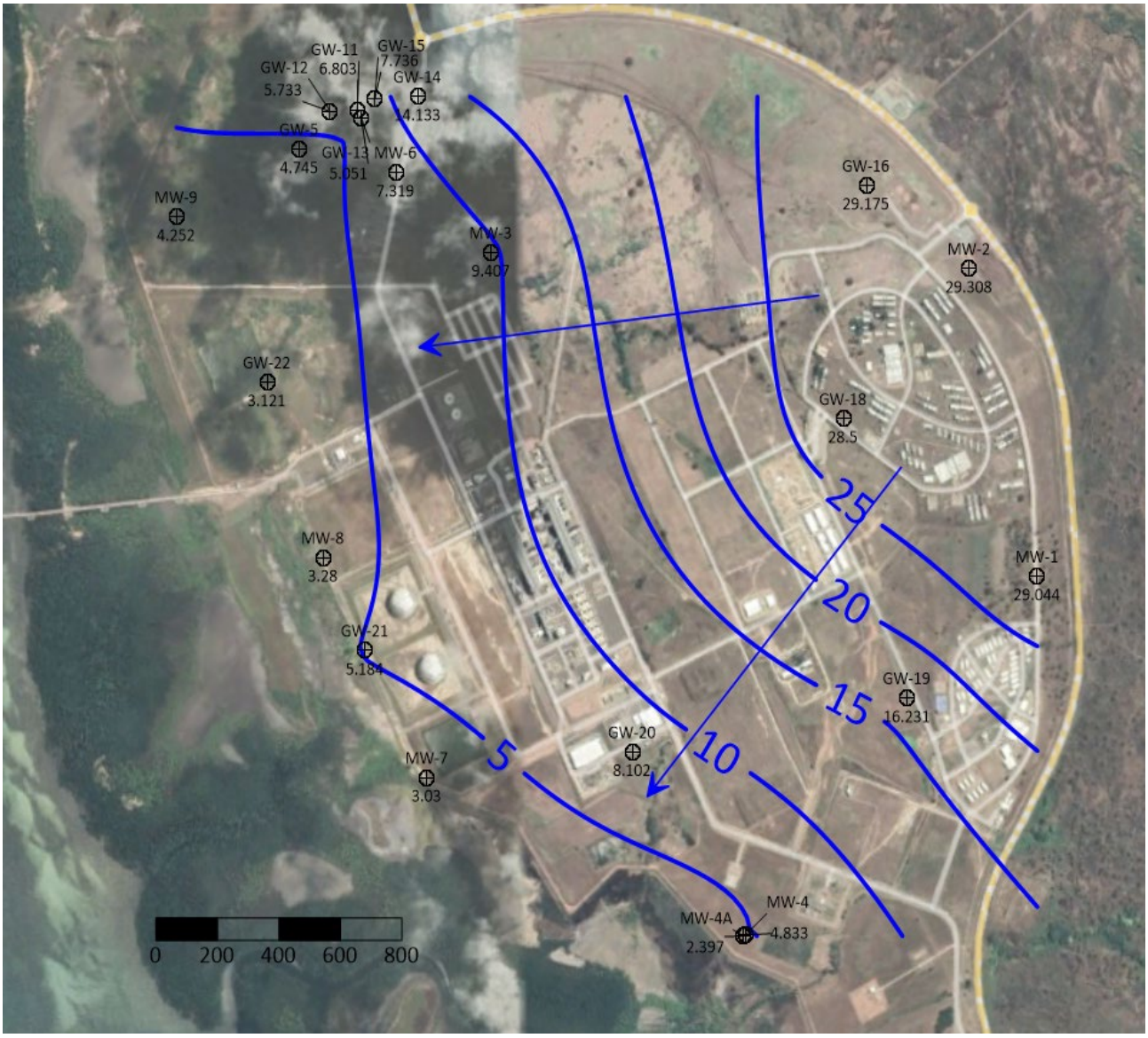


Figure 3.1 Approximate groundwater levels (m RL) and inferred ground flow directions

3.4.4 Recharge and discharge processes

Previous studies predict that recharge to the alluvial aquifers predominantly occurs from streams traversing the coarser sediments at the base of the hills to the east of the Plant. Direct recharge to the alluvial aquifer from surface water across the coastal plains is likely to be minimal, due to the overlying thick clay layer (SKM 2008).

Recharge to the deeper rock aquifer is likely to occur mostly in the highland areas to the east of the LNG Plant site where the bedrock unit outcrops and direct rainfall recharge would occur.

Nested wells MW-4 and MW-4a reported a strong downward hydraulic gradient during 2010 for the single round of data that is available for MW-4a, suggesting a degree of recharge from the shallow to the deeper aquifer would also occur. However, vertical gradients are likely to vary or reverse as the watertable naturally fluctuates in response to wet season recharge events. There is likely to be a variable relationship of recharge and discharge between the shallow alluvial aquifer and the underlying rock aquifer.

Groundwater flows from the inland areas, moving beneath the LNG Plant and discharges to the coastline (including Caution Bay) and likely at the mouths of creeks and streams that traverse across the site. Addition

discharge mechanisms likely include evaporative losses where water tables are shallow (approximately less than 2 m depth) and evapotranspiration where deep-rooted vegetation accesses the water table (SKM 2008).

3.4.5 Groundwater quality

Groundwater quality across the site was assessed as part of the initial baseline monitoring work by Coffey Environments (2010). The results of this assessment have been summarised here as a background to the current assessment of groundwater monitoring from 2010 to 2019.

The Coffey Environments (2010) report concluded the following:

- Groundwater physio-chemical parameters for temperature, pH and redox potential were generally consistent across the locations. It was noted the post purge dissolved oxygen (DO) concentrations ranged from 0.39 mg/L to 5.15 mg/L, without a consistent trend across the site identified.
- Electrical conductivity (EC) values indicated significant variation across the site, with conductivity (and salinity) generally increasing towards the coastline.
- During purging of monitoring well MW7, located near to the coast onsite, EC values changed from ~68,000 uS/cm pre-sampling to ~20,000 uS/cm post-sampling. This was likely due to the monitoring well intersecting a mixing zone between the fresh groundwater and saline groundwater of the marine environment. At sites with nested wells, EC increased with depth.
- The naturally occurring metal concentrations of manganese, boron, selenium and mercury exceeding the WHO guidelines in groundwater for both the shallow and deep wells, suggesting both groundwater zones are unsuitable for potable use. Additionally, three of the thirteen wells showed slightly elevated mercury results compared with WHO drinking water guidelines.
- The four deeper groundwater wells reported elevated concentrations of manganese, boron, iron and sulfate compared to the shallower wells at the site. The elevated metal and sulfate concentrations and neutral pH of the groundwater is indicative of naturally occurring non-acid metalliferous drainage at the site. Metalliferous drainage occurs when acid generated from the oxidation of sulfide minerals is completely neutralised by carbonate minerals in the profile.

3.4.6 Groundwater users

ExxonMobil PNG Limited (personal comms 2020) notes that groundwater bores and dug pits are commonly utilised by the local villages to the north and south of the lease for potable use (most likely freshwater lenses overlying the more saline deeper groundwater). Under the environment permit EP-L3(210) groundwater is not permitted to be extracted for potable use within the lease area.

There are limited and sometimes conflicting reports of productive uses of groundwater offsite (such as stock, domestic, irrigation, or industrial use). This is identified as a data gap that warrants resolution when considering nearby sensitive receptors as part of the EIS (Section 8.3). Extractive groundwater use has been conservatively adopted as an EV of groundwater in Section 3.5.

3.5 ENVIRONMENTAL VALUES OF GROUNDWATER

The following environmental values (EVs) are likely to be associated with shallow groundwater in the alluvial aquifer beneath the site and are also likely to be currently realised:

- Maintenance of aquatic ecosystems (including the Vaihua and North Vaihua rivers and Karuka Creek).
- Maintenance of marine ecosystems (Caution Bay).
- Extractive groundwater uses (domestic, stock or potable use). Industrial use is not currently realised but may be a viable use in the future.

The following additional EVs may apply to groundwater at the point of discharge to Caution Bay; however, these are currently uncertain or are less likely to be realised in the future given the industrial development of the site and absence of local communities within the site and downstream:

- Recreational water use (Caution Bay).
- Human consumption of aquatic foods (sourced from Caution Bay).

A complete assessment of groundwater EVs that require consideration will be provided in the EIS.

4. SAMPLING LOCATIONS

Groundwater monitoring was conducted at existing groundwater monitoring wells located at the LNG Plant site, including the adjacent landfill. Active groundwater monitoring well locations are listed in Table 4.1 and both active and inactive (decommissioned) wells are shown in Figure 4.1.

Table 4.1 Groundwater sampling locations

Borehole ID*	Installation Date	Monitoring location	Total depth (mBTOC)	Depth to water‡ (mBTOC)	Coordinates	
					Easting	Northing
MW2	2009	LNG Plant	17.100	4.40	503364	8968551
GW5	2012	Landfill	15.150	3.88	501374	8968916
GW11	2012	Landfill	9.165	4.93	501374	8969035
GW12	2012	Landfill	7.940	3.97	501286	8969031
GW13	2012	Landfill	8.270	4.70	501387	8969011
GW14	2012	Landfill	11.889	4.54	501571	8969076
GW15	2012	Landfill	10.695	6.00	501431	8969069
GW17	2012	LNG Plant	11.356	5.67	502607	8968476
GW18	2012	LNG Plant	NR	NR	502955	8968094
GW19	2012	LNG Plant	13.180	3.71	503163	8967242
GW20	2012	LNG Plant	11.850	5.70	502269	8967078
GW21	2012	LNG Plant	10.314	1.90	501400	8967387
GW22	2012	LNG Plant	8.415	2.50	501081	8968205
GW23†	2019	LNG Plant	5.000	1.68	500866	8968067
GW24†	2019	LNG Plant	5.700	4.70	501906	8966876

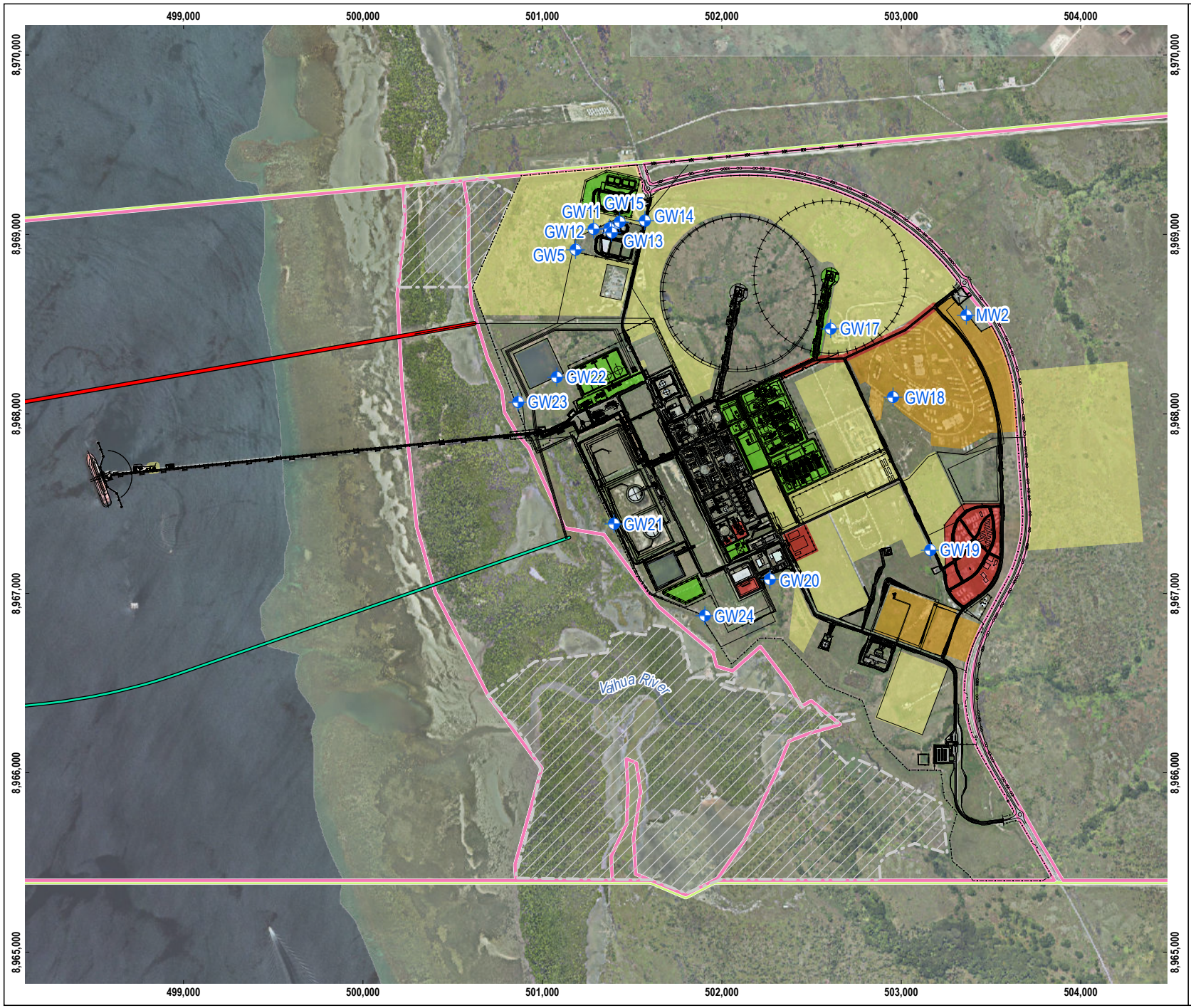
mBTOC – meters below top of casing

NR – not recorded (reason unknown)

*50mm well diameter

† 100mm well diameter

‡ data recorded 29 November 2019



LEGEND

- Groundwater monitoring well
- PNG LNG pipeline
- Proposed Papua LNG pipelines route
- Existing and proposed plant layout
- Proposed new facility
- Proposed expanded/upgraded facility
- Temporary construction area
- Temporary camp
- PPFL2 boundary
- APPFL boundary
- Cultural heritage restricted area

SOURCE
Wells, infrastructure, cultural heritage and lease boundary from EMPNGA.
Imagery from EMPNGA and Google Earth.

0 500 m

SCALE **1:30,000**
PAGE SIZE: **A4**
PROJECTION: **WGS 1984 UTM Zone 55S**

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PAPUA LNG PROJECT – DOWNSTREAM

FIGURE 4.1

Groundwater monitoring locations (LNG Plant)

TETRA TECH COFFEY

DATE: **18.07.23** PROJECT: **754-MELEN300733** FILE: **300733_06_F04.01_GIS**

5. METHODOLOGY

A groundwater monitoring event (GME) was undertaken by the EMPNG environment team over three days, from 29 November to 2 December 2019.

5.1 SAMPLING METHOD

The following sampling methodology was adopted during the December 2019 monitoring event, which was conducted by ExxonMobil in line with its Groundwater Quality Monitoring Environmental Protocol (ExxonMobil PNG Limited 2015):

- All available groundwater monitoring wells (MW2, GW5, GW11 to GW15, GW17 and GW19 to GW24) were gauged on 29 November, prior to purging on 1 December and sampling on 2 December 2019.
- Depth to water was measured from the top of the casing using an interface probe (IP). Current and historical groundwater gauging data is presented as Tables 1 and 2 in Appendix A.
- Phase Separated Hydrocarbons (PSH) were not detected using the IP at any of the groundwater monitoring well locations.
- Fourteen of the 15 groundwater monitoring wells were sampled (MW2, GW5, GW11 to GW15, GW17 and GW19 to GW24) using disposable polyethylene bailers. GW18 was not sampled during the event, however, it is not included as a location to be sampled per the site Groundwater Quality Monitoring Environmental Protocol (ExxonMobil PNG Limited 2015)
- Where possible, three (3) well volumes were purged from each monitoring well (unless the well was purged dry), and water quality parameters (temperature, electrical conductivity (EC), dissolved oxygen (DO), pH and reduction/oxidation potential (redox)) were measured following the removal of each well volume. During sampling of GW23 it was noted that 3 well volumes were not extracted from the well, due to a suspected miscalculation of the bore well volume. Field purging data is presented as Table 2 in Appendix A.
- Groundwater samples were collected from each well and stored in laboratory prepared acid washed sample containers under chilled conditions (approximately 4°C). The samples were transported to Brisbane, Australia via aircraft, except for those being analysed for BOD, faecal coliforms, enterococci and E. coli which were transported to the LNG Plant laboratory for local analysis in order to meet holding time requirements.
- ExxonMobil completed the groundwater monitoring in general accordance with QC measures as per its Groundwater Quality Monitoring Environmental Protocol (ExxonMobil PNG Limited 2015), however some QC samples have not been reported.

5.2 LABORATORY ANALYSIS

All samples collected during the December 2019 GME were submitted to ALS laboratories for the following analysis:

- Major ions: sodium (Na), potassium (K), calcium (Ca), magnesium (Mg) and chloride (Cl), total alkalinity, sulfate (SO_4) (filtered).
- Filtered (<0.45 µm) metals: arsenic (As), barium (Ba), boron (B), cadmium (Cd), cobalt (Co), copper (Cu), chromium VI (Cr (VI)), iron (Fe), lead (Pb), manganese (Mn), mercury (Hg), nickel (Ni), selenium (Se), silver (Ag), tin (Sn) and zinc (Zn).
- Nutrients: total nitrogen (TN), total Kjeldahl nitrogen (TKN), nitrate (NO_3- + NO_2-), nitrite as N (48-hour holding time), ammonia (NH^3), reactive and total phosphorus (48-hour holding time).

- Microbiology: faecal coliforms, enterococci, Escherichia coli (E.coli) (24-hour holding time).
- Total recoverable hydrocarbons (TRH) C_6-C_9 and C_{10}-C_{36}.
- Benzene, toluene, ethylbenzene, total xylenes and naphthalene (BTEXN).
- Total suspended solids (TSS).
- Phenols.
- Biochemical oxygen demand (BOD) (48-hour holding time).
- Chemical oxygen demand (COD).
- Turbidity (48-hour holding time).

Groundwater samples sent to ALS Laboratories, a NATA-accredited laboratory with proven relevant experience in their Australian-based laboratories, were generally analysed within the respective holding time for each analyte. Several analytes with a holding time of 48-hours or less were not able to reach the laboratory within this time (nitrite, reactive phosphorus and turbidity).

Pathogens with short holding times, such as faecal coliforms, enterococci and E.coli were able to be analysed in the LNG Plant laboratory and samples for BOD analysis were sent to NATA-accredited SGS Australia laboratory based in Port Moresby, in order to meet the required holding times. The LNG Plant laboratory is not NATA accredited and the internal methods and QA/QC procedures have not been reviewed. The data provided is a good alternative to sample transport to Australian laboratories where holding times would be substantially exceeded.

The laboratory methods for groundwater sample analysis are included in the laboratory reports provided in Appendix B.

5.3 QUALITY CONTROL

Quality control measures were implemented in the field and in the laboratory and included:

- Daily field blank sample collection: Two field blank samples were collected by filling selected sample bottles with field blank water and labelled to ensure the laboratory was unable to differentiate the samples. The samples were collected, stored and handled in a manner as close as possible to that used for the actual sample.
- Field duplicate sample collection: Two duplicate samples were taken and labelled to ensure the laboratory was unable to differentiate the samples. The samples were collected, stored and handled in a manner as close as possible to that used for the actual sample.
- Laboratory duplicates: Analysis of a sample was repeated to assess analytical precision.
- Laboratory spikes: Analysis of a sample was conducted with a known concentration of analyte added to check the effect of sample matrix interference on the analysis result (matrix spike). This is also done for diluted samples with no matrix interference where the sample is spiked with known amounts of certified reference materials to check for analytical accuracy and precision (laboratory control spike).
- Laboratory blanks: De-ionised water was analysed to check for the presence of laboratory contamination.

6. ADOPTED SCREENING CRITERIA

The assessment has adopted the permit compliance criteria (discussed in Section 2.2 and criteria presented in Table 2 of Appendix A).

For the purpose of supporting the future EIS, additional screening criteria have been adopted for this assessment in order to provide further commentary on the potential risk to the identified EVs of groundwater, summarised in Section 3.5.

Noting that this report is intended to be factual, the assessment of EVs and the identification of all relevant screening criteria is not exhaustive and is provided for discussion purposes only. Alternative domestic PNG or international screening criteria may be adopted in the EIS based on further review of risks posed by the Project to the local environmental and/or human health.

The adopted screening criteria applied in Table 2 of Appendix A, include:

- Marine guidelines for ecosystem protection (c).
- Freshwater guidelines for ecosystem protection (Independent State of Papua New Guinea 2002).
- Recreational water use (National Health and Medical Research Council (NHMRC), 2008. Guidelines for Managing Risks in Recreational Water).
- Public Health (Drinking Water) Regulation 1984 (Independent State of Papua New Guinea 1987) (PNG DWG 1987).

7. RESULTS

7.1 GAUGING RESULTS

Groundwater gauging results from December 2019 are presented in Table 1 of Appendix A, together with historical gauging data. Field notes are provided in Appendix C. December 2019 gauging results are summarised below:

- Standing water levels (SWLs) to groundwater ranged from 1.68 m below top of casing (mBTOC) (GW23) to 6 mBTOC (GW15). In the absence of survey data for all wells the inferred groundwater flow directions have not been estimated for the December 2019 round. Site-wide approximate groundwater levels and inferred flow directions have been discussed in Section 3.4.2.
- SWLs have decreased by an average of 0.39 m in all wells since the previous monitoring event in September 2019, with the exception of the new wells GW23 and GW24 which were installed in July 2019 and increased and decreased by 2.45 m and 3.12 m, respectively. These changes are likely to be associated with the lack of rainfall during the dry season, which is from June to October.

Review of the complete groundwater gauging dataset indicates that groundwater levels can fluctuate seasonally in a range from 1 m to 4 m, consistent with high recharge rates during the high rainfall wet season (Table 7.1).

Table 7.1 Groundwater level fluctuation summary

Monitoring Well	Minimum DTW (m BTOC)	Maximum DTW (m BTOC)	DTW range (m)	Average DTW (m BTOC)
GW-11	3.5	5.6	2.1	4.9
GW-12	3.3	4.4	1.1	3.8
GW-13	3.7	5.2	1.5	4.4
GW-14	3.2	6.2	3.0	4.4
GW-15	5.2	6.6	1.5	6.0
GW-17	0.5	5.4	4.9	3.5
GW-19	1.3	4.3	3.1	3.1
GW-20	4.5	8.4	3.9	5.6
GW-21	1.3	2.8	1.5	2.0
GW-22	2.0	3.1	1.0	2.4
GW-5	2.8	4.0	1.2	3.6
MW-1	-	8.2	-	-
MW-2	1.1	5.4	4.3	3.6
MW-3		8.2	-	-
MW-4	2.9	4.7	1.9	3.6
MW-4A	-	6.2	-	-
MW-6_NTH	-	5.4	-	-
MW-7	-	1.8	-	-
MW-8	-	0.8	-	-
MW-9	-	2.3	-	-

7.2 FIELD WATER QUALITY RESULTS

Field-measured groundwater quality results from the December 2019 GME are summarised in Table 2 (Appendix A) and are discussed below. Field sampling notes are provided in Appendix C.

- Dissolved oxygen (DO) concentrations ranged from 5.86 mg/L (GW22) to 7.28 mg/L (GW19) which typically indicates oxidising conditions. However, when viewed in conjunction with the predominantly reducing redox potential values (discussed below) it is likely that DO concentrations are artificially elevated as a result of the agitation caused by the bailer sampling method and are unlikely to represent aquifer conditions.
- Redox potential measurements ranged between -511 mV (GW22) and 33 mV (GW17) and were generally negative indicating groundwater conditions are generally reducing at the site.
- Temperature measurements ranged between values of 30.2ºC (GW15, GW22 and GW24) and 32.6 ºC (MW2).
- Electrical conductivity (EC) values ranged between 2,243 µS/cm (GW11) and 59,170 µS/cm (GW22). Low EC values were measured at wells at higher elevations where freshwater recharge and/or local freshwater recharge sources may be present. The highest EC values were recorded in three of the four wells located along the western site boundary near Caution Bay (GW21, GW22 and GW24). These wells are positioned

along the western site boundary and may be influenced by marine water intrusion into the aquifer. Monitoring well GW22 is positioned next to the sedimentation pond.

- pH measurements generally remained generally circumneutral in groundwater across the site, with values ranging between 6.60 (GW21) and 7.48 (GW12).

7.3 GROUNDWATER ANALYTICAL RESULTS

A summary of groundwater quality results from the December 2019 GME is presented in the following sections and comparisons are made to the Environment Permit criteria. Additional commentary regarding comparison to ecological criteria (the most likely EV of groundwater to be realised in the immediate vicinity of the site), is also provided.

7.3.1 Major ions and nutrients

Major ions are naturally occurring solutes in water that can vary based on the interactions that may occur with minerals in the aquifer matrix or elsewhere in the environment. Some major ions can also be directly sourced from anthropogenic contamination such as landfills and waste discharge (such as bicarbonate and sulfate) or be indicators of upgradient sources of contamination undergoing natural attenuation process and altering the electron donors in groundwater (such as elevated iron, manganese and sulfate).

Nutrients, including nitrogen and phosphorus species, may be associated with either anthropogenic or natural sources in the catchment, but are commonly found as contaminants in groundwater sourced from sewage, animal wastes and other waste disposal practices, such as landfills.

The results for major ions and nutrients are presented in Table 7.2 compared to both the Environment Permit criteria and adopted screening criteria. The relative concentrations of major ions are also graphically presented on a trilinear diagram (also referred to as a Piper diagram), show as Figure 7.1.

Concentrations of calcium, magnesium and sodium exceeded the current permit criteria at GW21 and GW22. Monitoring wells GW21 and GW22 are in the coastal zone and the elevated concentrations of these major ions are attributed to the high TDS at these locations. The high TDS and elevated concentrations of these ions are likely to be associated with mixing with marine water rather than enrichment from local sources of contamination. Despite significant TDS differences, groundwater from GW21 and GW22 does not show different water type to other lower TDS groundwater across the site (see Figure 7.1).

Most groundwater across the site was generally sodium-chloride type, with some samples from monitoring wells MW2 and GW20 showing increasing relative concentrations of sulfate compared to other anions. Monitoring well GW17 has elevated bicarbonate relative to other anions.

Nitrogen species in groundwater exceeded Environment Permit conditions at MW2, GW11, GW21, GW22, GW24 (total nitrogen, and ammonia at GW22), with nitrate concentrations at MW2 exceeding the recreational water quality criteria. Potassium and sulfate exceeded the PNG freshwater aquatic ecosystem criteria at several bores.

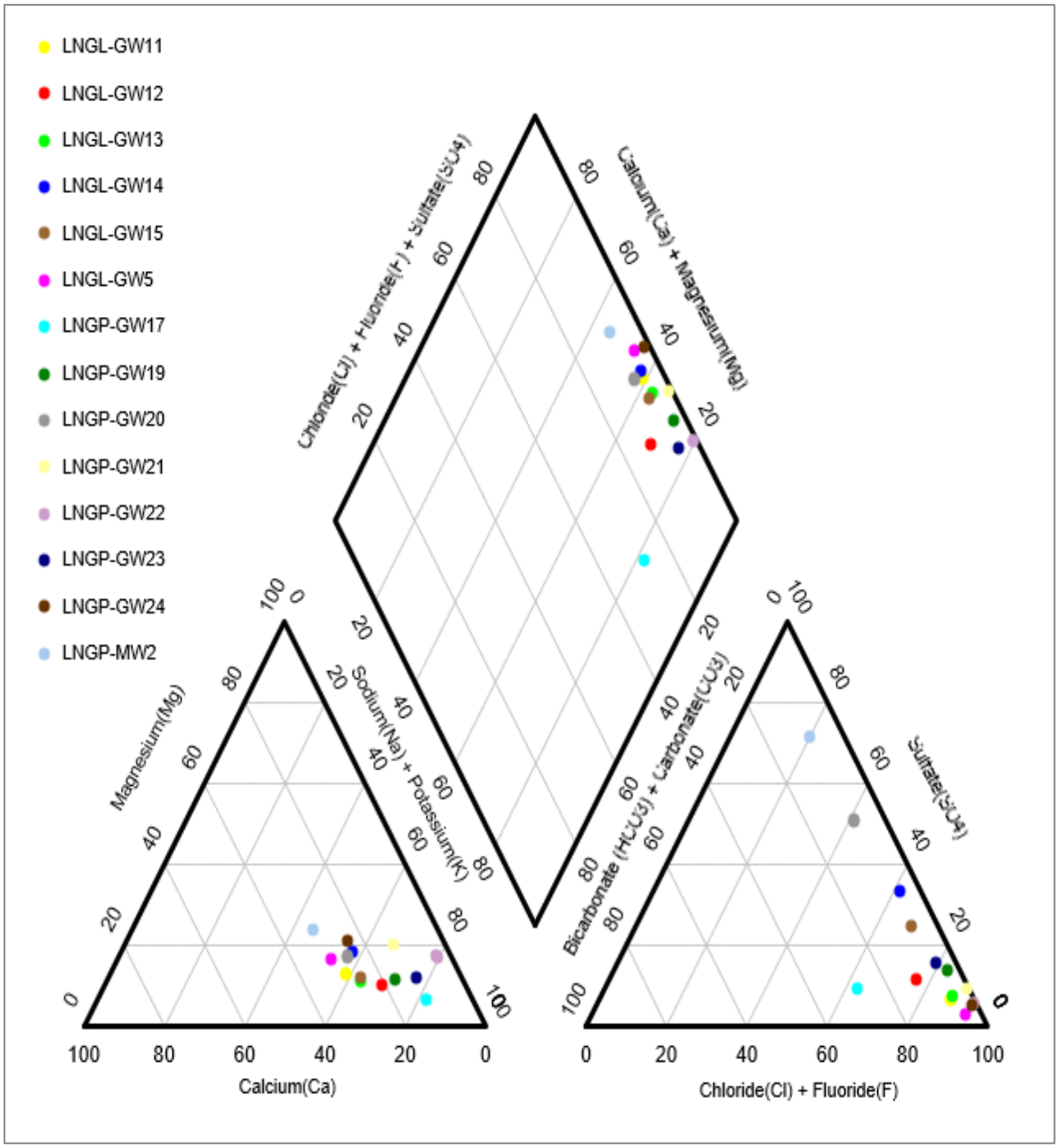

Figure 7.1 Trilinear Piper diagram of major ions in groundwater (December 2019)

Table 7.2 Summary of current analytical results – major ions and nutrients

Parameter	PNG Ecosystems Criteria		Baseline Range EMP Criteria[c] (mg/L)	Additional Screening Criteria		Concentration Range (mg/L) (December 2019)	Criteria Exceedances			
	Freshwater Aquatic Ecosystem (mg/L)	Marine Aquatic Ecosystem (mg/L)		NHMRC Recreational Water (2008) (mg/L)	PNG DWG (1987) (mg/L)		Baseline Range EMP Criteria[a]	PNG Freshwater Ecosystems Criteria[b]	NHMRC Recreational Water (2008)	PNG DWG (1987)
Potassium	**5**	*600*	1 – 495	NS	NS	3 – 286	-	MW2 (16) GW5 (12) GW11 (8) GW14 (17) GW15 (9) GW19 (12) GW20 (11) GW21 (202) GW22 (280) GW23 (26) GW24 (34)	-	-
Calcium	**NS**	*NS*	47.6 – 1,300	NS	200	76 – 1,750	GW21 (1,750)	-	-	MW2 (598) GW5 (621) GW11 (348) GW13 (340) GW14 (607) GW15 (348) GW19 (473) GW20 (489) GW22 (719) GW23 (252) GW24 (1,060)
Chloride	**NS**	*NS*	NA	NS	1000	612 – 33,900	-	-	-	GW5 (3,310) GW11 (1,750) GW13 (1,860) GW14 (2,660) GW15 (1,480) GW19 (4,020) GW20 (1,290) GW21 (21,800) GW22 (33,900)

Parameter	PNG Ecosystems Criteria		Baseline Range EMP Criteria[c] (mg/L)	Additional Screening Criteria		Concentration Range (mg/L) (December 2019)	Criteria Exceedances			
	Freshwater Aquatic Ecosystem (mg/L)	Marine Aquatic Ecosystem (mg/L)		NHMRC Recreational Water (2008) (mg/L)	PNG DWG (1987) (mg/L)		Baseline Range EMP Criteria[a]	PNG Freshwater Ecosystems Criteria[b]	NHMRC Recreational Water (2008)	PNG DWG (1987)
										GW23 (2,960) GW24 (7,470)
Magnesium	**NS**	*NS*	14 - 620	NS	150	26 – 2,170	GW21 (1,710) GW22 (2,170)	-	-	MW2 (277) GW5 (206) GW14 (288) GW19 (201) GW20 (199) GW23 (166) GW24 (579)
Sodium	**NS**	*NS*	87 – 9,000	NS	NS	524 – 18,500	GW21 (10,400) GW22 (18,500)	-	-	-
Nitrate (as N)	**NS**	*NS*	<0.01 – 29	10	45	<0.01 – 12.3	-	-	MW2 (12.3)	-
Nitrite (as N)	**NS**	*NS*	<0.01 – 1.03	1	NS	<0.01 - <0.07	-	-	-	-
Nitrogen (total)	**NS**	*NS*	<0.01 – 1.3	NS	NS	<0.1 – 14.2	MW2 (14.2) GW11 (1.4) GW21 (2.3) GW22 (8.4) GW24 (2)	-	-	-
Sulfate (Filtered)	**400**	*NS*	42 – 4,130	NS	400	133 – 3,080	-	MW2 (3,010) GW14 (1,980) GW15 (724) GW19 (920) GW20 (2,180)	-	MW2 (3,010) GW14 (1,980) GW15 (724) GW19 (920) GW20 (2,180)

Parameter	PNG Ecosystems Criteria		Baseline Range EMP Criteria[c] (mg/L)	Additional Screening Criteria		Concentration Range (mg/L) (December 2019)	Criteria Exceedances			
	Freshwater Aquatic Ecosystem (mg/L)	Marine Aquatic Ecosystem (mg/L)		NHMRC Recreational Water (2008) (mg/L)	PNG DWG (1987) (mg/L)		Baseline Range EMP Criteria[a]	PNG Freshwater Ecosystems Criteria[b]	NHMRC Recreational Water (2008)	PNG DWG (1987)
								GW21 (3,080) GW22 (2,760) GW23 (808) GW24 (590)		GW21 (3,080) GW22 (2,760) GW23 (808) GW24 (590)
Ammonia Nitrogen	**2.4**	*NS*	0.1 – 7.2	NS	NS	<0.01 – 8.04	GW22 (**8.04**)	-	-	-
Total Alkalinity	**NS**	*NS*	NA	NS	600	190 – 677	-	-	-	GW22 (654)
Total Phosphorus	**NS**	*NS*	NA	NS	NS	<0.01 – 0.19	-	-	-	-
Reactive Phosphorus	**NS**	*NS*	NA	NS	NS	<0.01 – 0.11	-	-	-	-

NS – not specified

NA – not analysed

'-' denotes no exceedance reported

[a] values that are underlined exceed the Baseline Range EMP criteria

[b] values that are bold exceed the Freshwater Aquatic Ecosystems criteria

c criteria based on groundwater baseline data from 2010

7.3.2 Petroleum hydrocarbons

Petroleum hydrocarbon results are presented in Table 7.3. There were no detectable concentrations of petroleum hydrocarbons or BTEXN compounds in groundwater during the December 2019 GME.

It is noted that the groundwater sampling methodology adopted in the field (bailer sampling) may have affected the reported concentrations of volatile hydrocarbons such as the light fraction TPH C6-C9, and BTEXN compounds, potentially under reporting the concentrations that may be present. Heavier fraction hydrocarbons (>C10) are less likely to be affected by volatilisation and are more likely to be representative of aquifer conditions.

The available data indicates that groundwater does not appear to be impacted by heavy fraction TPH contamination at detectable concentrations.

Future monitoring rounds may consider using no-purge sampling methods (hydrasleeves) or low flow sampling to minimise potential volatilisation of some hydrocarbons.

7.3.3 Dissolved metals

The results for dissolved metals are presented in Table 7.4. Concentrations of manganese exceeded the Environment Permit criteria at well GW21. Cobalt, manganese, selenium and iron exceeded the PNG freshwater aquatic ecosystem criteria at several bores with manganese, selenium and iron also exceeding the PNG drinking water criteria at the same locations. Selenium concentrations also exceeded the Recreational Water criteria at well GW20.

7.3.4 Other analytes

The results for other water quality analytes reported by the laboratory are presented in Table 7.5 compared with screening criteria where available.

The laboratory reported pre-dilution of samples for mercury, total phosphorus and COD was required due to matrix interference, resulting in the laboratory detection limit being raised. As none of these analytes exceeded the Environment Permit criteria (where available), this indicates that it is not likely to impact the results of the assessment. However, EMPNG advised that the results for COD were invalid and have been excluded from this report.

Table 7.3 Summary of 2019 analytical results – petroleum hydrocarbons

Parameter	PNG Ecosystems Criteria		Baseline Range EMP Criteria (µg/L)	Additional Screening Criteria		Concentration Range (mg/L) (December 2019)	Criteria Exceedances			
	Freshwater Aquatic Ecosystems (µg/L)	Marine Aquatic Ecosystems (µg/L)		NHMRC Recreational Water (2008) (µg/L)	PNG DWG (1987) (µg/L)		Baseline Range EMP Criteria	PNG Freshwater Ecosystems Criteria	NHMRC Recreational Water (2008)	PNG DWG (1987)
Total petroleum hydrocarbons (TPH) (C_6-C_9)	**NS**	*NS*	NS	NS	NS	<20	-	-	-	-
Total petroleum hydrocarbons (TPH) (C_{10}-C_{14})	**NS**	*NS*	<50 – 17,000	NS	NS	<50	-	-	-	-
Total petroleum hydrocarbons (TPH) (C_{15}-C_{28})	**NS**	*NS*	<100 – 13,000	NS	NS	<100	-	-	-	-
Total petroleum hydrocarbons (TPH) (C_{29}-C_{36})	**NS**	*NS*	<50 – 800	NS	NS	<50	-	-	-	-
Benzene	**NS**	*NS*	<1	NS	NS	<1	-	-	-	-
Toluene	**NS**	*NS*	<2	NS	NS	<2	-	-	-	-
Ethylbenzene	**NS**	*NS*	<2	NS	NS	<2	-	-	-	-
Total Xylenes	**NS**	*NS*	<2	NS	NS	<2	-	-	-	-
meta-& para-xylene	**NS**	*NS*	<2	NS	NS	<2	-	-	-	-
ortho-xylene	**NS**	*NS*	<2	NS	NS	<2	-	-	-	-
Naphthalene	**NS**	*NS*	<1 – 54.4	NS	NS	<5	-	-	-	-

NS – not specified

NA – not analysed

'-' denotes no exceedance reported

Table 7.4 Summary of current analytical results – dissolved metals

Parameter	PNG Ecosystems Criteria		Baseline Range EMP Criteria (µg/L)	Additional Screening Criteria		Concentration Range (mg/L) (December 2019)	Criteria Exceedances			
	Freshwater Aquatic Ecosystems (µg/L)	Marine Aquatic Ecosystems (µg/L)		NHMRC Recreational Water (2008) (µg/L)	PNG DWG (1987) (µg/L)		Baseline Range EMP Criteria[a]	PNG Freshwater Ecosystems Criteria[b]	NHMRC Recreational Water (2008)	PNG DWG** (1987)
Arsenic	**50**	*50*	<1 – 106	70	50	<1 – 5	-	-	-	-
Barium	**1,000**	*1,000*	<6 – 1,400	7,000	NS	32 - 656	-	-	-	-
Cadmium	**10**	*1*	<0.1 – 340	20	10	<0.1 - <0.5	-	-	-	-
Chromium (VI)	**50**	*10*	<1 – 120	NS	NS	<10	-	-	-	-
Cobalt	**1***	*1**	<1 – 30	NS	NS	<1 – 8	-	GW5 (5) GW11 (3) GW20 (2) GW21 (8) GW23 (2) GW24 (2)	-	-
Copper	**1,000**	*30*	<1 – 25	20,000	1,500	<1 – 2	-	-	-	-
Lead	**5**	*4*	<1 – 52	100	100	<1 - <5	-	-	-	-
Manganese	**500**	*2,000*	<1 – 3,200	5,000	500	6 – 4,600	GW21 (**4,600**)	MW2 (**693**) GW5 (**1,010**) GW11 (**2,420**) GW22 (**820**) GW23 (**1,220**) GW24 (**1,680**)	-	MW2 (693) GW5 (1,010) GW11 *(2,420)* GW22 (820) GW23 (1,220) GW24 (1,680)
Nickel	**1,000**	*1,000*	<1 – 40	200	NS	<1 – 2	-	-	-	-
Selenium	**10**	*10*	<1 – 235	100	10	<10 – 170	-	GW13 (***20***) GW20 (***170***)	GW20 (170)	GW13 (20) GW20 (170)

Parameter	PNG Ecosystems Criteria		Baseline Range EMP Criteria (µg/L)	Additional Screening Criteria		Concentration Range (mg/L) (December 2019)	Criteria Exceedances			
	Freshwater Aquatic Ecosystems (µg/L)	Marine Aquatic Ecosystems (µg/L)		NHMRC Recreational Water (2008) (µg/L)	PNG DWG (1987) (µg/L)		Baseline Range EMP Criteria[a]	PNG Freshwater Ecosystems Criteria[b]	NHMRC Recreational Water (2008)	PNG DWG** (1987)
Silver	**50**	*50*	<1 – 200	NS	NS	<1 - <5	-	-	-	-
Tin	**500**	*500*	<1 – 220	NS	NS	<1 - <5	-	-	-	-
Zinc	**5,000**	*5,000*	<1 – 95	NS	15,000	<5 – 6	-	-	-	-
Boron	**1,000**	*2,000*	1 – 4,600	40,000	NS	130 – 1,910	-	GW11 (1,920) GW21 (3,760) GW22 (2,230)	-	-
Iron	**1,000**	*1,000*	<1 – 17,000	NS	1,000	<50 – 12,600	-	GW14 (***1,510***) GW22 (***12,600***)	-	GW14 (1,510) GW22 (12,600)
Mercury	**0.2**	*0.2*	<0.1 – 0.3	10	1	<0.1 - <0.5	-	-	-	-

NS – not specified

NA – not analysed

'-' denotes no exceedance reported

* Cobalt is defined as the Limit of detectability per the PNG Ecosystems Criteria, with 1 µg/L adopted based upon the December 2019 dataset

** PNG drinking water criteria is based upon total metals. This assessment adopts dissolved metals only and may under report the health risk.

[a] values that are underlined exceed the *Baseline Range EMP* criteria

[b] values that are bold exceed the Freshwater Aquatic Ecosystems criteria

Table 7.5 Summary of current analytical results – other analytes

Parameter	PNG Ecosystems Criteria		Baseline Range EMP Criteria (mg/L)	Additional Screening Criteria		Concentration Range (mg/L) (December 2019)	Criteria Exceedances			
	Freshwater Aquatic Ecosystems (mg/L)	Marine Aquatic Ecosystems (mg/L)		NHMRC Recreational Water (2008) (mg/L)	PNG DWG (1987) (mg/L)		Baseline Range EMP Criteria[a]	PNG Freshwater Ecosystems Criteria[b]	NHMRC Recreational Water (2008)	PNG DWG (1987)
Phenol	**0.002**	*0.002*	<1 – 0.175	NS	NS	<1	-	-	-	-
2-chloro phenol	**NS**	*NS*	<0.001	NS	NS	<1	-	-	-	-
2-methyl phenol	**NS**	*NS*	<0.001	NS	NS	<1	-	-	-	-
3-&4-methyl phenol	**NS**	*NS*	<0.002	NS	NS	<2	-	-	-	-
2-nitro phenol	**NS**	*NS*	<0.001	NS	NS	<1	-	-	-	-
2,4-dimethylphenol	**NS**	*NS*	<0.001	NS	NS	<1	-	-	-	-
2,4-dichloro phenol	**NS**	*NS*	<0.001	NS	NS	<1	-	-	-	-
2,6-dichloro phenol	**NS**	*NS*	<0.001	NS	NS	<1	-	-	-	-
4-chloro-3-methyl	**NS**	*NS*	<0.001	NS	NS	<1	-	-	-	-
2,4,6-trichloro phenol	**NS**	*NS*	<0.001	NS	NS	<1	-	-	-	-
2,4,5-trichloro phenol	**NS**	*NS*	<0.001	NS	NS	<1	-	-	-	-
pentachloro phenol	**NS**	*NS*	<0.002	NS	NS	<2	-	-	-	-
Total Suspended Solids (TSS)	**50**	*50*	<11 – 3,230	NS	NS	NA	-	-	-	-
Turbidity (NTU)	**25**	*25*	NA	NS	25	NS	-	GW17 (***218***) GW22 (***72.8***)	-	GW17 (*218*)

Parameter	PNG Ecosystems Criteria		Baseline Range EMP Criteria (mg/L)	Additional Screening Criteria		Concentration Range (mg/L) (December 2019)	Criteria Exceedances			
	Freshwater Aquatic Ecosystems (mg/L)	Marine Aquatic Ecosystems (mg/L)		NHMRC Recreational Water (2008) (mg/L)	PNG DWG (1987) (mg/L)		Baseline Range EMP Criteria[a]	PNG Freshwater Ecosystems Criteria[b]	NHMRC Recreational Water (2008)	PNG DWG (1987)
										GW22 (*72.8*)
Biological Oxygen Demand (BOD)	**25**	*25*	<2 – 22	NS	NS	<5 – 22	-	-	-	-
Faecal Coliforms (MPN/100mL)	**200**	*200*	0 – 336	NS	3	<1 - >2,419.6	MW2 (***1,732.9***) GW12 (***>2,419.6***) GW13 (***>2,419.6***) GW15 (***>2,419.6***) GW17 (***1,046***) GW19 (***>2,419.6***) GW20 (***387.3***)	-	-	MW2 (1,732.9) GW11 (195.6) GW12 (>2,419.6) GW13 (>2,419.6) GW14 (8.5) GW15 (>2,419.6) GW17 (1,046) GW19 (>2,419.6) GW20 (387.3) GW21 (36.4) GW23 (20.1)
Enterococci (MPN/100mL)	**NS**	*NS*	0 – >2,419.6	NS	NS	<10 - >2,419.6	GW12 (>2,419.6) GW17 (>2,419.6)	-	-	-
E.Coli (MPN/100mL)	**NS**	*NS*	<1	NS	<1	<1 – 328.2	GW11 (5.2) GW13 (28.5)	-	-	GW11 (5.2) GW13 (28.5)

Parameter	PNG Ecosystems Criteria		Baseline Range EMP Criteria (mg/L)	Additional Screening Criteria		Concentration Range (mg/L) (December 2019)	Criteria Exceedances			
	Freshwater Aquatic Ecosystems (mg/L)	Marine Aquatic Ecosystems (mg/L)		NHMRC Recreational Water (2008) (mg/L)	PNG DWG (1987) (mg/L)		Baseline Range EMP Criteria[a]	PNG Freshwater Ecosystems Criteria[b]	NHMRC Recreational Water (2008)	PNG DWG (1987)
							GW19 (328.2)			GW19 (328.2)

NS – not specified

NA – not analysed

'-' denotes no exceedance reported

[a] values that are underlined exceed the *Baseline Range EMP* criteria

[b] values that are bold and italicised exceed the Freshwater & Marine Aquatic Ecosystems criteria

7.4 QUALITY ASSURANCE AND QUALITY CONTROL

This section provides a summary of the quality control results for water quality sampling and analysis.

The following quality assurance comments are noted:

- The groundwater sampling methodology adopted in the field (bailer sampling) may have affected the reported concentrations of dissolved oxygen, volatile hydrocarbons such as the light fraction TPH C_6-C_9, and BTEXN compounds. This sampling method may have resulted in potentially under reporting the concentrations. Future monitoring rounds should consider using no-purge sampling methods (hydrasleeves) or low flow sampling to minimise potential volatilisation.
- Sampling methodology and the introduction of Oxygen during bailing may also have affected COD and to a lesser extent BOD concentrations. As discussed above, future monitoring rounds should consider alternative sampling methods.
- The validity of locally reported microbiological parameters; E. coli, enterococci, and faecal coliforms cannot be determined without knowledge of the sampling and transport protocols, holding times achieved and laboratory procedures adopted by the in-house laboratory. Future monitoring rounds should explain the protocols used.

The results of the quality control analysis are summarised as follows:

- The ability to replicate the water quality results is measured by the relative percent difference (RPD) between duplicate results. Two sets of duplicate water sample results (primary samples GW22 and GW20 and corresponding duplicate samples QC1 and QC2) were collected and generally showed good agreement. Two parameters reported an RPD above the recommended level of 25% (APHA 2005) as follows:
    - Turbidity at GW20 (0.5 NTU) and QC2 (0.7 NTU) reported an RPD of 33%. This result is marginally above the acceptance criteria and can be attributed to the high degree of variability that occurs at low concentrations both results were reported below the adopted criteria and this parameter is typically not of concern for groundwater.
    - COD at GW22 (408 mg/L) and QC1 (545 mg/L) reported an RPD of 29%. As both results were reported above the adopted criteria and indicate the presence of impact, this result is not likely to affect the integrity of the results. The extremely high TDS of this sample is likely to have caused interference with the accuracy of the laboratory instrumentation when running this sample.
- Two field blanks (QC3 and QC4) were collected during the groundwater sampling program. These samples were analysed for the primary contaminants of concern. The results are presented in Table 2 in Appendix A.
    - Detectable concentrations were identified for Turbidity (0.1 NTU for both QC3 &4), Bicarbonate Alkalinity as CaCO3 (4 mg/L for both QC3 &4) and BOD in QC3 (15 mg/L). No other detectable analytical results were encountered in either of the field blank samples collected.
    - Future analysis of laboratory deionised water should be performed to confirm absence of these parameters.
    - The detected concentrations indicate that improvements to decontamination protocols could be made in future rounds however the analytes detected and the concentrations reported suggest any cross contamination would not materially affect the outcomes of the assessment.
- No trip blanks or rinsates blanks were collected during the groundwater sampling program. Based on the absence of volatile contaminants in the primary samples, the absence of trip blanks is not likely to affect the outcomes of the results. The absence of rinsate blanks means that the potential for cross-contamination between sampling locations as a result of the equipment being used was not able to be assessed.

- Laboratory duplicate results did not report duplicate outliers.
- Laboratory method blanks did not report outliers.
- Laboratory matrix spike results reported outliers for sulfate and chloride. The low matrix spike recoveries may be due to possible sample matrix interferences.
- Laboratory surrogate recovery results for phenol were lower than the data quality objective. This could suggest that lower concentrations of phenol may have been recorded than what was actually present. However, this is not likely to have affected the outcome of the dataset as no phenols were reported in groundwater at the site.

Analysis for nitrite as N, reactive phosphorus and turbidity for all samples occurred outside of the holding time (see Appendix B). This was due to the remote location of the survey area and the need to transport samples to Australia for analysis at a NATA accredited laboratory. This circumstance is common to water quality studies where samples need to be transported from Papua New Guinea to Australia if NATA accredited facilities are to be used. It is unlikely that this non-conformance would materially influence the results due to the short exceedance of the holding time and the low concentrations in the samples.

Overall, the groundwater sampling QC measures and laboratory QC measures generally indicate that the dataset provides a reliable understanding of groundwater quality at the site.

A QC review of the laboratory data was undertaken with a summary results table presented in Table 7.6 below. Of the 665 individual laboratory analyses conducted in association with the quality assessment, issues were identified in 10 (~1.62%) analyses. As >95% of the QA/QC data was satisfactory, this indicates that the data quality for the GME is of an acceptable standard.

Table 7.6 Summary of QC assessment

Sample Type	Total Number of Analyses	Number of Identified Issues	% of Analyses with Identified Issues	Comment
Duplicate sample analyses	182	2	~1.1%	RPDs outside acceptable range
Field quality control sample (Field Blanks) analyses	180	5	~2.8%	Concentrations reported above the LOR in Field Blanks
Internal laboratory analyses	303	3	~1%	Lab Matrix spike recoveries and surrogate recoveries outside of control limits.
Total	665	10	~1.62%	-

8. DISCUSSION

8.1 RECENT (2019) MONITORING RESULTS

The recent groundwater results are presented in Table 2, Appendix A, and are summarised below. Where applicable, results and discussions were updated in line with the LNG Groundwater monitoring data review conducted by Tetra Tech Coffey in 2021. Investigations of groundwater quality trends since the 2019 monitoring event are reported elsewhere.

- An organic odour was recorded during sampling at GW21.
- No monocyclic aromatic hydrocarbons (MAHs), total petroleum hydrocarbons (TPH) compounds, polyaromatic hydrocarbons (PAHs) compounds or phenolic compounds were detected at any of the monitoring wells sampled.
- Concentrations of dissolved metals were reported at concentrations above the baseline range which represents the Environment Permit criteria, as follows:
    - Manganese was reported above the Environment Permit criteria at location GW21 (located within the LNG Plant site) and also exceeded the PNG marine aquatic ecosystems & PNG drinking water criteria. Concentrations exceeded the PNG freshwater aquatic ecosystems and PNG drinking water criteria at two sampling locations at the landfill (GW5 and GW11) and five sampling locations across the LNG Plant site (MW2, GW22, GW23 and GW24) but these were below the Environment Permit criteria for the site. Manganese is discussed further in the following section.
    - Selenium was reported above the PNG criteria for both freshwater and marine aquatic ecosystems and PNG drinking water at two locations (GW13 at the landfill and GW20 at the LNG Plant site), but below the Environment Permit criteria for the site. Concentrations for location GW20 also exceeded the Recreational Water criteria.
    - Iron was reported above the PNG criteria for both freshwater and marine aquatic ecosystems and PNG drinking water at two locations (GW14 at the landfill and GW22 at the LNG Plant site) but these were below the Environment Permit criteria for the site. Iron is discussed further in the following section.
- Sulfate concentrations exceeded the PNG freshwater aquatic ecosystems & PNG drinking water criteria at two locations in the vicinity of the landfill (GW14 and GW15) and at seven locations across the LNG Plant (MW2, and GW19 to GW24). All sulfate concentrations were reported below the Environment Permit criteria for the site.
- Total nitrogen concentrations were reported above the Environment Permit criteria at one location at the landfill (GW11) and four locations across the LNG Plant (MW2, GW21, GW22 and GW24). These results are discussed further in Section 8.2.
- Turbidity exceeded the PNG criteria for both freshwater and marine aquatic ecosystems and PNG drinking water at two locations on the northern portion of the LNG Plant (GW17 and GW22).
- Biological oxygen demand (BOD) results were reported below the Environment Permit criteria at all sampling locations. Further monitoring is recommended to determine if results are representative of aquifer conditions and/or whether long-term trends exist.
- Faecal coliform concentrations were reported above the Environment Permit criteria at three locations on the northern portion of the landfill (GW12, GW13 and GW15) and four locations across the LNG Plant site (MW2, GW17, GW19 and GW20). All of the concentrations reported at these locations also exceeded the PNG criteria for freshwater and marine aquatic ecosystems and PNG drinking water criteria. Concentrations also exceeded the PNG drinking water criteria for one location at the landfill (GW14) and

two locations at the western boundary of the LNG Plant site (GW21 and GW23). Further rounds of monitoring should be undertaken with improved QA/QC protocols to verify these results.

- Enterococci concentrations were reported above the Environment Permit criteria at one location on the north-western portion of the landfill (GW12) and one location on the northern part of the LNG Plant (GW17). Further rounds of monitoring should be undertaken with improved QA/QC protocols to verify these results.
- E. Coli exceeded the Environment Permit and PNG drinking water criteria at two landfill locations in the north (GW11, GW13) and one location on the south-eastern portion of the LNG Plant site (GW19). Further rounds of monitoring should be undertaken with improved QA/QC protocols to verify these results.

8.2 LONG TERM MONITORING RESULTS

This section provides an overview of the available baseline groundwater quality monitoring dataset (March 2010 to September 2019) and makes comments long term data trends that apply.

Time series plots of the available water quality data are presented in Appendix D.

The Mann-Kendall analysis, which assesses the significance of concentration changes over time without assuming a distribution for the data (i.e., it is non-parametric, Gilbert 1987), has been used to assess trends for selected parameters of interest. The test requires a minimum of four measurable concentrations to assess a trend in the data. Results are discussed where relevant in the following sections.

8.2.1 Physicochemical parameters

Groundwater salinity is highly variable both spatially across the site and temporally within individual wells. Monitoring wells GW21 and GW22 are highly saline, reporting concentrations between 30,000 and 70,000 mg/L TDS. These wells are positioned along the western site boundary and may be influenced by marine water intrusion into the aquifer. Monitoring well GW22 is positioned next to the sedimentation pond.

Wells further inland generally report lower TDS concentrations, however notable TDS fluctuations area also reported in wells closer to the eastern margin of the site (e.g., MW2, GW19). TDS concentrations in MW2 have fluctuated from below 1,000 mg/L (September 2019) to over 6,000 mg/L (December 2019) over a period of approximately three months. Similar fluctuations are noted in most wells to varying magnitudes. Fluctuations, particularly inland may be attributed to the suspected variable vertical interaction between shallow and deep groundwater. This may also be attributed to high rates of rainfall recharge diluting shallow groundwater during the wet season.

Groundwater pH has been relatively consistent across the site over the long-term monitoring period. Field-measured pH has generally fluctuated within a range of 6.5 to 8.

The redox potential of groundwater generally indicates reducing conditions but conditions can vary site-wide, and may be a result of seasonal recharge of more oxygenated rainfall to the aquifer or artefacts of the sampling methods.

8.2.2 Dissolved metals

All analysed dissolved metals had one or more detectable concentration reported, with the exception of mercury and hexavalent chromium, which have been consistently below the laboratory's limit of reporting. It is noted that the PNG Drinking water regulations (1987) are based upon total concentrations of metals, however EMPNG have only analysed for dissolved metals.

The following assessment of dissolved metal concentrations in groundwater draws comparisons to drinking water criteria. This assessment may under report the health risk associated with use of groundwater for

potable supply (which is understood not to be occurring on the lease or down gradient of the LNG site) because drinking water standards are based on total metals concentrations:

- Barium concentrations at GW19 has temporarily fluctuated to levels that have exceeded PNG criteria for both freshwater and marine aquatic ecosystems. No increasing trends were reported at this well however. Increasing trends were noted at several other wells where lower concentrations were reported (GW13, GW20, GW21, GW22, MW4) (see Figure 8.1).
- Boron concentrations are likely to be naturally elevated above PNG freshwater & marine ecosystem criteria at most locations. This assumption is supported by the presence of elevated concentrations at all wells during all rounds, including baseline rounds prior to the LNG Plant construction (see Figure 8.1). Elevated boron is unlikely to pose a risk to aquatic ecosystems which would be adapted to high boron concentrations. Concentrations also exceeded PNG drinking water criteria for MW2 in two rounds (2010 & 2014) and GW22 in four rounds (both rounds in 2016, 2017 & 2019), with concentrations decreasing in subsequent sampling rounds.
- Elevated arsenic, cadmium, lead and nickel concentrations above one or more adopted screening criteria were all associated with the October 2012 monitoring round and similar concentrations were not reported in subsequent rounds. Results may be attributed to sampling error in the field (such as ineffective filtering) or cross contamination during this first round of monitoring.
- Detectable concentrations of hexavalent chromium were also reported for several of the same wells where arsenic, cadmium, lead and nickel were elevated during the 2012 monitoring round. A single detection of hexavalent chromium was also reported at MW2 during the 2010 monitoring round at this well. Hexavalent chromium is typically not naturally occurring and would not be attributed to field sampling errors. Detectable concentrations have only been reported at wells during the first monitoring round following drilling and well installation. It is possible that hexavalent chromium (and the elevated concentrations of arsenic, cadmium, lead and nickel) might be attributed to contaminants introduced during drilling. The maximum concentrations reported in these early rounds of monitoring have been adopted as ‘background’ and are applied as the Environment Permit criteria, therefore the values do not exceed. A more conservative approach of adopting PNG ecosystem protection criteria of 0.01 mg/L should be considered, noting all groundwater currently meets this preferred value.
- Cobalt exceeds PNG marine ecosystem criteria at several locations across the site.
- Concentrations of manganese and selenium have remained generally consistent over all rounds of monitoring across most locations (see Figure 8.1). The concentrations of manganese were generally higher than the PNG freshwater ecosystem and PNG drinking water criteria but below the Environment Permit criteria at each location, whereas selenium was generally consistent with the PNG freshwater & marine ecosystem and PNG drinking water criteria and also below the Environment Permit criteria for the majority of locations.
    - Manganese concentrations have remained elevated at GW11 and GW21 in recent monitoring rounds and report increasing trends at both wells.
    - Manganese is generally elevated down gradient of the landfill (GW11) when compared to cross-gradient (GW15) and upgradient monitoring wells (GW14).
    - Selenium concentrations report increasing trends in the LNG Plant area at GW12, GW13, and GW20, and wells GW21 and GW22 in the vicinity of the landfill. Maximum concentrations at GW20 exceed screening criteria for recreational users of Caution Bay and PNG drinking water criteria, with concentrations indicating an increasing trend over time. The source of selenium at GW20 is unknown.
- Elevated concentrations of iron at GW22 are lower than the Environment Permit criteria for the site but have remained relatively consistent since 2016. There is a long-term increasing trend reported for iron at GW22 (see Figure 8.1), with concentrations generally reported above 7 mg/L since 2014. No other monitoring locations report increasing trends. General groundwater quality indicators (pH, dissolved

oxygen, redox potential) at GW22 have remained stable during this period and don't suggest changing geochemical conditions.

Increasing iron in groundwater at GW22 may indicate natural attenuation processes occurring upgradient of the well, such as where landfills or hydrocarbon contamination may be present. Increased iron is one of a series of common geochemical effects caused by natural attenuation processes that deplete electron acceptors in the aquifer downgradient of landfill and areas of groundwater contamination. This is also consistent with elevated ammonia and sulfate also reported at GW22 (discussed below), both consistent with potential groundwater impact up gradient.

8.2.3 Petroleum hydrocarbons

While no detectable concentrations of petroleum hydrocarbons were reported in the current round, historically, heavy fraction TPH (>C10) have been reported at the following groundwater monitoring locations:

- Landfill monitoring wells: GW-12, GW-14, GW-15.
- Plant monitoring wells: GW-17, GW-19, GW-21, GW-23.

No further laboratory analysis of these samples was conducted after receiving the results to confirm the nature of the hydrocarbons detected . This may suggest a degree of petroleum-based hydrocarbons impact to groundwater that has not been observed in recent rounds or may represent naturally occurring oils or biofilms that can exist in monitoring wells.

Light fraction TPH (C6-C9) hydrocarbons were reported at the following groundwater monitoring locations:

- Landfill monitoring wells: GW-05, GW-12, GW-15.
- Plant monitoring wells: GW-22, GW-21.

As detectable concentrations were only reported in singular monitoring rounds for each location (suspected to be immediately post well drilling & construction) it is possible that the elevated concentrations might be attributed to contaminants introduced during drilling. Subsequent monitoring rounds have not reported detectable concentrations.

No historical monitoring rounds reported any BTEXN compounds above the laboratory detection limit.

8.2.4 PAHs

PAHs were monitored at most locations during most rounds. No historical samples reported detectable concentrations of these compounds.

8.2.5 Phenols

Phenols were detected in groundwater generally during the first two rounds of monitoring at wells GW5, GW17, GW19, GW20, GW21 and GW22 between 2011 and 2013 (see Figure 8.2). Phenol concentrations have since been consistently below the laboratory reporting limit in these and all other wells.

The source of phenols in groundwater prior to 2014 is unknown but may be attributed to the same source of elevated metals in groundwater during these early rounds, such as from the drilling fluids.

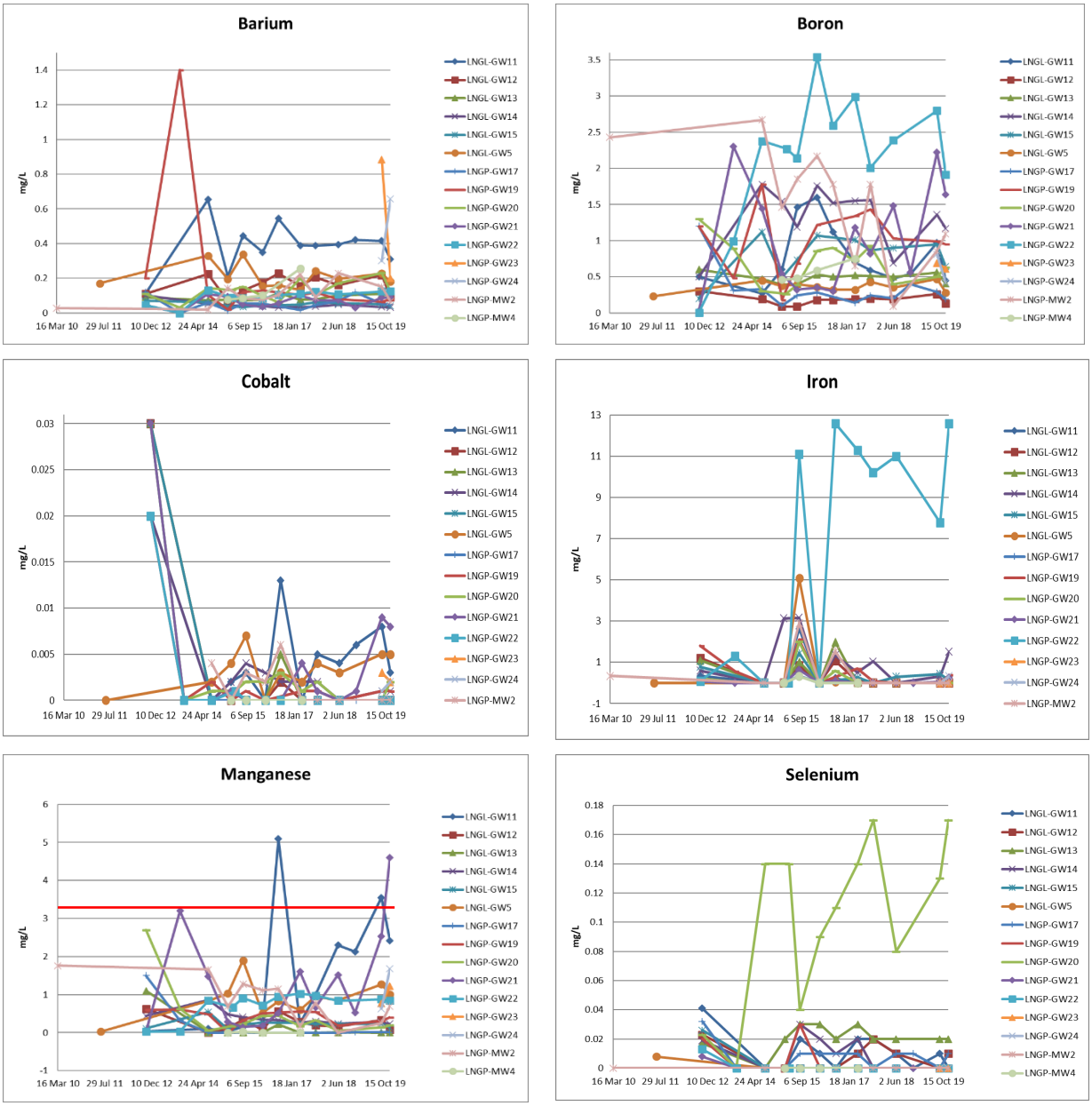

Figure 8.1 Time series plots of selected dissolved metals (red line shows Baseline Range EMP criteria where relevant)

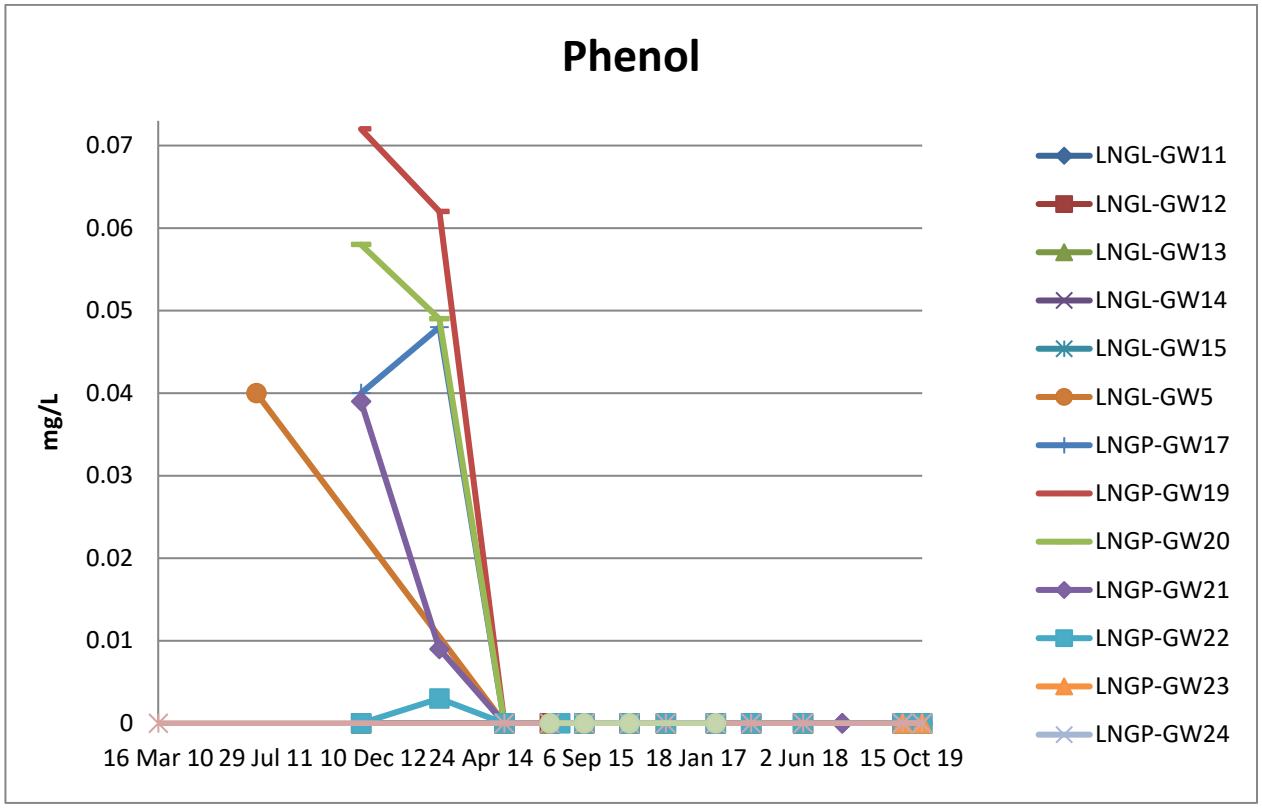

Figure 8.2 Phenol concentrations in groundwater

8.2.6 Nitrogen

Total nitrogen concentrations in groundwater have been generally low for most monitoring locations (see Figure 8.3). Exceptions are noted at MW2 and GW22 where concentrations have ranged up to 37 mg/L and 10 mg/L, respectively.

Monitoring well MW2 is located on the up-gradient eastern site boundary and is unlikely to be affected by most of the processing plant infrastructure and accommodation facilities. Nitrate accounts for most of the nitrogen at MW21. Nitrate may be attributed to offsite agricultural or human waste disposal but further work would be required to confirm this.

Nitrogen at location GW22 (hydraulically cross-gradient of construction sediment pond) is comprised almost entirely of ammonia. Ammonia at GW22 is up to approximately two orders of magnitude compared to downgradient and upgradient monitoring wells. Ammonia may be attributed to the landfill or other unknown sources that may exist in closer proximity in the plant area.

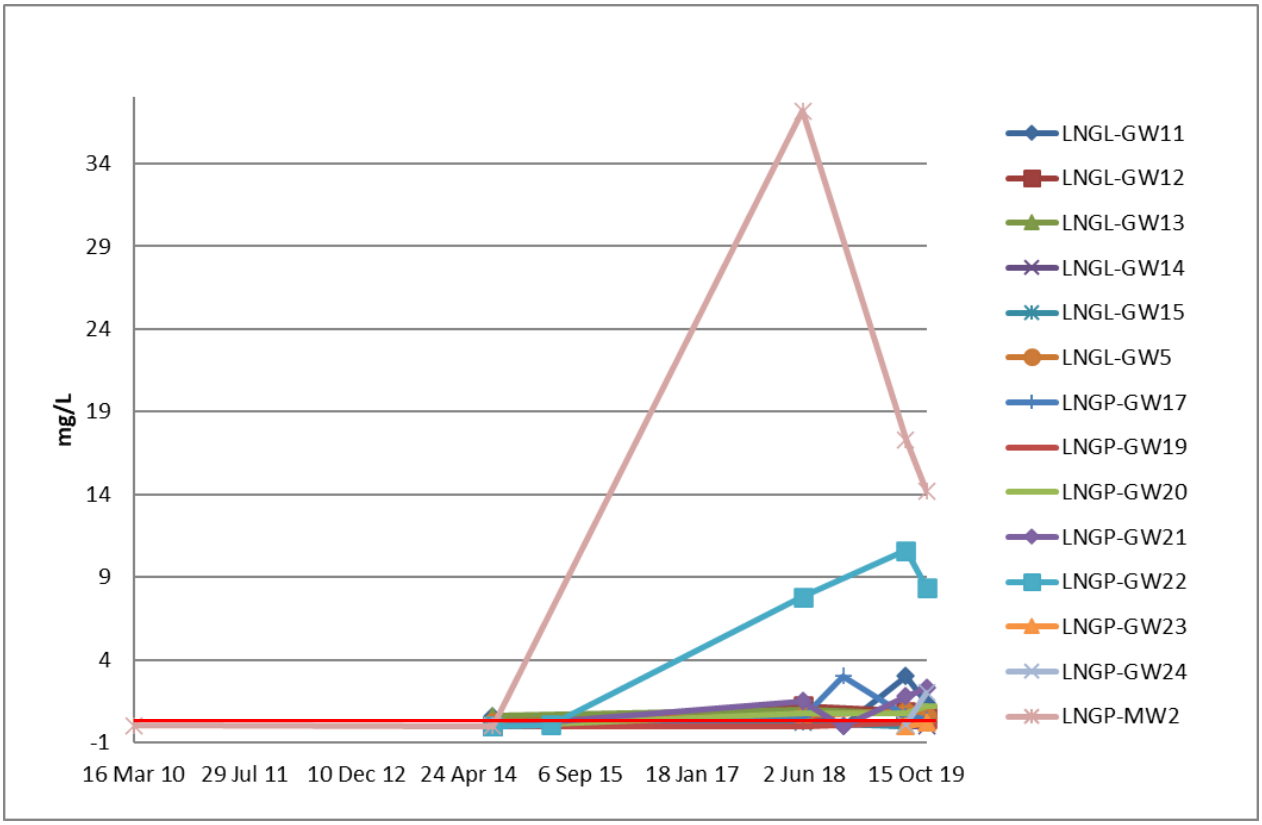

Figure 8.3 Total nitrogen (red line shows Baseline Range EMP criteria)

8.2.7 Microbiological parameters

Elevated concentrations of faecal coliforms, enterococci and/or E.coli were noted at a number of sampling locations during the current round and during previous sampling rounds since 2017.

Limited analysis for these analytes was conducted prior to 2017. Concentrations have ranged widely from less than 1 to more than 2419.6 MPN/100ml in each well for all three analytes. No spatial patterns were evident, with concentrations of faecal coliforms being detected above the environment permit criteria at least once in all wells since 2013.

Further interpretation of microbiological parameters and discussion of impacts is limited by doubt cast over recently reported results analysed by the in-house laboratory and difficulty transporting samples to a NATA accredited laboratory within the 24 hour holding time. Repeat sampling and improved field and laboratory QA/QC procedures should be explored to verify these results.

8.3 LIMITATIONS AND RECOMMENDATIONS

This report provides a review of the groundwater level and quality data that has been provided by EMPNG and makes comments on quality indicators compared to adopted permit and screening criteria. This is consistent with the requirements of the environmental permit.

While this report provides an assessment of groundwater quality across the site and comments on compliance with permit requirements, it does not intend to provide a complete assessment of potential groundwater quality impacts that might reasonably be expected (such as would be achieved if conducted in accordance with Australian *National Environment Protection (Assessment of Site Contamination) Measure 1999).*

The following additional limitations and recommendations are noted:

- Bore construction logs for monitoring locations GW5, GW11-GW15, GW17-GW24 were not provided by EMPNG, only an assessment of the screened lithology type (i.e., Claystone). Therefore, a comparison of any perched/shallow versus deeper aquifer water chemistry, hydraulic gradients has not been undertaken.
- Survey data for monitoring locations GW5, GW11-GW15, GW17-GW24 has not been provided, introducing uncertainty in the groundwater flow assessment. Refined survey levels will support accurate groundwater flow assessment.
- All monitoring data from 2010-2019 (excluding September 2019) was supplied by EMPNG, and Tetra Tech Coffey has assumed all data has been appropriately QC checked and is suitable for use (per the site endorsed Groundwater Quality Monitoring Environmental Protocol (EMPNLG Limited 2015)).
- The interpretation provided in Section 8 is supported by a high-level understanding of the site's infrastructure layout and potential sources of contamination that might affect groundwater quality.
- Adopted field sampling methods are not recognised best practice for the analysis of volatile contaminants and may underreport some analytes, particularly light fraction hydrocarbons and BTEXN compounds.

  Further work should be conducted to confirm the presence of groundwater bores used for drinking water. The use of groundwater sources for potable water within the site is currently not permitted within the lease
- This report comments on the data collected and provided to Tetra Tech Coffey. To achieve a comprehensive baseline assessment of the contamination status of groundwater at the site, an assessment that is consistent with recognised industry standards, such as the Australian National Environment Protection (Assessment of Site Contamination) Measure 1999 should be completed. This process would draw on the operational understanding of the site and its development history, which may identify other potential contaminants that are not currently being monitored.
- Investigations of groundwater quality trends since the 2019 monitoring event are reported elsewhere.

9. REFERENCES

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APPENDIX A: TABLES

Appendix A Table 1: Groundwater gauging data

Appendix A Table 1: Groundwater gauging data

Monitoring Location	Borehole ID	Date	Coordinates			Screened Lithology	Total Depth (mBTOC)	Depth To Water (mBTOC)	Top of Well Casing (mRL)	SWL (mRL)
			UTM	Easting	Northing					
Plant Site	MW-2	16-Mar-10	55	503365	8968551	SANDSTONE	16.949	4.406	33.714	29.308
		10-Aug-14	55	503365	8968551	SANDSTONE	17.1	4.548	33.714	29.166
		8-Mar-15	55	503365	8968551	SANDSTONE	17.1	1.104	33.714	32.61
		16-Aug-15	55	503365	8968551	SANDSTONE	17.1	3.733	33.714	29.981
		13-Mar-16	55	503365	8968551	SANDSTONE	17.1	5.381	33.714	28.333
		28-Aug-16	55	503365	8968551	SANDSTONE	17.1	4.966	33.714	28.748
		17-Apr-17	55	503365	8968551	SANDSTONE	17.1	2.098	33.714	31.616
		29-Oct-17	55	503365	8968551	SANDSTONE	17.1	4.927	33.714	28.787
		28-May-18	55	503365	8968551	SANDSTONE	17.1	2.5	33.714	31.214
		26-Nov-18	55	503365	8968551	SANDSTONE	17.1	4.35	33.714	29.364
		2-Sep-19	55	503365	8968551	SANDSTONE	17.1	3.51	33.714	30.204
		2-Dec-19	55	503365	8968551	SANDSTONE	17.1	4.4	33.714	29.314
	GW-17	13-Oct-12	55	502607	8968476	SANDSTONE	17.1	NR	Not surveyed	Not surveyed
		12-Oct-13	55	502607	8968476	SANDSTONE	17.1	NR	Not surveyed	Not surveyed
		10-Aug-14	55	502607	8968476	SANDSTONE	17.1	4.325	Not surveyed	Not surveyed
		8-Mar-15	55	502607	8968476	SANDSTONE	17.1	0.495	Not surveyed	Not surveyed
		16-Aug-15	55	502607	8968476	SANDSTONE	17.1	4.044	Not surveyed	Not surveyed
		13-Mar-16	55	502607	8968476	SANDSTONE	17.1	4.995	Not surveyed	Not surveyed
		17-Apr-17	55	502607	8968476	SANDSTONE	17.1	2.436	Not surveyed	Not surveyed
		29-Oct-17	55	502607	8968476	SANDSTONE	17.1	5.412	Not surveyed	Not surveyed
		28-May-18	55	502607	8968476	SANDSTONE	17.1	2.96	Not surveyed	Not surveyed
		26-Nov-18	55	502607	8968476	SANDSTONE	17.1	2.96	Not surveyed	Not surveyed
		2-Sep-19	55	502607	8968476	SANDSTONE	17.1	4.6	Not surveyed	Not surveyed
		2-Dec-19	55	502607	8968476	SANDSTONE	17.1	5.67	Not surveyed	Not surveyed

Monitoring Location	Borehole ID	Date	Coordinates			Screened Lithology	Total Depth (mBTOC)	Depth To Water (mBTOC)	Top of Well Casing (mRL)	SWL (mRL)
			UTM	Easting	Northing					
Plant Site	GW-18	13-Oct-12	55	502955	8968094	SANDSTONE	17.1	NR	Not surveyed	Not surveyed
		12-Oct-13	55	502955	8968094	SANDSTONE	17.1	NR	Not surveyed	Not surveyed
	GW-19	13-Oct-12	55	503163	8967242	SANDSTONE	17.1	NR	Not surveyed	Not surveyed
		12-Oct-13	55	503163	8967242	SANDSTONE	17.1	NR	Not surveyed	Not surveyed
		10-Aug-14	55	503163	8967242	SANDSTONE	17.1	3.269	Not surveyed	Not surveyed
		8-Mar-15	55	503163	8967242	SANDSTONE	17.1	1.254	Not surveyed	Not surveyed
		16-Aug-15	55	503163	8967242	SANDSTONE	17.1	3.213	Not surveyed	Not surveyed
		13-Mar-16	55	503163	8967242	SANDSTONE	17.1	4.293	Not surveyed	Not surveyed
		17-Apr-17	55	503163	8967242	SANDSTONE	17.1	3.005	Not surveyed	Not surveyed
		29-Oct-17	55	503163	8967242	SANDSTONE	17.1	4.335	Not surveyed	Not surveyed
		28-May-18	55	503163	8967242	SANDSTONE	17.1	2.765	Not surveyed	Not surveyed
		26-Nov-18	55	503163	8967242	SANDSTONE	17.1	2.765	Not surveyed	Not surveyed
		2-Sep-19	55	503163	8967242	SANDSTONE	17.1	2.95	Not surveyed	Not surveyed
		2-Dec-19	55	503163	8967242	SANDSTONE	17.1	3.71	Not surveyed	Not surveyed
	GW-20	13-Oct-12	55	502269	8967078	SANDSTONE	17.1	NR	Not surveyed	Not surveyed
		12-Oct-13	55	502269	8967078	SANDSTONE	17.1	NR	Not surveyed	Not surveyed
		10-Aug-14	55	502269	8967078	SANDSTONE	17.1	8.398	Not surveyed	Not surveyed
		20-Apr-15	55	502269	8967078	SANDSTONE	17.1	4.5	Not surveyed	Not surveyed
		16-Aug-15	55	502269	8967078	SANDSTONE	17.1	5.008	Not surveyed	Not surveyed
		13-Mar-16	55	502269	8967078	SANDSTONE	17.1	5.499	Not surveyed	Not surveyed
		28-Aug-16	55	502269	8967078	SANDSTONE	17.1	5.969	Not surveyed	Not surveyed
		17-Apr-17	55	502269	8967078	SANDSTONE	17.1	4.897	Not surveyed	Not surveyed
		29-Oct-17	55	502269	8967078	SANDSTONE	17.1	6.639	Not surveyed	Not surveyed
		28-May-18	55	502269	8967078	SANDSTONE	17.1	4.627	Not surveyed	Not surveyed
		26-Nov-18	55	502269	8967078	SANDSTONE	17.1	4.627	Not surveyed	Not surveyed
		2-Sep-19	55	502269	8967078	SANDSTONE	17.1	5.4	Not surveyed	Not surveyed
		2-Dec-19	55	502269	8967078	SANDSTONE	17.1	5.7	Not surveyed	Not surveyed

Monitoring Location	Borehole ID	Date	Coordinates			Screened Lithology	Total Depth (mBTOC)	Depth To Water (mBTOC)	Top of Well Casing (mRL)	SWL (mRL)
			UTM	Easting	Northing					
Plant Site	GW-21	13-Oct-12	55	501400	8967387	No bore log	NR	NR	Not surveyed	Not surveyed
		12-Oct-13	55	501400	8967387	No bore log	NR	NR	Not surveyed	Not surveyed
		10-Aug-14	55	501400	8967387	No bore log	10.31	2.109	Not surveyed	Not surveyed
		8-Mar-15	55	501400	8967387	No bore log	10.31	1.316	Not surveyed	Not surveyed
		16-Aug-15	55	501400	8967387	No bore log	10.314	1.912	Not surveyed	Not surveyed
		13-Mar-16	55	501400	8967387	No bore log	10.314	1.76	Not surveyed	Not surveyed
		28-Aug-16	55	501400	8967387	No bore log	10.314	1.775	Not surveyed	Not surveyed
		17-Apr-17	55	501400	8967387	No bore log	10.314	1.472	Not surveyed	Not surveyed
		29-Oct-17	55	501400	8967387	No bore log	10.314	2.045	Not surveyed	Not surveyed
		28-May-18	55	501400	8967387	No bore log	10.314	2.815	Not surveyed	Not surveyed
		26-Nov-18	55	501400	8967387	No bore log	10.314	2.815	Not surveyed	Not surveyed
		2-Sep-19	55	501400	8967387	No bore log	10.314	1.81	Not surveyed	Not surveyed
		2-Dec-19	55	501400	8967387	No bore log	10.314	1.9	Not surveyed	Not surveyed
	GW-22	13-Oct-12	55	501081	8968205	No bore log	NR	NR	Not surveyed	Not surveyed
		12-Oct-13	55	501081	8968205	No bore log	NR	NR	Not surveyed	Not surveyed
		10-Aug-14	55	501081	8968205	No bore log	8.395	2.379	Not surveyed	Not surveyed
		26-Apr-15	55	501081	8968205	No bore log	8.415	2.139	Not surveyed	Not surveyed
		16-Aug-15	55	501081	8968205	No bore log	8.415	2.513	Not surveyed	Not surveyed
		13-Mar-16	55	501081	8968205	No bore log	8.415	2.609	Not surveyed	Not surveyed
		28-Aug-16	55	501081	8968205	No bore log	8.415	2.755	Not surveyed	Not surveyed
		17-Apr-17	55	501081	8968205	No bore log	8.415	2.041	Not surveyed	Not surveyed
		29-Oct-17	55	501081	8968205	No bore log	8.415	3.057	Not surveyed	Not surveyed
		28-May-18	55	501081	8968205	No bore log	8.415	2.246	Not surveyed	Not surveyed
		26-Nov-18	55	501081	8968205	No bore log	8.415	2.246	Not surveyed	Not surveyed
		2-Sep-19	55	501081	8968205	No bore log	8.415	2.35	Not surveyed	Not surveyed
		2-Dec-19	55	501081	8968205	No bore log	8.415	2.5	Not surveyed	Not surveyed
	GW-23	2-Sep-19	55	500860	8968065	No bore log	5.46	4.13	Not surveyed	Not surveyed

Monitoring Location	Borehole ID	Date	Coordinates			Screened Lithology	Total Depth (mBTOC)	Depth To Water (mBTOC)	Top of Well Casing (mRL)	SWL (mRL)
			UTM	Easting	Northing					
		2-Dec-19	55	500860	8968065	No bore log	5.46	1.68	Not surveyed	Not surveyed
	GW-24	2-Sep-19	55	501902	896687	No bore log	6.16	1.58	Not surveyed	Not surveyed
		2-Dec-19	55	501902	896687	No bore log	6.16	4.7	Not surveyed	Not surveyed
Landfill	GW-5	15-Jun-11	55	5001186	8968916	No bore log	15.15	NR	Not surveyed	Not surveyed
		8-Aug-11	55	5001186	8968916	No bore log	15.15	NR	Not surveyed	Not surveyed
		10-Aug-14	55	5001186	8968916	No bore log	15.15	3.755	Not surveyed	Not surveyed
		8-Mar-15	55	5001186	8968916	No bore log	15.15	2.83	Not surveyed	Not surveyed
		16-Aug-15	55	5001186	8968916	No bore log	15.15	3.61	Not surveyed	Not surveyed
		13-Mar-16	55	5001186	8968916	No bore log	15.15	3.774	Not surveyed	Not surveyed
		28-Aug-16	55	5001186	8968916	No bore log	15.15	3.998	Not surveyed	Not surveyed
		17-Apr-17	55	5001186	8968916	No bore log	15.15	3.313	Not surveyed	Not surveyed
		29-Oct-17	55	5001186	8968916	No bore log	15.15	3.976	Not surveyed	Not surveyed
		28-May-18	55	5001186	8968916	No bore log	15.15	3.415	Not surveyed	Not surveyed
		26-Nov-18	55	5001186	8968916	No bore log	15.15	3.415	Not surveyed	Not surveyed
		2-Sep-19	55	5001186	8968916	No bore log	15.15	3.64	Not surveyed	Not surveyed
		2-Dec-19	55	5001186	8968916	No bore log	15.15	3.88	Not surveyed	Not surveyed
	GW-11	13-Oct-12	55	501374	8969035	No bore log	NR	NR	Not surveyed	Not surveyed
		10-Aug-14	55	501374	8969035	No bore log	9.165	4.697	Not surveyed	Not surveyed
		8-Mar-15	55	501374	8969035	No bore log	9.165	3.528	Not surveyed	Not surveyed
		16-Aug-15	55	501374	8969035	No bore log	9.165	4.647	Not surveyed	Not surveyed
		13-Mar-16	55	501374	8969035	No bore log	9.165	5.075	Not surveyed	Not surveyed
		28-Aug-16	55	501374	8969035	No bore log	9.165	5.387	Not surveyed	Not surveyed
		17-Apr-17	55	501374	8969035	No bore log	9.165	5.615	Not surveyed	Not surveyed
		29-Oct-17	55	501374	8969035	No bore log	9.165	5.425	Not surveyed	Not surveyed
		28-May-18	55	501374	8969035	No bore log	9.165	4.89	Not surveyed	Not surveyed
		26-Nov-18	55	501374	8969035	No bore log	9.165	4.89	Not surveyed	Not surveyed
		2-Sep-19	55	501374	8969035	No bore log	9.165	4.72	Not surveyed	Not surveyed

Monitoring Location	Borehole ID	Date	Coordinates			Screened Lithology	Total Depth (mBTOC)	Depth To Water (mBTOC)	Top of Well Casing (mRL)	SWL (mRL)
			UTM	Easting	Northing					
Landfill		2-Dec-19	55	501374	8969035	No bore log	9.165	4.93	Not surveyed	Not surveyed
	GW-12	13-Oct-12	55	501286	8969031	No bore log	NR	NR	Not surveyed	Not surveyed
		10-Aug-14	55	501286	8969031	No bore log	7.94	3.767	Not surveyed	Not surveyed
		8-Mar-15	55	501286	8969031	No bore log	7.94	3.296	Not surveyed	Not surveyed
		16-Aug-15	55	501286	8969031	No bore log	7.94	3.67	Not surveyed	Not surveyed
		13-Mar-16	55	501286	8969031	No bore log	7.94	4.031	Not surveyed	Not surveyed
		28-Aug-16	55	501286	8969031	No bore log	7.94	4.414	Not surveyed	Not surveyed
		17-Apr-17	55	501286	8969031	No bore log	7.94	3.395	Not surveyed	Not surveyed
		29-Oct-17	55	501286	8969031	No bore log	7.94	4.386	Not surveyed	Not surveyed
		28-May-18	55	501286	8969031	No bore log	7.94	3.73	Not surveyed	Not surveyed
		26-Nov-18	55	501286	8969031	No bore log	7.94	3.73	Not surveyed	Not surveyed
		2-Sep-19	55	501286	8969031	No bore log	7.94	3.37	Not surveyed	Not surveyed
		2-Dec-19	55	501286	8969031	No bore log	7.94	3.97	Not surveyed	Not surveyed
	GW-13	13-Oct-12	55	501387	8969011	No bore log	NR	NR	Not surveyed	Not surveyed
		10-Aug-14	55	501387	8969011	No bore log	8.27	4.449	Not surveyed	Not surveyed
		8-Mar-15	55	501387	8969011	No bore log	8.27	4.104	Not surveyed	Not surveyed
		16-Aug-15	55	501387	8969011	No bore log	8.27	4.408	Not surveyed	Not surveyed
		13-Mar-16	55	501387	8969011	No bore log	8.27	4.834	Not surveyed	Not surveyed
		28-Aug-16	55	501387	8969011	No bore log	8.27	5.165	Not surveyed	Not surveyed
		17-Apr-17	55	501387	8969011	No bore log	8.27	4.919	Not surveyed	Not surveyed
		29-Oct-17	55	501387	8969011	No bore log	8.27	4.214	Not surveyed	Not surveyed
		28-May-18	55	501387	8969011	No bore log	8.27	3.66	Not surveyed	Not surveyed
		26-Nov-18	55	501387	8969011	No bore log	8.27	3.66	Not surveyed	Not surveyed
		2-Sep-19	55	501387	8969011	No bore log	8.27	4.51	Not surveyed	Not surveyed
		2-Dec-19	55	501387	8969011	No bore log	8.27	4.7	Not surveyed	Not surveyed
	GW-14	13-Oct-12	55	501571	8969076	No bore log	NR	NR	Not surveyed	Not surveyed
		10-Aug-14	55	501571	8969076	No bore log	11.889	3.367	Not surveyed	Not surveyed

Monitoring Location	Borehole ID	Date	Coordinates			Screened Lithology	Total Depth (mBTOC)	Depth To Water (mBTOC)	Top of Well Casing (mRL)	SWL (mRL)
			UTM	Easting	Northing					
Landfill		8-Mar-15	55	501571	8969076	No bore log	11.889	4.265	Not surveyed	Not surveyed
		16-Aug-15	55	501571	8969076	No bore log	11.889	3.248	Not surveyed	Not surveyed
		13-Mar-16	55	501571	8969076	No bore log	11.889	4.595	Not surveyed	Not surveyed
		28-Aug-16	55	501571	8969076	No bore log	11.889	5.51	Not surveyed	Not surveyed
		17-Apr-17	55	501571	8969076	No bore log	11.889	5.577	Not surveyed	Not surveyed
		29-Oct-17	55	501571	8969076	No bore log	11.889	6.228	Not surveyed	Not surveyed
		28-May-18	55	501571	8969076	No bore log	11.889	3.35	Not surveyed	Not surveyed
		26-Nov-18	55	501571	8969076	No bore log	11.889	3.35	Not surveyed	Not surveyed
		2-Sep-19	55	501571	8969076	No bore log	11.889	3.95	Not surveyed	Not surveyed
		2-Dec-19	55	501571	8969076	No bore log	11.889	4.54	Not surveyed	Not surveyed
	GW-15	13-Oct-12	55	501431	8969069	No bore log	NR	NR	Not surveyed	Not surveyed
		10-Aug-14	55	501431	8969069	No bore log	10.695	5.764	Not surveyed	Not surveyed
		8-Mar-15	55	501431	8969069	No bore log	10.695	5.156	Not surveyed	Not surveyed
		16-Aug-15	55	501431	8969069	No bore log	10.695	5.743	Not surveyed	Not surveyed
		13-Mar-16	55	501431	8969069	No bore log	10.695	6.257	Not surveyed	Not surveyed
		17-Apr-17	55	501431	8969069	No bore log	10.695	6.458	Not surveyed	Not surveyed
		29-Oct-17	55	501431	8969069	No bore log	10.695	6.614	Not surveyed	Not surveyed
		28-May-18	55	501431	8969069	No bore log	10.695	6	Not surveyed	Not surveyed
		26-Nov-18	55	501431	8969069	No bore log	10.695	6	Not surveyed	Not surveyed
		2-Sep-19	55	501431	8969069	No bore log	10.695	5.68	Not surveyed	Not surveyed
		2-Dec-19	55	501431	8969069	No bore log	10.695	6	Not surveyed	Not surveyed

* NR: Not recorded

Appendix A Table 2: Groundwater field and laboratory results

Blue shaded values denote value is higher than HHMRC 2008 guidelines for recreation water
Pink shaded vales denote value is higher than PNG water quality criteria for freshwater aquatic ecosystem protection
Green shaded values denote value is higher than the baseline range / environment permit value
Purple shaded values denote value is higher than PNG drinking water guideline

											Physical Parameters				Ions												Field							
											Electrical Conductivity (Non Compensated)	Chlorophyll a	Electrical Conductivity @ 25C (lab)	Total Dissolved Solids (TDS)	Calcium (Filtered)	Chloride	Potassium (Filtered)	Sodium (Filtered)	Sulfate as SO4 - Turbidimetric (Filtered)	Ionic Balance	Anions Total	Cations Total	Sulphide	Cyanide (Free)	TDS (Field)	DO (Field)	Redox Potential (Field)	pH (Field)	Turbidity	Magnesium (Filtered)	Arsenic (Filtered)	Barium (Filtered)
											µS/cm	mg/L	µS/cm	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	%	meq/L	meq/L	mg/L	mg/L	mg/L	mg/L	mV	-	NTU	mg/L	mg/L	mg/L
EQL											**1**	**0.001**	**1**	**10**	**1**	**1**	**1**	**1**	**1**	**0.01**	**0.01**	**0.01**			**1**	**0.001**	**1**	**0.01**	**0.1**	**1**	**0.001**	**0.001**
NHMRC 2008 Recreational Water																															0.07	7
PNG Water Quality Criteria for Freshwater Aquatic Ecosystem (guideline only)																	5		400				0.002	0.005				>6.5<9	25		0.05	1
PNG Water Quality Criteria for Marine Aquatic Ecosystem (guideline only)																	600						0.002	0.01					25		0.05	1
Environment Permit Criteria (Baseline Range)															1300		495	9000	4130				0.1	0.004		<9.9		>6.41<7.81		620	0.106	1.4
PNG DWG (1987)														1500	200	1000			400					0.05				>6.5<9.2	25	150	0.05	
Site_ID	**Location_Code**	**SampleCode**	**Field_ID**	**Sampled_Date_Time**	**Lab_Name**	**Lab_Report_Number**	**Sample_Type**																									
PNG LNG	LNGP-MW2	MW-2_Historical_160310	MW-2	16/03/2010			Normal	**10,937**	-	-	-	-	-	**31**	-	**4130**	-	-	-	<0.1	<0.004	**7109**	**3.34**	**35**	**7.02**	-	-	<0.001	**0.028**
PNG LNG	LNGP-MW-1	MW-1_Historical_160310	MW-1	16/03/2010			Normal	-	-	-	-	-	-	**6**	-	**61**	-	-	-	<0.1	<0.004	1621	**0.87**	-116	**6.96**	-	-	<0.001	**0.056**
PNG LNG	LNGP-MW-3	MW-3_Historical_160310	MW-3	16/03/2010			Normal	-	-	-	-	-	-	**3**	-	**344**	-	-	-	<0.1	<0.004	3365	**0.81**	-4	**6.92**	-	-	<0.001	**0.146**
PNG LNG	LNGP-MW-3B	MW-3B_Historical_160310	MW-3B	16/03/2010			Normal	-	-	-	-	-	-	**8**	**-**	**484**	-	-	-	<0.1	<0.004	550	**1.48**	-150	**7.06**	-	-	**0.003**	**0.066**
PNG LNG	LNGP-MW-4	MW-4_Historical_160310	MW-4	16/03/2010			Normal	-	-	-	-	-	-	**4**	**-**	**77**	-	-	-	<0.1	<0.004	3264	**3.52**	**22**	**7.33**	-	-	**0.001**	**0.081**
PNG LNG	LNGP-MW-4	MW-4_Historical_121013	MW-4	12/10/2013			Normal	-	-	-	-	**800**	-	**56**	**8800**	**620**	-	-	-	-	-	-	**9.9**	-	**6.7**	-	**280**	<0.003	**0.08**
PNG LNG	LNGP-MW-4	MW-4_Historical_100814	MW-4	10/08/2014			Normal	-	-	-	-	**387**	-	**3**	**758**	**1940**	-	-	-	-	-	-	**6.22**	**123.9**	**6.15**	-	**182**	<0.001	**0.068**
PNG LNG	LNGP-MW-4	MW-4_Historical_080315	MW-4	8/03/2015			Normal	-	-	-	-	**760**	-	**3**	**741**	**1710**	-	-	-	-	-	2631	**6.31**	**99**	**7.51**	-	**807**	<0.001	**0.077**
PNG LNG	LNGP-MW-4	MW-4_Historical_160815	MW-4	16/08/2015			Normal	-	-	-	-	**843**	-	**6**	**1180**	**1710**	-	-	-	-	-	2248	**6.9**	**136.3**	**7.54**	-	**2670**	<0.001	**0.086**
PNG LNG	LNGP-MW-4	MW-4_Historical_130316	MW-4	13/03/2016			Normal	-	-	-	-	**779**	-	**5**	**994**	**2900**	-	-	-	-	-	2928	**5.58**	-168.1	**7.41**	-	**802**	<0.001	**0.102**
PNG LNG	LNGP-MW-4	MW-4_Historical_170417	MW-4	17/04/2017			Normal	-	-	-	-	**122**	-	**8**	**1520**	**277**	-	-	-	-	-	5924	**5.06**	-270	**7.17**	-	**134**	<0.001	**0.255**
PNG LNG	LNGP-MW-4A	MW-4A_Historical_160310	MW-4A	16/03/2010			Normal	-	-	-	-	-	-	**76**	**-**	**662**	-	-	-	<0.1	<0.004	22318	**5.15**	-31	**6.66**	-	-	<0.001	**0.648**
PNG LNG	LNGP-MW-5	MW-5_Historical_160310	MW-5	16/03/2010			Normal	-	-	-	-	-	-	**8**	**-**	**472**	-	-	-	<0.1	<0.004	7013	**2.23**	**46**	**6.91**	-	-	**0.001**	**0.243**
PNG LNG	LNGP-MW-5A	MW-5A_Historical_160310	MW-5A	16/03/2010			Normal	-	-	-	-	-	-	**42**	**-**	**2280**	-	-	-	<0.1	<0.004	11262	**0.73**	-20	**6.41**	-	-	<0.001	**0.043**
PNG LNG	LNGP-MW-6_NTH	MW-6_NTH_Historical_160310	MW-6_NTH	16/03/2010			Normal	-	-	-	-	-	-	**15**	**-**	**410**	-	-	-	<0.1	<0.004	5747	**1.05**	**24**	**6.6**	-	-	<0.001	**0.168**
PNG LNG	LNGP-MW-6_STH (MW6A)	MW-6_STH (MW6A)_Historical_16031	MW-6_STH (MW6A)	16/03/2010			Normal	-	-	-	-	-	-	**43**	**-**	**1120**	-	-	-	<0.1	<0.004	8274	**1.56**	-83	**6.94**	-	-	<0.001	**0.388**
PNG LNG	LNGP-MW-7	MW-7_Historical_160310	MW-7	16/03/2010			Normal	-	-	-	-	-	-	**29**	**-**	**260**	-	-	-	<0.1	<0.004	12955	**2.53**	**11**	**6.81**	-	-	<0.001	**0.281**
PNG LNG	LNGP-MW-8	MW-8_Historical_160310	MW-8	16/03/2010			Normal	-	-	-	-	-	-	**7**	**-**	**136**	-	-	-	<0.1	<0.004	1850	**0.39**	-18	**7.12**	-	-	0.002	**0.096**
PNG LNG	LNGP-GW-16	GW-16_Historical_131012	GW-16	13/10/2012			Normal	-	-	-	-	**166**	-	**28**	**512**	**2400**	-	-	-	-	-	-	**4**	-	**6.9**	-	**122**	**0.106**	**0.1**
PNG LNG	LNGP-GW-16	GW-16_Historical_121013	GW-16	12/10/2013			Normal	-	-	-	-	**580**	-	**57**	**2200**	**620**	-	-	-	-	-	-	**7.6**	-	**6.6**	-	**160**	<0.003	**0.05**
PNG LNG	LNGL-MW-9	MW-9_Historical_160310	MW-9	16/03/2010			Normal	-	-	-	-	**407**	-	**1**	**-**	**131**	-	-	-	<0.1	<0.004	1495	**0.84**	-54	**7.81**	-	**119**	<0.001	**0.006**
PNG LNG	LNGL-GW-6	GW-6_Historical_150611	GW-6	15/06/2011			Normal	-	-	-	-	**66**	-	**9.7**	**270**	**102**	-	-	-	-	-	-	**1.14**	-	**6.7**	-	**23**	<0.003	**0.03**
PNG LNG	LNGL-GW-6	GW-6_Historical_080811	GW-6	8/08/2011			Normal	-	-	-	-	-	-	**-**	**-**	**-**	-	-	-	-	-	-	**4.9**	-	-	-	-	-	**-**
PNG LNG	LNGL-GW-7	GW-7_Historical_150611	GW-7	15/06/2011			Normal	-	-	-	-	**470**	-	**25**	**1000**	**72**	-	-	-	-	-	-	**1.73**	-	**7**	-	**200**	<0.003	**0.14**
PNG LNG	LNGL-GW-7	GW-7_Historical_080811	GW-7	8/08/2011			Normal	-	-	-	-	-	-	**-**	**-**	**-**	-	-	-	-	-	-	**4.2**	-	-	-	-	-	**-**
PNG LNG	LNGL-GW-8	GW-8_Historical_150611	GW-8	15/06/2011			Normal	-	-	-	-	**410**	-	**15**	**1200**	**92**	-	-	-	-	-	-	**1.71**	-	**6.6**	-	**150**	<0.003	**0.27**
PNG LNG	LNGL-GW-8	GW-8_Historical_080811	GW-8	8/08/2011			Normal	-	-	-	-	-	-	**-**	**-**	**-**	-	-	-	-	-	-	**5**	-	-	-	-	-	**-**
PNG LNG	LNGL-GW-9	GW-9_Historical_150611	GW-9	15/06/2011			Normal	-	-	-	-	**1300**	-	**56**	**2400**	**42**	-	-	-	-	-	-	**0.93**	-	**7.3**	-	**620**	<0.003	**0.48**
PNG LNG	LNGL-GW-9	GW-9_Historical_080811	GW-9	8/08/2011			Normal	-	-	-	-	-	-	**-**	**-**	**-**	-	-	-	-	-	-	**4.5**	-	-	-	-	-	**-**
PNG LNG	LNGL-GW-10	GW-10_Historical_150611	GW-10	15/06/2011			Normal	-	-	-	-	**170**	-	**20**	**930**	91	-	-	-	-	-	-	**1.85**	-	**6.8**	-	**100**	<0.003	**0.01**
PNG LNG	LNGL-GW-10	GW-10_Historical_080811	GW-10	8/08/2011			Normal	-	-	-	-	-	-	**-**	-	-	-	-	-	-	-	-	**4.6**	-	-	-	-	-	-
PNG LNG	LNGL-GW5	GW-5_Historical_150611	GW-5	15/06/2011			Normal	**5840**	-	-	-	**230**	-	**7**	**640**	**67**	-	-	-	-	-	-	**1.89**	-	**6.8**	-	**110**	<0.003	**0.17**
PNG LNG	LNGL-GW5	GW-5-SGS_Historical_150611	GW-5	15/06/2011			Normal	-	-	-	-	-	-	**-**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGL-GW5	GW-5_Historical_080811	GW-5	8/08/2011			Normal	**5420**	-	-	-	-	-	**-**	-	-	-	-	-	-	-	-	**4.7**	-	-	-	-	-	-
PNG LNG	LNGL-GW5	GW-5-SGS_Historical_080811	GW-5	8/08/2011			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGL-GW11	GW-11_Historical_131012	GW-11	13/10/2012			Normal	**4400**	-	-	-	**209**	-	**6.5**	**253**	**150**	-	-	-	-	-	-	**4.4**	-	**7.2**	-	**43**	**0.094**	**0.11**
PNG LNG	LNGL-GW11	GW-11-SGS_Historical_131012	GW-11	13/10/2012			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGL-GW12	GW-12_Historical_131012	GW-12	13/10/2012			Normal	**5100**	-	-	-	**127**	-	**7.1**	**220**	**65**	-	-	-	-	-	-	**4.1**	-	**6.8**	-	**45**	**0.07**	**0.11**
PNG LNG	LNGL-GW12	GW-12-SGS_Historical_131012	GW-12	13/10/2012			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGL-GW13	GW-13_Historical_131012	GW-13	13/10/2012			Normal	**4400**	-	-	-	**178**	-	**10**	**254**	**90**	-	-	-	-	-	-	**1.2**	-	**7.1**	-	**54**	**0.057**	**0.09**
PNG LNG	LNGL-GW13	GW-13-SGS_Historical_131012	GW-13	13/10/2012			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGL-GW14	GW-14_Historical_131012	GW-14	13/10/2012			Normal	**5800**	-	-	-	**366**	-	**5**	**509**	**590**	-	-	-	-	-	-	**3.1**	-	**6.9**	-	**126**	**0.065**	**0.1**
PNG LNG	LNGL-GW14	GW-14-SGS_Historical_131012	GW-14	13/10/2012			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGL-GW15	GW-15_Historical_131012	GW-15	13/10/2012			Normal	**4700**	-	-	-	**47.6**	-	**3.6**	**126**	**520**	-	-	-	-	-	-	**1.8**	-	**6.9**	-	**14**	**0.058**	**0.07**
PNG LNG	LNGL-GW15	GW-15-SGS_Historical_131012	GW-15	13/10/2012			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGP-GW17	GW-17_Historical_131012	GW-17	13/10/2012			Normal	**2400**	-	-	-	**330**	-	**5**	**834**	**170**	-	-	-	-	-	-	**1.2**	-	**7.3**	-	**153**	**0.073**	**0.12**
PNG LNG	LNGP-GW17	GW-17-SGS_Historical_131012	GW-17	13/10/2012			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGP-GW19	GW-19_Historical_131012	GW-19	13/10/2012			Normal	**13,000**	-	-	-	**184**	-	**20**	**2972**	**1500**	-	-	-	-	-	-	**3.1**	-	**6.8**	-	**526**	**0.103**	**0.2**
PNG LNG	LNGP-GW19	GW-19-SGS_Historical_131012	GW-19	13/10/2012			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGP-GW20	GW-20_Historical_131012	GW-20	13/10/2012			Normal	**11,000**	-	-	-	**570**	-	**45**	**2923**	**2900**	-	-	-	-	-	-	**3.3**	-	**6.8**	-	**592**	**0.073**	**0.11**
PNG LNG	LNGP-GW20	GW-20-SGS_Historical_131012	GW-20	13/10/2012			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGP-GW21	GW-21_Historical_131012	GW-21	13/10/2012			Normal	**71,000**	-	-	-	**756**	-	**495**	**5500**	**3100**	-	-	-	-	-	-	**2.2**	-	**6.6**	-	**273**	**0.075**	**0.044**
PNG LNG	LNGP-GW21	GW-21-SGS_Historical_131012	GW-21	13/10/2012			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGP-GW22	GW-22_Historical_131012	GW-22	13/10/2012			Normal	**73,000**	-	-	-	**146**	-	<50	**3457**	**2000**	-	-	-	-	-	-	**1.6**	-	**7.1**	-	**531**	**0.007**	**0.046**
PNG LNG	LNGP-GW22	GW-22-SGS_Historical_131012	GW-22	13/10/2012			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGP-GW17	GW-17_Historical_121013	GW-17	12/10/2013			Normal	**3900**	-	-	-	**110**	-	**23**	**850**	**170**	-	-	-	-	-	-	**2.8**	-	**7.3**	-	**220**	<0.003	<0.005
PNG LNG	LNGP-GW17	GW-17-SGS_Historical_121013	GW-17	12/10/2013			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGP-GW19	GW-19_Historical_121013	GW-19	12/10/2013			Normal	**13,000**	-	-	-	**420**	-	**23**	**87**	**1500**	-	-	-	-	-	-	**8**	-	**7.1**	-	**160**	<0.003	**1.4**
PNG LNG	LNGP-GW19	GW-19-SGS_Historical_121013	GW-19	12/10/2013			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGP-GW20	GW-20_Historical_121013	GW-20	12/10/2013			Normal	**8600**	-	-	-	**350**	-	**42**	**2000**	**2800**	-	-	-	-	-	-	**9.1**	-	**7.1**	-	**180**	<0.003	**0.03**
PNG LNG	LNGP-GW20	GW-20-SGS_Historical_121013	GW-20	12/10/2013			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGP-GW21	GW-21_Historical_121013	GW-21	12/10/2013			Normal	**55,000**	-	-	-	**790**	-	**180**	**9000**	**3100**	-	-	-	-	-	-	**9.7**	-	**6.7**	-	**280**	<0.003	<0.005
PNG LNG	LNGP-GW21	GW-21-SGS_Historical_121013	GW-21	12/10/2013			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

									Physical Parameters				Ions												Field							
									Electrical Conductivity (Non Compensated)	Chlorophyll a	Electrical Conductivity @ 25C (lab)	Total Dissolved Solids (TDS)	Calcium (Filtered)	Chloride	Potassium (Filtered)	Sodium (Filtered)	Sulfate as SO4 - Turbidimetric (Filtered)	Ionic Balance	Anions Total	Cations Total	Sulphide	Cyanide (Free)	TDS (Field)	DO (Field)	Redox Potential (Field)	pH (Field)	Turbidity	Magnesium (Filtered)	Arsenic (Filtered)	Barium (Filtered)
									µS/cm	mg/L	µS/cm	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	%	meq/L	meq/L	mg/L	mg/L	mg/L	mg/L	mV	-	NTU	mg/L	mg/L	mg/L
EQL									**1**	**0.001**	**1**	**10**	**1**	**1**	**1**	**1**	**1**	**0.01**	**0.01**	**0.01**			**1**	**0.001**	**1**	**0.01**	**0.1**	**1**	**0.001**	**0.001**
NHMRC 2008 Recreational Water																													0.07	7
PNG Water Quality Criteria for Freshwater Aquatic Ecosystem (guideline only)															5		400				0.002	0.005				>6.5<9	25		0.05	1
PNG Water Quality Criteria for Marine Aquatic Ecosystem (guideline only)															600						0.002	0.01					25		0.05	1
Environment Permit Criteria (Baseline Range)													1300		495	9000	4130				0.1	0.004		<9.9		>6.41<7.81		620	0.106	1.4
PNG DWG (1987)												1500	200	1000			400					0.05				>6.5<9.2	25	150	0.05	
Site_ID	**Location_Code**	**SampleCode**	**Field_ID**	**Sampled_Date_Time**	**Lab_Name**	**Lab_Report_Number**	**Sample_Type**																									
PNG LNG	LNGP-GW22	GW-22_Historical_121013	GW-22	12/10/2013			Normal	**99,000**	-	-	-	**330**	-	**17**	**4000**	**2900**	-	-	-	-	-	-	**9**	-	**6.9**	-	**250**	<0.003	<0.005
PNG LNG	LNGP-GW22	GW-22-SGS_Historical_121013	GW-22	12/10/2013			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGL-GW11	GW-11_Historical_100814	GW-11	10/08/2014			Normal	**6118**	-	-	-	**217**	-	**7**	**801**	**238**	-	-	-	-	-	**3977**	**3.9**	**84**	**6.5**	-	**59**	<0.001	**0.654**
PNG LNG	LNGL-GW11	GW-11-SGS_Historical_100814	GW-11	10/08/2014			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGL-GW12	GW-12_Historical_100814	GW-12	10/08/2014			Normal	**4086**	-	-	-	**779**	-	**7**	**711**	**2900**	-	-	-	-	-	**2655**	**1.74**	**88.4**	6.28	-	**134**	<0.001	**0.225**
PNG LNG	LNGL-GW12	GW-12-SGS_Historical_100814	GW-12	10/08/2014			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGL-GW13	GW-13_Historical_100814	GW-13	10/08/2014			Normal	**3885**	-	-	-	**426**	-	**5**	**789**	**724**	-	-	-	-	-	**2580**	**4**	**166.4**	5.54	-	**802**	<0.001	**0.073**
PNG LNG	LNGL-GW13	GW-13-SGS_Historical_100814	GW-13	10/08/2014			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGL-GW14	GW-14_Historical_100814	GW-14	10/08/2014			Normal	**7457**	-	-	-	**387**	-	**20**	**1620**	**1940**	-	-	-	-	-	**4840**	**3.35**	-217	**6.78**	-	**141**	<0.001	**0.052**
PNG LNG	LNGL-GW14	GW-14-SGS_Historical_100814	GW-14	10/08/2014			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGL-GW15	GW-15_Historical_100814	GW-15	10/08/2014			Normal	**7152**	-	-	-	**387**	-	**13**	**1270**	**238**	-	-	-	-	-	**4649**	**3.57**	-115.4	9.23	-	**182**	<0.001	**0.061**
PNG LNG	LNGL-GW15	GW-15-SGS_Historical_100814	GW-15	10/08/2014			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGL-GW5	GW-5_Historical_100814	GW-5	10/08/2014			Normal	**24,950**	-	-	-	**194**	-	**18**	**1600**	**164**	-	-	-	-	-	**16,210**	**4**	**82.8**	**6.5**	-	**63**	<0.001	**0.33**
PNG LNG	LNGL-GW5	GW-5-SGS_Historical_100814	GW-5	10/08/2014			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGP-GW17	GW-17_Historical_100814	GW-17	10/08/2014			Normal	**2662**	-	-	-	**23**	-	**4**	**631**	**40**	-	-	-	-	-	**1732**	**4.7**	-127.7	**6.98**	-	**9**	<0.001	**0.059**
PNG LNG	LNGP-GW17	GW-17-SGS_Historical_100814	GW-17	10/08/2014			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGP-GW19	GW-19_Historical_100814	GW-19	10/08/2014			Normal	**8753**	-	-	-	**653**	-	**14**	**2100**	**230**	-	-	-	-	-	**5691**	**4.17**	**73.2**	**6.87**	-	**315**	<0.001	**0.104**
PNG LNG	LNGP-GW19	GW-19-SGS_Historical_100814	GW-19	10/08/2014			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGP-GW20	GW-20_Historical_100814	GW-20	10/08/2014			Normal	**2570**	-	-	-	**608**	-	**8**	**836**	**1320**	-	-	-	-	-	**1671**	**2.28**	-200.7	**7.14**	-	**266**	0.000002	**0.142**
PNG LNG	LNGP-GW21	GW-21_Historical_100814	GW-21	10/08/2014			Normal	**1030**	-	-	-	**217**	-	**137**	**4720**	**238**	-	-	-	-	-	**32,010**	**4.65**	-83.4	6.43	-	**59**	<0.001	**0.108**
PNG LNG	LNGP-GW21	GW-21-SGS_Historical_100814	GW-21	10/08/2014			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGP-GW22	GW-22_Historical_100814	GW-22	10/08/2014			Normal	**74,000**	-	-	-	**608**	-	**397**	**19,500**	**1940**	-	-	-	-	-	**48,140**	**4.1**	**95**	6.25	-	**266**	<0.001	**0.131**
PNG LNG	LNGP-MW2	MW-2_Historical_100814	MW-2	10/08/2014			Normal	**8497**	-	-	-	**619**	-	**30**	**1700**	**3260**	-	-	-	-	-	**5523**	**3.5**	**176.1**	**6.45**	-	**499**	<0.001	**0.019**
PNG LNG	LNGP-MW2	MW-2-SGS_Historical_100814	MW-2	10/08/2014			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGL-GW11	GW-11_Historical_080315	GW-11	8/03/2015			Normal	**2752**	-	-	-	-	-	-	-	-	-	-	-	-	-	**1786**	**5.71**	**85.8**	**7.46**	-	-	-	-	-	-
PNG LNG	LNGL-GW11	GW-11-SGS_Historical_080315	GW-11	8/03/2015			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGL-GW12	GW-12_Historical_080315	GW-12	8/03/2015			Normal	**7189**	-	-	-	-	-	-	-	-	-	-	-	-	-	**4677**	**4.37**	**145**	**7.58**	-	-	-	-	-	-
PNG LNG	LNGL-GW12	GW-12-SGS_Historical_080315	GW-12	8/03/2015			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGL-GW13	GW-13_Historical_080315	GW-13	8/03/2015			Normal	**5057**	-	-	-	-	-	-	-	-	-	-	-	-	-	**3255**	**4.83**	**64.3**	**7.38**	-	-	-	-	-	-
PNG LNG	LNGL-GW13	GW-13-SGS_Historical_080315	GW-13	8/03/2015			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGL-GW14	GW-14_Historical_080315	GW-14	8/03/2015			Normal	**10,770**	-	-	-	-	-	-	-	-	-	-	-	-	-	**7007**	**4.35**	-58.8	**7.1**	-	-	-	-	-	-
PNG LNG	LNGL-GW14	GW-14-SGS_Historical_080315	GW-14	8/03/2015			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGL-GW15	GW-15_Historical_080315	GW-15	8/03/2015			Normal	**8276**	-	-	-	-	-	-	-	-	-	-	-	-	-	**5378**	**5.27**	-74.5	**7.14**	-	-	-	-	-	-
PNG LNG	LNGL-GW15	GW-15-SGS_Historical_080315	GW-15	8/03/2015			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGL-GW5	GW-5_Historical_080315	GW-5	8/03/2015			Normal	**24,600**	-	-	-	-	-	-	-	-	-	-	-	-	-	**16,000**	**2.48**	-25.8	**7.08**	-	-	-	-	-	-
PNG LNG	LNGL-GW5	GW-5-SGS_Historical_080315	GW-5	8/03/2015			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGP-GW17	GW-17_Historical_080315	GW-17	8/03/2015			Normal	**1079**	-	-	-	-	-	-	-	-	-	-	-	-	-	**700**	**4.97**	**29.8**	**7.81**	-	-	-	-	-	-
PNG LNG	LNGP-GW17	GW-17-SGS_Historical_080315	GW-17	8/03/2015			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGP-GW19	GW-19_Historical_080315	GW-19	8/03/2015			Normal	**1807**	-	-	-	-	-	-	-	-	-	-	-	-	-	**1174**	**5.35**	**82.3**	**7.54**	-	-	-	-	-	-
PNG LNG	LNGP-GW19	GW-19-SGS_Historical_080315	GW-19	8/03/2015			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGP-GW21	GW-21_Historical_080315	GW-21	8/03/2015			Normal	**31,460**	-	-	-	-	-	-	-	-	-	-	-	-	-	**20,450**	**5.46**	-35.9	**7.48**	-	-	-	-	-	-
PNG LNG	LNGP-GW21	GW-21-SGS_Historical_080315	GW-21	8/03/2015			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGP-MW2	MW-2_Historical_080315	MW-2	8/03/2015			Normal	**6561**	-	-	-	-	-	-	-	-	-	-	-	-	-	**4265**	**4.19**	**130.6**	**7.18**	-	-	-	-	-	-
PNG LNG	LNGP-MW2	MW-2-SGS_Historical_080315	MW-2	8/03/2015			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PNG LNG		EB1514750012	QC1	8/03/2015	ALSE-Brisbane	EB1514750	Normal	-	-	-	-	<1	-	<1	**6**	<1	-	-	-	-	-	-	-	-	-	-	<1	<0.001	<0.001
PNG LNG		EB1514750013	QC2	8/03/2015	ALSE-Brisbane	EB1514750	Normal	-	-	-	-	<1	-	<1	**6**	**2**	-	-	-	-	-	-	-	-	-	-	<1	<0.001	<0.001
PNG LNG		EB1514750014	QC3	8/03/2015	ALSE-Brisbane	EB1514750	Normal	-	-	-	-	**18**	-	**2**	**249**	**28**	-	-	-	-	-	-	-	-	-	-	**6**	<0.001	**0.015**
PNG LNG		EB1514750015	QC4	8/03/2015	ALSE-Brisbane	EB1514750	Normal	-	-	-	-	**108**	-	**5**	**358**	**153**	-	-	-	-	-	-	-	-	-	-	**24**	<0.001	**0.019**
PNG LNG	LNGL-GW11	EB1514750009	LNGP Landfill GW11	8/03/2015	ALSE-Brisbane	EB1514750	Normal	-	-	-	-	**231**	-	**4**	**237**	**166**	-	-	-	-	-	-	-	-	-	-	**39**	<0.001	**0.211**
PNG LNG	LNGL-GW12	EB1514750007	LNGP Landfill GW12	8/03/2015	ALSE-Brisbane	EB1514750	Normal	-	-	-	-	**78**	-	**3**	**275**	**34**	-	-	-	-	-	-	-	-	-	-	**22**	<0.001	**0.07**
PNG LNG	LNGL-GW13	EB1514750008	LNGP Landfill GW13	8/03/2015	ALSE-Brisbane	EB1514750	Normal	-	-	-	-	**223**	-	**4**	**697**	**224**	-	-	-	-	-	-	-	-	-	-	**52**	<0.001	**0.076**
PNG LNG	LNGL-GW14	EB1514750010	LNGP Landfill GW14	8/03/2015	ALSE-Brisbane	EB1514750	Normal	-	-	-	-	**657**	-	**17**	**1660**	**2000**	-	-	-	-	-	-	-	-	-	-	**273**	**0.005**	**0.038**
PNG LNG	LNGL-GW15	EB1514750011	LNGP Landfill GW15	8/03/2015	ALSE-Brisbane	EB1514750	Normal	-	-	-	-	**157**	-	**6**	**566**	**335**	-	-	-	-	-	-	-	-	-	-	**43**	<0.001	**0.038**
PNG LNG	LNGL-GW5	EB1514750006	LNGP Landfill GW5	8/03/2015	ALSE-Brisbane	EB1514750	Normal	-	-	-	-	**611**	-	**11**	**1140**	**150**	-	-	-	-	-	-	-	-	-	-	**178**	<0.001	**0.196**
PNG LNG	LNGP-GW17	EB1514750003	LNGP Plant Site GW17	8/03/2015	ALSE-Brisbane	EB1514750	Normal	-	-	-	-	**19**	-	**2**	**258**	**29**	-	-	-	-	-	-	-	-	-	-	**6**	<0.001	**0.014**
PNG LNG	LNGP-GW19	EB1514750004	LNGP Plant Site GW19	8/03/2015	ALSE-Brisbane	EB1514750	Normal	-	-	-	-	**107**	-	**5**	**353**	**154**	-	-	-	-	-	-	-	-	-	-	**24**	<0.001	**0.021**
PNG LNG	LNGP-GW21	EB1514750005	LNGP Plant Site GW21	8/03/2015	ALSE-Brisbane	EB1514750	Normal	-	-	-	-	**122**	-	**54**	**1790**	**414**	-	-	-	-	-	-	-	-	-	-	**118**	**0.002**	**0.093**
PNG LNG	LNGP-MW2	EB1514750001	LNGP Plant Site MW2	8/03/2015	ALSE-Brisbane	EB1514750	Normal	-	-	-	-	**498**	-	**15**	**957**	**2640**	-	-	-	-	-	-	-	-	-	-	**238**	<0.001	**0.142**
PNG LNG	LNGP-MW4	EB1514750002	LNGP Plant Site MW4	8/03/2015	ALSE-Brisbane	EB1514750	Normal	-	-	-	-	**30**	-	**3**	**741**	**44**	-	-	-	-	-	-	-	-	-	-	**30**	**0.001**	**0.077**
PNG LNG	LNGP-GW20	GW-20_Historical_200415	GW-20	20/04/2015			Normal	**3115**	-	-	-	**387**	-	**6**	**538**	**1940**	-	-	-	-	-	**2022**	**4.01**	-33.7	**7.74**	-	**182**	<0.000001	**0.133**
PNG LNG	LNGP-GW20	GW-20-SGS_Historical_200415	GW-20	20/04/2015			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGP-GW22	GW-22_Historical_260415	GW-22	26/04/2015			Normal	**61,470**	-	-	-	**387**	-	**284**	**19,400**	**1710**	-	-	-	-	-	**39,970**	**0.4**	-148	**7.62**	-	**182**	<0.001	**0.087**
PNG LNG	LNGP-GW22	GW-22-SGS_Historical_260415	GW-22	26/04/2015			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

									Physical Parameters		Ions												Field							
									Electrical Conductivity (Non Compensated)	Chlorophyll a	Electrical Conductivity @ 25C (lab)	Total Dissolved Solids (TDS)	Calcium (Filtered)	Chloride	Potassium (Filtered)	Sodium (Filtered)	Sulfate as SO4 - Turbidimetric (Filtered)	Ionic Balance	Anions Total	Cations Total	Sulphide	Cyanide (Free)	TDS (Field)	DO (Field)	Redox Potential (Field)	pH (Field)	Turbidity	Magnesium (Filtered)	Arsenic (Filtered)	Barium (Filtered)
									µS/cm	mg/L	µS/cm	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	%	meq/L	meq/L	mg/L	mg/L	mg/L	mg/L	mV	-	NTU	mg/L	mg/L	mg/L
EQL									**1**	**0.001**	**1**	**10**	**1**	**1**	**1**	**1**	**1**	**0.01**	**0.01**	**0.01**			**1**	**0.001**	**1**	**0.01**	**0.1**	**1**	**0.001**	**0.001**
NHMRC 2008 Recreational Water																													0.07	7
PNG Water Quality Criteria for Freshwater Aquatic Ecosystem (guideline only)															5		400				0.002	0.005				>6.5<9	25		0.05	1
PNG Water Quality Criteria for Marine Aquatic Ecosystem (guideline only)															600						0.002	0.01					25		0.05	1
Environment Permit Criteria (Baseline Range)													1300		495	9000	4130				0.1	0.004		<9.9		>6.41<7.81		620	0.106	1.4
PNG DWG (1987)												1500	200	1000			400					0.05				>6.5<9.2	25	150	0.05	
Site_ID	**Location_Code**	**SampleCode**	**Field_ID**	**Sampled_Date_Time**	**Lab_Name**	**Lab_Report_Number**	**Sample_Type**																							
PNG LNG		EB1526355015	QC2	15/08/2015	ALSE-Brisbane	EB1526355	Normal	-	-	**2840**	-	**66**	-	**9**	**680**	**121**	-	-	-	-	-	-	-	-	-	-	**38**	<0.001	**0.051**
PNG LNG	LNGL-GW12	EB1526355009	LNGP Landfill GW12	15/08/2015	ALSE-Brisbane	EB1526355	Normal	-	-	**3340**	-	**152**	-	**5**	**490**	**112**	-	-	-	-	-	-	-	-	-	-	**52**	<0.001	**0.129**
PNG LNG	LNGL-GW14	EB1526355012	LNGP Landfill GW14	15/08/2015	ALSE-Brisbane	EB1526355	Normal	-	-	**10,700**	-	**627**	-	**21**	**1630**	**2100**	-	-	-	-	-	-	-	-	-	-	**316**	**0.002**	**0.045**
PNG LNG	LNGP-GW17	EB1526355003	LNGP Plant Site GW17	15/08/2015	ALSE-Brisbane	EB1526355	Normal	-	-	**2860**	-	**64**	-	**6**	**614**	**117**	-	-	-	-	-	-	-	-	-	-	**31**	<0.001	**0.054**
PNG LNG	LNGP-GW19	EB1526355004	LNGP Plant Site GW19	15/08/2015	ALSE-Brisbane	EB1526355	Normal	-	-	**11,200**	-	**415**	-	**12**	**1960**	**863**	-	-	-	-	-	-	-	-	-	-	**156**	<0.001	**0.12**
PNG LNG	LNGP-GW20	EB1526355005	LNGP Plant Site GW20	15/08/2015	ALSE-Brisbane	EB1526355	Normal	-	-	**5300**	-	**405**	-	**9**	**733**	**1650**	-	-	-	-	-	-	-	-	-	-	**130**	<0.001	**0.15**
PNG LNG	LNGP-GW21	EB1526355006	LNGP Plant Site GW21	15/08/2015	ALSE-Brisbane	EB1526355	Normal	-	-	**4760**	-	**119**	-	**37**	**943**	**195**	-	-	-	-	-	-	-	-	-	-	**96**	<0.001	**0.048**
PNG LNG	LNGP-GW22	EB1526355007	LNGP Plant Site GW22	15/08/2015	ALSE-Brisbane	EB1526355	Normal	-	-	**79,700**	-	**776**	-	**270**	**17,000**	**3150**	-	-	-	-	-	-	-	-	-	-	**2070**	<0.05	**0.086**
PNG LNG	LNGP-MW4	EB1526355002	LNGP Plant Site MW4	15/08/2015	ALSE-Brisbane	EB1526355	Normal	-	-	**4460**	-	**43**	-	**6**	**1180**	**108**	-	-	-	-	-	-	-	-	-	-	**51**	<0.001	**0.086**
PNG LNG	LNGL-GW11	GW-11_Historical_160815	GW-11	16/08/2015			Normal	**5743**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	**3740**	**4.55**	**97.4**	**7.3**	-	-	-	-
PNG LNG	LNGL-GW11	GW-11-SGS_Historical_160815	GW-11	16/08/2015			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGL-GW12	GW-12_Historical_160815	GW-12	16/08/2015			Normal	**6986**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	**4557**	**4.05**	-98.4	**6.84**	-	-	-	-
PNG LNG	LNGL-GW13	GW-13_Historical_160815	GW-13	16/08/2015			Normal	**3938**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	**2564**	**4.55**	**105.9**	**7.55**	-	-	-	-
PNG LNG	LNGL-GW13	GW-13-SGS_Historical_160815	GW-13	16/08/2015			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGL-GW14	GW-14_Historical_160815	GW-14	16/08/2015			Normal	**4629**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	**6265**	**2.94**	**127.2**	**6.73**	-	-	-	-
PNG LNG	LNGL-GW14	GW-14-SGS_Historical_160815	GW-14	16/08/2015			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGL-GW15	GW-15_Historical_160815	GW-15	16/08/2015			Normal	**5962**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	**3881**	**3.85**	-12.8	**7.07**	-	-	-	-
PNG LNG	LNGL-GW15	GW-15-SGS_Historical_160815	GW-15	16/08/2015			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGL-GW5	GW-5_Historical_160815	GW-5	16/08/2015			Normal	**7771**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	**5053**	**4.47**	**109.2**	**6.88**	-	-	-	-
PNG LNG	LNGL-GW5	GW-5-SGS_Historical_160815	GW-5	16/08/2015			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGP-GW17	GW-17_Historical_160815	GW-17	16/08/2015			Normal	**2597**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	**1680**	**3.95**	-47.2	**7.18**	-	-	-	-
PNG LNG	LNGP-GW17	GW-17-SGS_Historical_160815	GW-17	16/08/2015			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGP-GW19	GW-19_Historical_160815	GW-19	16/08/2015			Normal	**9252**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	**6029**	**5.14**	-30.2	**7.27**	-	-	-	-
PNG LNG	LNGP-GW19	GW-19-SGS_Historical_160815	GW-19	16/08/2015			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGP-GW20	GW-20_Historical_160815	GW-20	16/08/2015			Normal	**5006**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	**3250**	**4.11**	**129.6**	**7.34**	-	-	-	-
PNG LNG	LNGP-GW20	GW-20-SGS_Historical_160815	GW-20	16/08/2015			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGP-GW21	GW-21_Historical_160815	GW-21	16/08/2015			Normal	**4296**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	**2787**	**6.07**	**111.3**	**7.59**	-	-	-	-
PNG LNG	LNGP-GW21	GW-21-SGS_Historical_160815	GW-21	16/08/2015			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGP-GW22	GW-22_Historical_160815	GW-22	16/08/2015			Normal	**91,920**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	**59,760**	**1.1**	-100.7	**6.73**	-	-	-	-
PNG LNG	LNGP-GW22	GW-22-SGS_Historical_160815	GW-22	16/08/2015			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGP-MW2	MW-2_Historical_160815	MW-2	16/08/2015			Normal	**7596**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	**4941**	**5.35**	**81**	**6.88**	-	-	-	-
PNG LNG	LNGP-MW2	MW-2-SGS_Historical_160815	MW-2	16/08/2015			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PNG LNG		EB1526355014	QC1	16/08/2015	ALSE-Brisbane	EB1526355	Normal	-	-	**1**	-	<1	-	<1	<1	<1	-	-	-	-	-	-	-	-	-	-	<1	<0.001	<0.001
PNG LNG		EB1526355016	QC3	16/08/2015	ALSE-Brisbane	EB1526355	Normal	-	-	**4630**	-	**201**	-	**5**	**713**	**236**	-	-	-	-	-	-	-	-	-	-	**58**	<0.001	**0.075**
PNG LNG		EB1526355017	QC4	16/08/2015	ALSE-Brisbane	EB1526355	Normal	-	-	**161**	-	<1	-	<1	<1	**18**	-	-	-	-	-	-	-	-	-	-	<1	<0.001	<0.001
PNG LNG	LNGL-GW11	EB1526355011	LNGP Landfill GW11	16/08/2015	ALSE-Brisbane	EB1526355	Normal	-	-	**6110**	-	**544**	-	**8**	**615**	**383**	-	-	-	-	-	-	-	-	-	-	**115**	<0.001	**0.445**
PNG LNG	LNGL-GW13	EB1526355010	LNGP Landfill GW13	16/08/2015	ALSE-Brisbane	EB1526355	Normal	-	-	**4620**	-	**199**	-	**5**	**702**	**234**	-	-	-	-	-	-	-	-	-	-	**58**	<0.001	**0.074**
PNG LNG	LNGL-GW15	EB1526355013	LNGP Landfill GW15	16/08/2015	ALSE-Brisbane	EB1526355	Normal	-	-	**5910**	-	**281**	-	**10**	**898**	**615**	-	-	-	-	-	-	-	-	-	-	**101**	<0.001	**0.035**
PNG LNG	LNGL-GW5	EB1526355008	LNGP Landfill GW5	16/08/2015	ALSE-Brisbane	EB1526355	Normal	-	-	**17,300**	-	**976**	-	**21**	**1540**	**163**	-	-	-	-	-	-	-	-	-	-	**365**	<0.001	**0.337**
PNG LNG	LNGP-MW2	EB1526355001	LNGP Plant Site MW2	16/08/2015	ALSE-Brisbane	EB1526355	Normal	-	-	**8400**	-	**607**	-	**28**	**1400**	**3850**	-	-	-	-	-	-	-	-	-	-	**441**	<0.001	**0.083**
PNG LNG	LNGL-GW11	GW-11_Historical_130316	GW-11	13/03/2016			Normal	**5994**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	**3442**	**1.58**	-224.5	**6.88**	-	-	-	-
PNG LNG	LNGL-GW11	GW-11-SGS_Historical_130316	GW-11	13/03/2016			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGL-GW12	GW-12_Historical_130316	GW-12	13/03/2016			Normal	**3994**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	**2596**	**2.76**	-220.5	**7.01**	-	-	-	-
PNG LNG	LNGL-GW12	GW-12-SGS_Historical_130316	GW-12	13/03/2016			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGL-GW13	GW-13_Historical_130316	GW-13	13/03/2016			Normal	**4221**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	**2763**	**3.2**	-215.3	**7**	-	-	-	-
PNG LNG	LNGL-GW13	GW-13-SGS_Historical_130316	GW-13	13/03/2016			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGL-GW14	GW-14_Historical_130316	GW-14	13/03/2016			Normal	**10,460**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	**6850**	**2.57**	-212.6	**6.51**	-	-	-	-
PNG LNG	LNGL-GW14	GW-14-SGS_Historical_130316	GW-14	13/03/2016			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGL-GW15	GW-15_Historical_130316	GW-15	13/03/2016			Normal	**6446**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	**4187**	**2.93**	-226.9	**6.92**	-	-	-	-
PNG LNG	LNGL-GW15	GW-15-SGS_Historical_130316	GW-15	13/03/2016			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGL-GW5	GW-5_Historical_130316	GW-5	13/03/2016			Normal	**7663**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	**4982**	**2.96**	-219	**6.91**	-	-	-	-
PNG LNG	LNGL-GW5	GW-5-SGS_Historical_130316	GW-5	13/03/2016			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGP-GW17	GW-17_Historical_130316	GW-17	13/03/2016			Normal	**3085**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	**2505**	**5.04**	-161.3	**7.3**	-	-	-	-
PNG LNG	LNGP-GW17	GW-17-SGS_Historical_130316	GW-17	13/03/2016			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGP-GW19	GW-19_Historical_130316	GW-19	13/03/2016			Normal	**14,870**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	**9655**	-	-210.3	**6.87**	-	-	-	-
PNG LNG	LNGP-GW19	GW-19-SGS_Historical_130316	GW-19	13/03/2016			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGP-GW20	GW-20_Historical_130316	GW-20	13/03/2016			Normal	**4613**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	**2999**	**2.96**	-203.7	**7.05**	-	-	-	-
PNG LNG	LNGP-GW20	GW-20-SGS_Historical_130316	GW-20	13/03/2016			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGP-GW21	GW-21_Historical_130316	GW-21	13/03/2016			Normal	**8252**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	**5365**	**2.65**	-191.1	**6.68**	-	-	-	-
PNG LNG	LNGP-GW21	GW-21-SGS_Historical_130316	GW-21	13/03/2016			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGP-GW22	GW-22_Historical_130316	GW-22	13/03/2016			Normal	**15,410**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	**67,710**	**2.59**	-201.7	**6.64**	-	-	-	-
PNG LNG	LNGP-GW22	GW-22-SGS_Historical_130316	GW-22	13/03/2016			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGP-MW2	MW-2_Historical_130316	MW-2	13/03/2016			Normal	**6603**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	**2548**	**3**	-165.2	**6.9**	-	-	-	-

									Physical Parameters				Ions												Field							
									Electrical Conductivity (Non Compensated)	Chlorophyll a	Electrical Conductivity @ 25C (lab)	Total Dissolved Solids (TDS)	Calcium (Filtered)	Chloride	Potassium (Filtered)	Sodium (Filtered)	Sulfate as SO4 - Turbidimetric (Filtered)	Ionic Balance	Anions Total	Cations Total	Sulphide	Cyanide (Free)	TDS (Field)	DO (Field)	Redox Potential (Field)	pH (Field)	Turbidity	Magnesium (Filtered)	Arsenic (Filtered)	Barium (Filtered)
									µS/cm	mg/L	µS/cm	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	%	meq/L	meq/L	mg/L	mg/L	mg/L	mg/L	mV	-	NTU	mg/L	mg/L	mg/L
EQL									**1**	**0.001**	**1**	**10**	**1**	**1**	**1**	**1**	**1**	**0.01**	**0.01**	**0.01**			**1**	**0.001**	**1**	**0.01**	**0.1**	**1**	**0.001**	**0.001**
NHMRC 2008 Recreational Water																													0.07	7
PNG Water Quality Criteria for Freshwater Aquatic Ecosystem (guideline only)															5		400				0.002	0.005				>6.5<9	25		0.05	1
PNG Water Quality Criteria for Marine Aquatic Ecosystem (guideline only)															600						0.002	0.01					25		0.05	1
Environment Permit Criteria (Baseline Range)													1300		495	9000	4130				0.1	0.004		<9.9		>6.41<7.81		620	0.106	1.4
PNG DWG (1987)												1500	200	1000			400					0.05				>6.5<9.2	25	150	0.05	
Site_ID	**Location_Code**	**SampleCode**	**Field_ID**	**Sampled_Date_Time**	**Lab_Name**	**Lab_Report_Number**	**Sample_Type**																									
PNG LNG	LNGP-MW2	MW-2-SGS_Historical_130316	MW-2	13/03/2016			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PNG LNG		EB1607514014	QC1	13/03/2016	ALSE-Brisbane	EB1607514	Normal	-	-	**3050**	-	**83**	-	**4**	**592**	**128**	-	-	-	-	-	-	-	-	-	-	-	**28**	**0.001**	**0.055**
PNG LNG		EB1607514015	QC2	13/03/2016	ALSE-Brisbane	EB1607514	Normal	-	-	**8240**	-	**524**	-	**10**	**1050**	**140**	-	-	-	-	-	-	-	-	-	-	-	**160**	<0.001	**0.158**
PNG LNG		EB1607514016	QC3	13/03/2016	ALSE-Brisbane	EB1607514	Normal	-	-	**5**	-	<1	-	<1	<1	<1	-	-	-	-	-	-	-	-	-	-	-	<1	<0.001	<0.001
PNG LNG		EB1607514017	QC4	13/03/2016	ALSE-Brisbane	EB1607514	Normal	-	-	**3**	-	<1	-	<1	<1	<1	-	-	-	-	-	-	-	-	-	-	-	<1	<0.001	<0.001
PNG LNG	LNGL-GW11	EB1607514011	LNGP Landfill GW11	13/03/2016	ALSE-Brisbane	EB1607514	Normal	-	-	**6190**	-	**533**	-	**8**	**639**	**232**	-	-	-	-	-	-	-	-	-	-	-	**110**	**0.001**	**0.35**
PNG LNG	LNGL-GW12	EB1607514009	LNGP Landfill GW12	13/03/2016	ALSE-Brisbane	EB1607514	Normal	-	-	**4380**	-	**231**	-	**5**	**615**	**157**	-	-	-	-	-	-	-	-	-	-	-	**69**	**0.001**	**0.176**
PNG LNG	LNGL-GW13	EB1607514010	LNGP Landfill GW13	13/03/2016	ALSE-Brisbane	EB1607514	Normal	-	-	**4680**	-	**224**	-	**4**	**725**	**264**	-	-	-	-	-	-	-	-	-	-	-	**56**	<0.001	**0.077**
PNG LNG	LNGL-GW14	EB1607514012	LNGP Landfill GW14	13/03/2016	ALSE-Brisbane	EB1607514	Normal	-	-	**11,400**	-	**711**	-	**18**	**1710**	**2150**	-	-	-	-	-	-	-	-	-	-	-	**317**	**0.001**	**0.039**
PNG LNG	LNGL-GW15	EB1607514013	LNGP Landfill GW15	13/03/2016	ALSE-Brisbane	EB1607514	Normal	-	-	**7060**	-	**384**	-	**10**	**1040**	**691**	-	-	-	-	-	-	-	-	-	-	-	**128**	<0.001	**0.043**
PNG LNG	LNGL-GW5	EB1607514008	LNGP Landfill GW5	13/03/2016	ALSE-Brisbane	EB1607514	Normal	-	-	**8260**	-	**519**	-	**10**	**1050**	**140**	-	-	-	-	-	-	-	-	-	-	-	**159**	**0.001**	**0.155**
PNG LNG	LNGP-GW17	EB1607514003	LNGP Plant Site GW17	13/03/2016	ALSE-Brisbane	EB1607514	Normal	-	-	**3040**	-	**79**	-	**4**	**567**	**116**	-	-	-	-	-	-	-	-	-	-	-	**28**	**0.001**	**0.052**
PNG LNG	LNGP-GW19	EB1607514004	LNGP Plant Site GW19	13/03/2016	ALSE-Brisbane	EB1607514	Normal	-	-	**15,600**	-	**613**	-	**12**	**2730**	**1130**	-	-	-	-	-	-	-	-	-	-	-	**222**	**0.001**	**0.129**
PNG LNG	LNGP-GW20	EB1607514005	LNGP Plant Site GW20	13/03/2016	ALSE-Brisbane	EB1607514	Normal	-	-	**9350**	-	**628**	-	**13**	**1410**	**2310**	-	-	-	-	-	-	-	-	-	-	-	**246**	<0.001	**0.099**
PNG LNG	LNGP-GW21	EB1607514006	LNGP Plant Site GW21	13/03/2016	ALSE-Brisbane	EB1607514	Normal	-	-	**5230**	-	**139**	-	**28**	**834**	**266**	-	-	-	-	-	-	-	-	-	-	-	**89**	**0.001**	**0.035**
PNG LNG	LNGP-GW22	EB1607514007	LNGP Plant Site GW22	13/03/2016	ALSE-Brisbane	EB1607514	Normal	-	-	**84,800**	-	**699**	-	**338**	**21,500**	**2820**	-	-	-	-	-	-	-	-	-	-	-	**2740**	<0.01	**0.082**
PNG LNG	LNGP-MW2	EB1607514001	LNGP Plant Site MW2	13/03/2016	ALSE-Brisbane	EB1607514	Normal	-	-	**8860**	-	**605**	-	**20**	**1290**	**3450**	-	-	-	-	-	-	-	-	-	-	-	**363**	<0.001	**0.076**
PNG LNG	LNGP-MW4	EB1607514002	LNGP Plant Site MW4	13/03/2016	ALSE-Brisbane	EB1607514	Normal	-	-	**5100**	-	**54**	-	**5**	**994**	**117**	-	-	-	-	-	-	-	-	-	-	-	**58**	**0.001**	**0.102**
PNG LNG	LNGL-GW11	GW-11_Historical_280816	GW-11	28/08/2016			Normal	**9763**	-	-	-	-	-	-	-	-	-	-	-	-	-	**6348**	**2.95**	-233.6	**7.47**	-	-	-	-
PNG LNG	LNGL-GW11	GW-11-SGS_Historical_280816	GW-11	28/08/2016			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGL-GW12	GW-12_Historical_280816	GW-12	28/08/2016			Normal	**2952**	-	-	-	-	-	-	-	-	-	-	-	-	-	**2635**	**3.14**	-235.4	**7.59**	-	-	-	-
PNG LNG	LNGL-GW13	GW-13_Historical_280816	GW-13	28/08/2016			Normal	**4072**	-	-	-	-	-	-	-	-	-	-	-	-	-	**2647**	**4.52**	-184.5	**6.83**	-	-	-	-
PNG LNG	LNGL-GW13	GW-13-SGS_Historical_280816	GW-13	28/08/2016			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGL-GW14	GW-14_Historical_280816	GW-14	28/08/2016			Normal	**8150**	-	-	-	-	-	-	-	-	-	-	-	-	-	**5293**	**3.47**	-244.3	**7.23**	-	-	-	-
PNG LNG	LNGL-GW14	GW-14-SGS_Historical_280816	GW-14	28/08/2016			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGL-GW5	GW-5_Historical_280816	GW-5	28/08/2016			Normal	**1527**	-	-	-	-	-	-	-	-	-	-	-	-	-	**5292**	**3.89**	-184.8	**6.6**	-	-	-	-
PNG LNG	LNGL-GW5	GW-5-SGS_Historical_280816	GW-5	28/08/2016			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGP-GW20	GW-20_Historical_280816	GW-20	28/08/2016			Normal	**2270**	-	-	-	-	-	-	-	-	-	-	-	-	-	**169**	**4.77**	-77.7	**6.86**	-	-	-	-
PNG LNG	LNGP-GW20	GW-20-SGS_Historical_280816	GW-20	28/08/2016			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGP-GW21	GW-21_Historical_280816	GW-21	28/08/2016			Normal	**15,210**	-	-	-	-	-	-	-	-	-	-	-	-	-	**6550**	**3.38**	-174.5	**6.85**	-	-	-	-
PNG LNG	LNGP-GW21	GW-21-SGS_Historical_280816	GW-21	28/08/2016			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGP-GW22	GW-22_Historical_280816	GW-22	28/08/2016			Normal	**79,100**	-	-	-	-	-	-	-	-	-	-	-	-	-	**51,550**	**2.78**	-179.15	**6.8**	-	-	-	-
PNG LNG	LNGP-GW22	GW-22-SGS_Historical_280816	GW-22	28/08/2016			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGP-MW2	MW-2_Historical_280816	MW-2	28/08/2016			Normal	**6906**	-	-	-	-	-	-	-	-	-	-	-	-	-	**4509**	**5.14**	-154	**7.01**	-	-	-	-
PNG LNG	LNGP-MW2	MW-2-SGS_Historical_280816	MW-2	28/08/2016			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PNG LNG		EB1621459010	QC1	28/08/2016	ALSE-Brisbane	EB1621459	Normal	-	-	-	-	**680**	-	**18**	**1630**	**2330**	-	-	-	-	-	-	-	-	-	-	-	**324**	**0.002**	**0.032**
PNG LNG		EB1621459011	QC2	28/08/2016	ALSE-Brisbane	EB1621459	Normal	-	-	-	-	**658**	-	**15**	**1580**	**2810**	-	-	-	-	-	-	-	-	-	-	-	**296**	<0.001	**0.062**
PNG LNG		EB1621459012	QC3	28/08/2016	ALSE-Brisbane	EB1621459	Normal	-	-	-	-	<1	-	<1	**10**	<1	-	-	-	-	-	-	-	-	-	-	-	<1	<0.001	<0.001
PNG LNG	LNGL-GW11	EB1621459003	LNGP Landfill GW11	28/08/2016	ALSE-Brisbane	EB1621459	Normal	-	-	-	-	**611**	-	**13**	**1640**	**279**	-	-	-	-	-	-	-	-	-	-	-	**186**	**0.007**	**0.544**
PNG LNG	LNGL-GW12	EB1621459004	LNGP Landfill GW12	28/08/2016	ALSE-Brisbane	EB1621459	Normal	-	-	-	-	**301**	-	**6**	**717**	**158**	-	-	-	-	-	-	-	-	-	-	-	**95**	**0.002**	**0.227**
PNG LNG	LNGL-GW13	EB1621459005	LNGP Landfill GW13	28/08/2016	ALSE-Brisbane	EB1621459	Normal	-	-	-	-	**420**	-	**5**	**739**	**271**	-	-	-	-	-	-	-	-	-	-	-	**68**	**0.001**	**0.115**
PNG LNG	LNGL-GW14	EB1621459006	LNGP Landfill GW14	28/08/2016	ALSE-Brisbane	EB1621459	Normal	-	-	-	-	**680**	-	**18**	**1690**	**2280**	-	-	-	-	-	-	-	-	-	-	-	**326**	**0.002**	**0.032**
PNG LNG	LNGL-GW5	EB1621459002	LNGP Landfill GW5	28/08/2016	ALSE-Brisbane	EB1621459	Normal	-	-	-	-	**577**	-	**10**	**1100**	**158**	-	-	-	-	-	-	-	-	-	-	-	**188**	<0.001	**0.161**
PNG LNG	LNGP-GW20	EB1621459007	LNGP Landfill GW20	28/08/2016	ALSE-Brisbane	EB1621459	Normal	-	-	-	-	**660**	-	**15**	**1580**	**2930**	-	-	-	-	-	-	-	-	-	-	-	**295**	<0.001	**0.061**
PNG LNG	LNGP-GW21	EB1621459008	LNGP Landfill GW21	28/08/2016	ALSE-Brisbane	EB1621459	Normal	-	-	-	-	**194**	-	**29**	**994**	**287**	-	-	-	-	-	-	-	-	-	-	-	**130**	**0.001**	**0.055**
PNG LNG	LNGP-GW22	EB1621459009	LNGP Landfill GW22	28/08/2016	ALSE-Brisbane	EB1621459	Normal	-	-	-	-	**849**	-	**312**	**19,400**	**3130**	-	-	-	-	-	-	-	-	-	-	-	**2450**	<0.005	**0.105**
PNG LNG	LNGP-MW2	EB1621459001	LNGP MW2	28/08/2016	ALSE-Brisbane	EB1621459	Normal	-	-	-	-	**598**	-	**19**	**1200**	**3620**	-	-	-	-	-	-	-	-	-	-	-	**361**	<0.001	**0.105**
PNG LNG	LNGL-GW11	GW-11_Historical_170417	GW-11	17/04/2017			Normal	**6812**	-	-	-	-	-	-	-	-	-	-	-	-	-	**4417**	**4.4**	**165.5**	**7.22**	-	-	-	-
PNG LNG	LNGL-GW11	GW-11-SGS_Historical_170417	GW-11	17/04/2017			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGL-GW12	GW-12_Historical_170417	GW-12	17/04/2017			Normal	**5879**	-	-	-	-	-	-	-	-	-	-	-	-	-	**3915**	**3.2**	-440.5	**7.18**	-	-	-	-
PNG LNG	LNGL-GW12	GW-12-SGS_Historical_170417	GW-12	17/04/2017			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGL-GW13	GW-13_Historical_170417	GW-13	17/04/2017			Normal	**4816**	-	-	-	-	-	-	-	-	-	-	-	-	-	**3130**	**5.16**	-220	**7.17**	-	-	-	-
PNG LNG	LNGL-GW13	GW-13-SGS_Historical_170417	GW-13	17/04/2017			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGL-GW14	GW-14_Historical_170417	GW-14	17/04/2017			Normal	**5335**	-	-	-	-	-	-	-	-	-	-	-	-	-	**6418**	**4.02**	-256.7	**6.75**	-	-	-	-
PNG LNG	LNGL-GW14	GW-14-SGS_Historical_170417	GW-14	17/04/2017			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGL-GW15	GW-15_Historical_170417	GW-15	17/04/2017			Normal	**7440**	-	-	-	-	-	-	-	-	-	-	-	-	-	**4836**	**5.6**	-245	**6.75**	-	-	-	-
PNG LNG	LNGL-GW15	GW-15-SGS_Historical_170417	GW-15	17/04/2017			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGL-GW5	GW-5_Historical_170417	GW-5	17/04/2017			Normal	**15,453**	-	-	-	-	-	-	-	-	-	-	-	-	-	**9629**	**2.37**	-397.8	**6.7**	-	-	-	-
PNG LNG	LNGL-GW5	GW-5-SGS_Historical_170417	GW-5	17/04/2017			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGP-GW17	GW-17_Historical_170417	GW-17	17/04/2017			Normal	**1435**	-	-	-	-	-	-	-	-	-	-	-	-	-	**1039**	**4.14**	-290.8	**7.63**	-	-	-	-
PNG LNG	LNGP-GW17	GW-17-SGS_Historical_170417	GW-17	17/04/2017			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGP-GW19	GW-19_Historical_170417	GW-19	17/04/2017			Normal	**15,270**	-	-	-	-	-	-	-	-	-	-	-	-	-	**9612**	**0.78**	-324.9	**7**	-	-	-	-
PNG LNG	LNGP-GW19	GW-19-SGS_Historical_170417	GW-19	17/04/2017			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

								Physical Parameters				Ions											Field							
								Electrical Conductivity (Non Compensated)	Chlorophyll a	Electrical Conductivity @ 25C (lab)	Total Dissolved Solids (TDS)	Calcium (Filtered)	Chloride	Potassium (Filtered)	Sodium (Filtered)	Sulfate as SO4 - Turbidimetric (Filtered)	Ionic Balance	Anions Total	Cations Total	Sulphide	Cyanide (Free)	TDS (Field)	DO (Field)	Redox Potential (Field)	pH (Field)	Turbidity	Magnesium (Filtered)	Arsenic (Filtered)	Barium (Filtered)
								µS/cm	mg/L	µS/cm	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	%	meq/L	meq/L	mg/L	mg/L	mg/L	mg/L	mV	-	NTU	mg/L	mg/L	mg/L
EQL								**1**	**0.001**	**1**	**10**	**1**	**1**	**1**	**1**	**1**	**0.01**	**0.01**	**0.01**			**1**	**0.001**	**1**	**0.01**	**0.1**	**1**	**0.001**	**0.001**
NHMRC 2008 Recreational Water																												0.07	7
PNG Water Quality Criteria for Freshwater Aquatic Ecosystem (guideline only)														5		400				0.002	0.005				>6.5<9	25		0.05	1
PNG Water Quality Criteria for Marine Aquatic Ecosystem (guideline only)														600						0.002	0.01					25		0.05	1
Environment Permit Criteria (Baseline Range)												1300		495	9000	4130				0.1	0.004		<9.9		>6.41<7.81		620	0.106	1.4
PNG DWG (1987)											1500	200	1000			400					0.05				>6.5<9.2	25	150	0.05	
Site_ID	**Location_Code**	**SampleCode**	**Field_ID**	**Sampled_Date_Time**	**Lab_Name**	**Lab_Report_Number**	**Sample_Type**																						
PNG LNG	LNGP-GW20	GW-20_Historical_170417	GW-20	17/04/2017			Normal	**2808**	-	-	-	-	-	-	-	-	-	-	-	-	-	**1820**	**3.84**	-290.9	**7.66**	-	-	-	-
PNG LNG	LNGP-GW20	GW-20-SGS_Historical_170417	GW-20	17/04/2017			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGP-GW21	GW-21_Historical_170417	GW-21	17/04/2017			Normal	**21,590**	-	-	-	-	-	-	-	-	-	-	-	-	-	**14.04**	**6.22**	-373.65	**7.15**	-	-	-	-
PNG LNG	LNGP-GW21	GW-21-SGS_Historical_170417	GW-21	17/04/2017			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGP-GW22	GW-22_Historical_170417	GW-22	17/04/2017			Normal	**110,600**	-	-	-	-	-	-	-	-	-	-	-	-	-	**71,970**	**2.14**	-34.03	**6.63**	-	-	-	-
PNG LNG	LNGP-GW22	GW-22-SGS_Historical_170417	GW-22	17/04/2017			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGP-MW2	MW-2_Historical_170417	MW-2	17/04/2017			Normal	**3859**	-	-	-	-	-	-	-	-	-	-	-	-	-	**2513**	**5.14**	-243	**7.37**	-	-	-	-
PNG LNG	LNGP-MW2	MW-2-SGS_Historical_170417	MW-2	17/04/2017			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PNG LNG		EB1707968014	QC1	17/04/2017	ALSE-Brisbane	EB1707968	Normal	-	-	-	-	**418**	-	**8**	**529**	**1880**	-	-	-	-	-	-	-	-	-	-	**150**	<0.001	**0.232**
PNG LNG		EB1707968015	QC2	17/04/2017	ALSE-Brisbane	EB1707968	Normal	-	-	-	-	**779**	-	**115**	**5780**	**1710**	-	-	-	-	-	-	-	-	-	-	**802**	**0.002**	**0.103**
PNG LNG		EB1707968016	QC3	17/04/2017	ALSE-Brisbane	EB1707968	Normal	-	-	-	-	<1	-	<1	**4**	<1	-	-	-	-	-	-	-	-	-	-	<1	<0.001	<0.001
PNG LNG	LNGL-GW11	EB1707968011	LNGP Landfill GW11	17/04/2017	ALSE-Brisbane	EB1707968	Normal	-	-	-	-	**407**	-	**8**	**962**	**230**	-	-	-	-	-	-	-	-	-	-	**119**	**0.001**	**0.389**
PNG LNG	LNGL-GW12	EB1707968009	LNGP Landfill GW12	17/04/2017	ALSE-Brisbane	EB1707968	Normal	-	-	-	-	**194**	-	**5**	**604**	**164**	-	-	-	-	-	-	-	-	-	-	**63**	<0.001	**0.156**
PNG LNG	LNGL-GW13	EB1707968010	LNGP Landfill GW13	17/04/2017	ALSE-Brisbane	EB1707968	Normal	-	-	-	-	**217**	-	**4**	**757**	**238**	-	-	-	-	-	-	-	-	-	-	**59**	<0.001	**0.076**
PNG LNG	LNGL-GW14	EB1707968012	LNGP Landfill GW14	17/04/2017	ALSE-Brisbane	EB1707968	Normal	-	-	-	-	**653**	-	**17**	**1730**	**2220**	-	-	-	-	-	-	-	-	-	-	**315**	**0.002**	**0.034**
PNG LNG	LNGL-GW15	EB1707968013	LNGP Landfill GW15	17/04/2017	ALSE-Brisbane	EB1707968	Normal	-	-	-	-	**411**	-	**10**	**1120**	**724**	-	-	-	-	-	-	-	-	-	-	**144**	<0.001	**0.047**
PNG LNG	LNGL-GW5	EB1707968008	LNGP Landfill GW5	17/04/2017	ALSE-Brisbane	EB1707968	Normal	-	-	-	-	**426**	-	**10**	**995**	**131**	-	-	-	-	-	-	-	-	-	-	**141**	<0.001	**0.131**
PNG LNG	LNGP-GW17	EB1707968003	LNGP Plant Site GW17	17/04/2017	ALSE-Brisbane	EB1707968	Normal	-	-	-	-	**23**	-	**2**	**353**	**40**	-	-	-	-	-	-	-	-	-	-	**9**	<0.001	**0.018**
PNG LNG	LNGP-GW19	EB1707968004	LNGP Plant Site GW19	17/04/2017	ALSE-Brisbane	EB1707968	Normal	-	-	-	-	**608**	-	**14**	**2860**	**1320**	-	-	-	-	-	-	-	-	-	-	**266**	**0.001**	**0.104**
PNG LNG	LNGP-GW20	EB1707968005	LNGP Plant Site GW20	17/04/2017	ALSE-Brisbane	EB1707968	Normal	-	-	-	-	**387**	-	**10**	**1140**	**1940**	-	-	-	-	-	-	-	-	-	-	**182**	<0.001	**0.2**
PNG LNG	LNGP-GW21	EB1707968006	LNGP Plant Site GW21	17/04/2017	ALSE-Brisbane	EB1707968	Normal	-	-	-	-	**760**	-	**114**	**5680**	**1710**	-	-	-	-	-	-	-	-	-	-	**807**	**0.002**	**0.1**
PNG LNG	LNGP-GW22	EB1707968007	LNGP Plant Site GW22	17/04/2017	ALSE-Brisbane	EB1707968	Normal	-	-	-	-	**843**	-	**325**	**21,400**	**2900**	-	-	-	-	-	-	-	-	-	-	**2670**	<0.005	**0.11**
PNG LNG	LNGP-MW2	EB1707968001	LNGP Plant Site MW2	17/04/2017	ALSE-Brisbane	EB1707968	Normal	-	-	-	-	**411**	-	**8**	**508**	**2010**	-	-	-	-	-	-	-	-	-	-	**146**	<0.001	**0.22**
PNG LNG	LNGP-MW4	EB1707968002	LNGP Plant Site MW4	17/04/2017	ALSE-Brisbane	EB1707968	Normal	-	-	-	-	**122**	-	**8**	**1520**	**277**	-	-	-	-	-	-	-	-	-	-	**134**	<0.001	**0.255**
PNG LNG	LNGP-GW17	EB1722826002	LNGP Plant Site - GW17	29/09/2017	ALSE-Brisbane	EB1722826	Normal	-	-	-	-	**64**	-	**3**	**478**	**99**	-	-	-	-	-	-	-	-	-	-	**23**	**0.001**	**0.046**
PNG LNG	LNGP-MW2	EB1722826001	LNGP Plant Site - MW2	29/09/2017	ALSE-Brisbane	EB1722826	Normal	-	-	-	-	**548**	-	**16**	**1000**	**3370**	-	-	-	-	-	-	-	-	-	-	**272**	<0.001	**0.089**
PNG LNG	LNGL-GW5	EB1722826007	LNGP Landfill - GW5	29/09/2017	ALSE-Brisbane	EB1722826	Normal	-	-	-	-	**566**	-	**10**	**1100**	**164**	-	-	-	-	-	-	-	-	-	-	**173**	<0.001	**0.242**
PNG LNG	LNGL-GW14	EB1722826011	LNGP Landfill - G14	29/09/2017	ALSE-Brisbane	EB1722826	Normal	-	-	-	-	**611**	-	**16**	**1540**	**2190**	-	-	-	-	-	-	-	-	-	-	**268**	**0.002**	**0.037**
PNG LNG	LNGP-GW20	EB1722826004	LNGP Plant Site - GW20	29/09/2017	ALSE-Brisbane	EB1722826	Normal	-	-	-	-	**533**	-	**12**	**1380**	**2660**	-	-	-	-	-	-	-	-	-	-	**226**	<0.001	**0.105**
PNG LNG		EB1722826016	QC4	29/09/2017	ALSE-Brisbane	EB1722826	Normal	-	-	-	-	**2**	-	<1	**1**	<1	-	-	-	-	-	-	-	-	-	-	<1	<0.001	**0.171**
PNG LNG	LNGP-GW19	EB1722826003	LNGP Plant Site - GW19	29/09/2017	ALSE-Brisbane	EB1722826	Normal	-	-	-	-	**584**	-	**12**	**2710**	**1360**	-	-	-	-	-	-	-	-	-	-	**218**	**0.001**	**0.119**
PNG LNG		EB1722826013	QC1	29/09/2017	ALSE-Brisbane	EB1722826	Normal	-	-	-	-	**804**	-	**323**	**21,700**	**2990**	-	-	-	-	-	-	-	-	-	-	**2570**	<0.02	**0.122**
PNG LNG		EB1722826014	QC2	29/09/2017	ALSE-Brisbane	EB1722826	Normal	-	-	-	-	**2**	-	<1	**6**	<1	-	-	-	-	-	-	-	-	-	-	<1	<0.001	**0.201**
PNG LNG		EB1722826015	QC3	29/09/2017	ALSE-Brisbane	EB1722826	Normal	-	-	-	-	**208**	-	**4**	**590**	**175**	-	-	-	-	-	-	-	-	-	-	**62**	<0.001	**0.216**
PNG LNG	LNGL-GW11	EB1722826010	LNGP Landfill - GW11	29/09/2017	ALSE-Brisbane	EB1722826	Normal	-	-	-	-	**425**	-	**7**	**1010**	**298**	-	-	-	-	-	-	-	-	-	-	**112**	<0.001	**0.387**
PNG LNG	LNGL-GW12	EB1722826008	LNGP Landfill - GW12	29/09/2017	ALSE-Brisbane	EB1722826	Normal	-	-	-	-	**209**	-	**5**	**586**	**172**	-	-	-	-	-	-	-	-	-	-	**61**	<0.001	**0.205**
PNG LNG	LNGL-GW13	EB1722826009	LNGP Landfill - GW13	29/09/2017	ALSE-Brisbane	EB1722826	Normal	-	-	-	-	**220**	-	**4**	**693**	**241**	-	-	-	-	-	-	-	-	-	-	**55**	<0.001	**0.078**
PNG LNG	LNGL-GW15	EB1722826012	LNGP Landfill - GW15	29/09/2017	ALSE-Brisbane	EB1722826	Normal	-	-	-	-	**348**	-	**8**	**922**	**794**	-	-	-	-	-	-	-	-	-	-	**105**	<0.001	**0.061**
PNG LNG	LNGP-GW21	EB1722826005	LNGP Plant Site - GW21	29/09/2017	ALSE-Brisbane	EB1722826	Normal	-	-	-	-	**210**	-	**61**	**2110**	**657**	-	-	-	-	-	-	-	-	-	-	**190**	**0.001**	**0.074**
PNG LNG	LNGP-GW22	EB1722826006	LNGP Plant Site - GW22	29/09/2017	ALSE-Brisbane	EB1722826	Normal	-	-	-	-	**842**	-	**330**	**21,300**	**2970**	-	-	-	-	-	-	-	-	-	-	**2570**	<0.02	**0.123**
PNG LNG	LNGL-GW11	GW-11_Historical_291017	GW-11	29/10/2017			Normal	**9161**	-	-	-	-	-	-	-	-	-	-	-	-	-	**5995**	**3.81**	-320.2	**7.27**	-	-	-	-
PNG LNG	LNGL-GW11	GW-11-SGS_Historical_291017	GW-11	29/10/2017			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGL-GW12	GW-12_Historical_291017	GW-12	29/10/2017			Normal	**7683.5**	-	-	-	-	-	-	-	-	-	-	-	-	-	**5176.5**	**3.83**	-294.8	**8**	-	-	-	-
PNG LNG	LNGL-GW12	GW-12-SGS_Historical_291017	GW-12	29/10/2017			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGL-GW13	GW-13_Historical_291017	GW-13	29/10/2017			Normal	**5588**	-	-	-	-	-	-	-	-	-	-	-	-	-	**3632**	**5.38**	-259.4	**7.34**	-	-	-	-
PNG LNG	LNGL-GW13	GW-13-SGS_Historical_291017	GW-13	29/10/2017			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGL-GW14	GW-14_Historical_291017	GW-14	29/10/2017			Normal	**11,615**	-	-	-	-	-	-	-	-	-	-	-	-	-	**7550.5**	**3.26**	-310.9	**7.07**	-	-	-	-
PNG LNG	LNGL-GW14	GW-14-SGS_Historical_291017	GW-14	29/10/2017			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGL-GW15	GW-15_Historical_291017	GW-15	29/10/2017			Normal	**8797**	-	-	-	-	-	-	-	-	-	-	-	-	-	**5731**	**3.21**	-293.3	**7.36**	-	-	-	-
PNG LNG	LNGL-GW15	GW-15-SGS_Historical_291017	GW-15	29/10/2017			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGL-GW5	GW-5_Historical_291017	GW-5	29/10/2017			Normal	**19,685**	-	-	-	-	-	-	-	-	-	-	-	-	-	**12,750**	**2.87**	-353.9	**7.02**	-	-	-	-
PNG LNG	LNGL-GW5	GW-5-SGS_Historical_291017	GW-5	29/10/2017			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGP-GW17	GW-17_Historical_291017	GW-17	29/10/2017			Normal	**2561**	-	-	-	-	-	-	-	-	-	-	-	-	-	**1664**	**3.23**	-312.8	**7.5**	-	-	-	-
PNG LNG	LNGP-GW17	GW-17-SGS_Historical_291017	GW-17	29/10/2017			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGP-GW19	GW-19_Historical_291017	GW-19	29/10/2017			Normal	**17,015**	-	-	-	-	-	-	-	-	-	-	-	-	-	**11,035**	**2.19**	-331.5	**7.26**	-	-	-	-
PNG LNG	LNGP-GW19	GW-19-SGS_Historical_291017	GW-19	29/10/2017			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGP-GW20	GW-20_Historical_291017	GW-20	29/10/2017			Normal	**9305**	-	-	-	-	-	-	-	-	-	-	-	-	-	**6050**	**4.38**	-324	**7.35**	-	-	-	-
PNG LNG	LNGP-GW20	GW-20-SGS_Historical_291017	GW-20	29/10/2017			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGP-GW21	GW-21_Historical_291017	GW-21	29/10/2017			Normal	**57,197**	-	-	-	-	-	-	-	-	-	-	-	-	-	**37,047**	**3.91**	-307	**6.62**	-	-	-	-
PNG LNG	LNGP-GW21	GW-21-SGS_Historical_291017	GW-21	29/10/2017			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGP-GW22	GW-22_Historical_291017	GW-22	29/10/2017			Normal	**84,423**	-	-	-	-	-	-	-	-	-	-	-	-	-	**56,400**	**1.27**	-321	**6.87**	-	-	-	-
PNG LNG	LNGP-GW22	GW-22-SGS_Historical_291017	GW-22	29/10/2017			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGP-MW2	MW-2_Historical_291017	MW-2	29/10/2017			Normal	**7325**	-	-	-	-	-	-	-	-	-	-	-	-	-	**4765**	**3.95**	-376	**7.56**	-	-	-	-

										Physical Parameters		Ions										Field							
										Electrical Conductivity (Non Compensated)	Chlorophyll a	Electrical Conductivity @ 25C (lab)	Total Dissolved Solids (TDS)	Calcium (Filtered)	Chloride	Potassium (Filtered)	Sodium (Filtered)	Sulfate as SO4 - Turbidimetric (Filtered)	Ionic Balance	Anions Total	Cations Total	Sulphide	Cyanide (Free)	TDS (Field)	DO (Field)	Redox Potential (Field)	pH (Field)	Turbidity	Magnesium (Filtered)	Arsenic (Filtered)	Barium (Filtered)
										µS/cm	mg/L	µS/cm	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	%	meq/L	meq/L	mg/L	mg/L	mg/L	mg/L	mV	-	NTU	mg/L	mg/L	mg/L
EQL										**1**	**0.001**	**1**	**10**	**1**	**1**	**1**	**1**	**1**	**0.01**	**0.01**	**0.01**			**1**	**0.001**	**1**	**0.01**	**0.1**	**1**	**0.001**	**0.001**
NHMRC 2008 Recreational Water																														0.07	7
PNG Water Quality Criteria for Freshwater Aquatic Ecosystem (guideline only)																5		400				0.002	0.005				>6.5<9	25		0.05	1
PNG Water Quality Criteria for Marine Aquatic Ecosystem (guideline only)																600						0.002	0.01					25		0.05	1
Environment Permit Criteria (Baseline Range)														1300		495	9000	4130				0.1	0.004		<9.9		>6.41<7.81		620	0.106	1.4
PNG DWG (1987)													1500	200	1000			400					0.05				>6.5<9.2	25	150	0.05	
Site_ID	**Location_Code**	**SampleCode**	**Field_ID**	**Sampled_Date_Time**	**Lab_Name**	**Lab_Report_Number**	**Sample_Type**																								
PNG LNG	LNGP-MW2	MW-2-SGS_Historical_291017	MW-2	29/10/2017			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGL-GW11	GW-11_Historical_280518	GW-11	28/05/2018			Normal	**7666**	-	-	-	-	-	-	-	-	-	-	-	-	-	**5020**	**5.13**	-6.1	**7.4**	-	-	-	-
PNG LNG	LNGL-GW11	GW-11-EM_Historical_280518	GW-11	28/05/2018			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGL-GW11	GW-11-SGS_Historical_280518	GW-11	28/05/2018			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGL-GW12	GW-12_Historical_280518	GW-12	28/05/2018			Normal	**6649**	-	-	-	-	-	-	-	-	-	-	-	-	-	**2460**	**3.57**	-137.9	**7.5**	-	-	-	-
PNG LNG	LNGL-GW12	GW-12-EM_Historical_280518	GW-12	28/05/2018			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGL-GW12	GW-12-SGS_Historical_280518	GW-12	28/05/2018			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGL-GW13	GW-13_Historical_280518	GW-13	28/05/2018			Normal	**6485**	-	-	-	-	-	-	-	-	-	-	-	-	-	**3620**	**5.51**	**98.4**	**7.32**	-	-	-	-
PNG LNG	LNGL-GW13	GW-13-EM_Historical_280518	GW-13	28/05/2018			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGL-GW13	GW-13-SGS_Historical_280518	GW-13	28/05/2018			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGL-GW14	GW-14_Historical_280518	GW-14	28/05/2018			Normal	**10,300**	-	-	-	-	-	-	-	-	-	-	-	-	-	**5150**	**4.3**	**162.2**	**7.1**	-	-	-	-
PNG LNG	LNGL-GW14	GW-14-EM_Historical_280518	GW-14	28/05/2018			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGL-GW14	GW-14-SGS_Historical_280518	GW-14	28/05/2018			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGL-GW15	GW-15_Historical_280518	GW-15	28/05/2018			Normal	**7464**	-	-	-	-	-	-	-	-	-	-	-	-	-	**4650**	**5.07**	**101**	**7.41**	-	-	-	-
PNG LNG	LNGL-GW15	GW-15-EM_Historical_280518	GW-15	28/05/2018			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGL-GW15	GW-15-SGS_Historical_280518	GW-15	28/05/2018			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGL-GW5	GW-5_Historical_280518	GW-5	28/05/2018			Normal	**12,262**	-	-	-	-	-	-	-	-	-	-	-	-	-	**6630**	**4.35**	**57.9**	**7.09**	-	-	-	-
PNG LNG	LNGL-GW5	GW-5-EM_Historical_280518	GW-5	28/05/2018			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGL-GW5	GW-5-SGS_Historical_280518	GW-5	28/05/2018			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGP-GW17	GW-17_Historical_280518	GW-17	28/05/2018			Normal	**2365**	-	-	-	-	-	-	-	-	-	-	-	-	-	**1410**	**4.86**	**75.03**	**7.46**	-	-	-	-
PNG LNG	LNGP-GW17	GW-17-EM_Historical_280518	GW-17	28/05/2018			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGP-GW17	GW-17-SGS_Historical_280518	GW-17	28/05/2018			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGP-GW19	GW-19_Historical_280518	GW-19	28/05/2018			Normal	**10,053**	-	-	-	-	-	-	-	-	-	-	-	-	-	**7590**	**4.15**	**64.8**	**7.32**	-	-	-	-
PNG LNG	LNGP-GW19	GW-19-EM_Historical_280518	GW-19	28/05/2018			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGP-GW19	GW-19-SGS_Historical_280518	GW-19	28/05/2018			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGP-GW20	GW-20_Historical_280518	GW-20	28/05/2018			Normal	**9650**	-	-	-	-	-	-	-	-	-	-	-	-	-	**3080**	**4.6**	**118.97**	**7.83**	-	-	-	-
PNG LNG	LNGP-GW20	GW-20-EM_Historical_280518	GW-20	28/05/2018			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGP-GW20	GW-20-SGS_Historical_280518	GW-20	28/05/2018			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGP-GW21	GW-21_Historical_280518	GW-21	28/05/2018			Normal	**46,990**	-	-	-	-	-	-	-	-	-	-	-	-	-	**24,800**	**3.19**	**59.25**	**7.3**	-	-	-	-
PNG LNG	LNGP-GW21	GW-21-EM_Historical_280518	GW-21	28/05/2018			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGP-GW21	GW-21-SGS_Historical_280518	GW-21	28/05/2018			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGP-GW22	GW-22_Historical_280518	GW-22	28/05/2018			Normal	**79,847**	-	-	-	-	-	-	-	-	-	-	-	-	-	**67,000**	**3.33**	-15.87	**7.2**	-	-	-	-
PNG LNG	LNGP-GW22	GW-22-EM_Historical_280518	GW-22	28/05/2018			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGP-GW22	GW-22-SGS_Historical_280518	GW-22	28/05/2018			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGP-MW2	MW-2_Historical_280518	MW-2	28/05/2018			Normal	**3904.6**	-	-	-	-	-	-	-	-	-	-	-	-	-	**644**	**5.26**	**85.5**	**7.5**	-	-	-	-
PNG LNG	LNGP-MW2	MW-2-EM_Historical_280518	MW-2	28/05/2018			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGP-MW2	MW-2-SGS_Historical_280518	MW-2	28/05/2018			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGP-GW20	EB1813230004	LNGP-GW20	28/05/2018	ALSE-Brisbane	EB1813230	Normal	-	-	-	**3080**	**294**	**625**	**6**	**658**	**1410**	**3.94**	**56.1**	**51.8**	-	-	-	-	-	-	-	**102**	<0.001	**0.17**
PNG LNG	LNGP-GW21	EB1813230005	LNGP-GW21	28/05/2018	ALSE-Brisbane	EB1813230	Normal	-	-	-	**24,800**	**754**	**11,300**	**137**	**6140**	**1860**	**0.22**	**365**	**367**	-	-	-	-	-	-	-	**714**	<0.005	**0.073**
PNG LNG	LNGP-GW22	EB1813230006	LNGP-GW22	28/05/2018	ALSE-Brisbane	EB1813230	Normal	-	-	-	**67,000**	**763**	**33,800**	**292**	**19,500**	**2930**	**1.96**	**1030**	**1070**	-	-	-	-	-	-	-	**2140**	<0.005	**0.107**
PNG LNG	LNGL-GW13	EB1813230009	LNGP-GW13	28/05/2018	ALSE-Brisbane	EB1813230	Normal	-	-	-	**3620**	**265**	**1610**	**5**	**763**	**220**	**1.85**	**54.2**	**52.2**	-	-	-	-	-	-	-	**69**	<0.001	**0.102**
PNG LNG	LNGL-GW11	EB1813230010	LNGP-GW11	28/05/2018	ALSE-Brisbane	EB1813230	Normal	-	-	-	**5020**	**454**	**2810**	**8**	**931**	**248**	**9.11**	**88.1**	**73.4**	-	-	-	-	-	-	-	**122**	**0.001**	**0.395**
PNG LNG	LNGL-GW15	EB1813230012	LNGP-GW15	28/05/2018	ALSE-Brisbane	EB1813230	Normal	-	-	-	**4650**	**385**	**1860**	**10**	**968**	**762**	**1.45**	**73.9**	**71.8**	-	-	-	-	-	-	-	**124**	<0.001	**0.056**
PNG LNG		EB1813230013	LNGP-QC1	28/05/2018	ALSE-Brisbane	EB1813230	Normal	-	-	-	**2520**	**165**	**1090**	**4**	**522**	**168**	**4.36**	**38.4**	**35.2**	-	-	-	-	-	-	-	**50**	<0.001	**0.153**
PNG LNG	LNGL-GW12	EB1813230008	LNGP-GW12	28/05/2018	ALSE-Brisbane	EB1813230	Normal	-	-	-	**2460**	**168**	**1100**	**5**	**521**	**175**	**4.56**	**38.7**	**35.4**	-	-	-	-	-	-	-	**51**	<0.001	**0.16**
PNG LNG		EB1813230014	LNGP-QC2	28/05/2018	ALSE-Brisbane	EB1813230	Normal	-	-	-	**6560**	**604**	**3620**	**10**	**1110**	**150**	**8.01**	**110**	**94**	-	-	-	-	-	-	-	**186**	<0.001	**0.194**
PNG LNG	LNGL-GW5	EB1813230007	LNGP-GW5	28/05/2018	ALSE-Brisbane	EB1813230	Normal	-	-	-	**6630**	**606**	**3610**	**11**	**1100**	**163**	**8.31**	**110**	**93.6**	-	-	-	-	-	-	-	**185**	<0.001	**0.197**
PNG LNG	LNGL-GW14	EB1813230011	LNGP-GW14	28/05/2018	ALSE-Brisbane	EB1813230	Normal	-	-	-	**5150**	**322**	**2510**	**12**	**1200**	**713**	**7.14**	**92.2**	**79.9**	-	-	-	-	-	-	-	**138**	**0.001**	**0.048**
PNG LNG	LNGP-MW2	EB1813230001	LNGP-MW2	28/05/2018	ALSE-Brisbane	EB1813230	Normal	-	-	-	**644**	**40**	**12**	<1	**154**	**29**	**3.71**	**10.8**	**10**	-	-	-	-	-	-	-	**16**	<0.001	**0.229**
PNG LNG	LNGP-GW17	EB1813230002	LNGP-GW17	28/05/2018	ALSE-Brisbane	EB1813230	Normal	-	-	-	**1410**	**42**	**480**	**2**	**417**	**90**	**8.43**	**25.4**	**21.4**	-	-	-	-	-	-	-	**14**	<0.001	**0.071**
PNG LNG	LNGP-GW19	EB1813230003	LNGP-GW19	28/05/2018	ALSE-Brisbane	EB1813230	Normal	-	-	-	**7590**	**375**	**4010**	**10**	**1960**	**860**	**7.86**	**136**	**116**	-	-	-	-	-	-	-	**147**	**0.001**	**0.079**
PNG LNG		EB1813230015	LNGP-QC3	28/05/2018	ALSE-Brisbane	EB1813230	Normal	-	-	-	<10	<1	<1	<1	<1	<1	-	**0.08**	<0.01	-	-	-	-	-	-	-	<1	<0.001	<0.001
PNG LNG		EB1813230016	LNGP-QC4	28/05/2018	ALSE-Brisbane	EB1813230	Normal	-	-	-	<10	<1	<1	<1	<1	<1	-	**0.04**	<0.01	-	-	-	-	-	-	-	<1	<0.001	**0.061**
PNG LNG	LNGL-GW11	GW-11_Historical_261118	GW-11	26/11/2018			Normal	**5684**	-	-	-	-	-	-	-	-	-	-	-	-	-	**3713**	**5.58**	**13.4**	**7.15**	-	-	-	-
PNG LNG	LNGL-GW11	GW-11-ALS_Historical_261118	GW-11	26/11/2018			Normal	-	<0.01	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGL-GW11	GW-11-EM_Historical_261118	GW-11	26/11/2018			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGL-GW12	GW-12_Historical_261118	GW-12	26/11/2018			Normal	**5113**	-	-	-	-	-	-	-	-	-	-	-	-	-	**3354**	**3.63**	**13.5**	**7.03**	-	-	-	-
PNG LNG	LNGL-GW12	GW-12-ALS_Historical_261118	GW-12	26/11/2018			Normal	-	<0.002	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGL-GW12	GW-12-EM_Historical_261118	GW-12	26/11/2018			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGL-GW13	GW-13_Historical_261118	GW-13	26/11/2018			Normal	**3874**	-	-	-	-	-	-	-	-	-	-	-	-	-	**2522**	**5.35**	**59.7**	**7.03**	-	-	-	-
PNG LNG	LNGL-GW13	GW-13-ALS_Historical_261118	GW-13	26/11/2018			Normal	-	<0.01	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGL-GW13	GW-13-EM_Historical_261118	GW-13	26/11/2018			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGL-GW14	GW-14_Historical_261118	GW-14	26/11/2018			Normal	**6694**	-	-	-	-	-	-	-	-	-	-	-	-	-	**4352**	**4.23**	**12.2**	**6.66**	-	-	-	-

								Physical Parameters		Ions												Field											
								Electrical Conductivity (Non Compensated)	Chlorophyll a	Electrical Conductivity @ 25C (lab)	Total Dissolved Solids (TDS)	Calcium (Filtered)	Chloride	Potassium (Filtered)	Sodium (Filtered)	Sulfate as SO4 - Turbidimetric (Filtered)	Ionic Balance	Anions Total	Cations Total	Sulphide	Cyanide (Free)	TDS (Field)	DO (Field)	Redox Potential (Field)	pH (Field)	Turbidity	Magnesium (Filtered)	Arsenic (Filtered)	Barium (Filtered)				
								µS/cm	mg/L	µS/cm	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	%	meq/L	meq/L	mg/L	mg/L	mg/L	mg/L	mV	-	NTU	mg/L	mg/L	mg/L				
EQL								**1**	**0.001**	**1**	**10**	**1**	**1**	**1**	**1**	**1**	**0.01**	**0.01**	**0.01**			**1**	**0.001**	**1**	**0.01**	**0.1**	**1**	**0.001**	**0.001**				
NHMRC 2008 Recreational Water																												0.07	7				
PNG Water Quality Criteria for Freshwater Aquatic Ecosystem (guideline only)														5		400				0.002	0.005				>6.5<9	25		0.05	1				
PNG Water Quality Criteria for Marine Aquatic Ecosystem (guideline only)														600						0.002	0.01					25		0.05	1				
Environment Permit Criteria (Baseline Range)												1300		495	9000	4130				0.1	0.004		<9.9		>6.41<7.81		620	0.106	1.4				
PNG DWG (1987)											1500	200	1000			400					0.05				>6.5<9.2	25	150	0.05					
Site_ID	**Location_Code**	**SampleCode**	**Field_ID**	**Sampled_Date_Time**	**Lab_Name**	**Lab_Report_Number**	**Sample_Type**																										
PNG LNG	LNGL-GW14	GW-14-ALS_Historical_261118	GW-14	26/11/2018			Normal	-	<0.002	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-				
PNG LNG	LNGL-GW14	GW-14-EM_Historical_261118	GW-14	26/11/2018			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-				
PNG LNG	LNGL-GW15	GW-15_Historical_261118	GW-15	26/11/2018			Normal	**4775**	-	-	-	-	-	-	-	-	-	-	-	-	-	**3115**	**5.25**	**6.4**	**7.03**	-	-	-				
PNG LNG	LNGL-GW15	GW-15-ALS_Historical_261118	GW-15	26/11/2018			Normal	-	<0.004	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-				
PNG LNG	LNGL-GW15	GW-15-EM_Historical_261118	GW-15	26/11/2018			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-				
PNG LNG	LNGL-GW5	GW-5_Historical_261118	GW-5	26/11/2018			Normal	**13,430**	-	-	-	-	-	-	-	-	-	-	-	-	-	**8654**	**1.87**	**68.4**	6.48	-	-	-				
PNG LNG	LNGL-GW5	GW-5-ALS_Historical_261118	GW-5	26/11/2018			Normal	-	<0.004	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-				
PNG LNG	LNGL-GW5	GW-5-EM_Historical_261118	GW-5	26/11/2018			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-				
PNG LNG	LNGP-GW17	GW-17_Historical_261118	GW-17	26/11/2018			Normal	**1525**	-	-	-	-	-	-	-	-	-	-	-	-	-	**993**	**4.93**	**136.2**	**7.28**	-	-	-				
PNG LNG	LNGP-GW17	GW-17-ALS_Historical_261118	GW-17	26/11/2018			Normal	-	<0.01	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-				
PNG LNG	LNGP-GW17	GW-17-EM_Historical_261118	GW-17	26/11/2018			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-				
PNG LNG	LNGP-GW19	GW-19_Historical_261118	GW-19	26/11/2018			Normal	**8270**	-	-	-	-	-	-	-	-	-	-	-	-	-	**5381**	**4.15**	-26.7	**6.97**	-	-	-				
PNG LNG	LNGP-GW19	GW-19-ALS_Historical_261118	GW-19	26/11/2018			Normal	-	<0.004	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-				
PNG LNG	LNGP-GW19	GW-19-EM_Historical_261118	GW-19	26/11/2018			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-				
PNG LNG	LNGP-GW20	GW-20_Historical_261118	GW-20	26/11/2018			Normal	**5455**	-	-	-	-	-	-	-	-	-	-	-	-	-	**3547**	**4.17**	-12.8	**7.04**	-	-	-				
PNG LNG	LNGP-GW20	GW-20-ALS_Historical_261118	GW-20	26/11/2018			Normal	-	<0.003	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-				
PNG LNG	LNGP-GW20	GW-20-EM_Historical_261118	GW-20	26/11/2018			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-				
PNG LNG	LNGP-GW21	GW-21_Historical_261118	GW-21	26/11/2018			Normal	**22,180**	-	-	-	-	-	-	-	-	-	-	-	-	-	**6410**	**5.9**	**190.2**	**6.83**	-	-	-				
PNG LNG	LNGP-GW21	GW-21-ALS_Historical_261118	GW-21	26/11/2018			Normal	-	<0.004	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-				
PNG LNG	LNGP-GW21	GW-21-EM_Historical_261118	GW-21	26/11/2018			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-				
PNG LNG	LNGP-GW22	GW-22_Historical_261118	GW-22	26/11/2018			Normal	**44,990**	-	-	-	-	-	-	-	-	-	-	-	-	-	**29,200**	**4.54**	-37.3	**6.64**	-	-	-				
PNG LNG	LNGP-GW22	GW-22-ALS_Historical_261118	GW-22	26/11/2018			Normal	-	<0.003	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-				
PNG LNG	LNGP-GW22	GW-22-EM_Historical_261118	GW-22	26/11/2018			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-				
PNG LNG	LNGP-MW2	MW-2_Historical_261118	MW-2	26/11/2018			Normal	**4395**	-	-	-	-	-	-	-	-	-	-	-	-	-	**2895**	**5.33**	**163.7**	**6.86**	-	-	-				
PNG LNG	LNGP-MW2	MW-2-ALS_Historical_261118	MW-2	26/11/2018			Normal	-	<0.004	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-				
PNG LNG	LNGP-MW2	MW-2-EM_Historical_261118	MW-2	26/11/2018			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-				
PNG LNG	LNGP-MW2	EB1829402001	LNGP-MW2	26/11/2018	ALSE-Brisbane	EB1829402	Normal	-	<0.004	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-				
PNG LNG		EB1829402013	LNGP-QC1	26/11/2018	ALSE-Brisbane	EB1829402	Normal	-	<0.003	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-				
PNG LNG	LNGP-GW20	EB1829402004	LNGP-GW20	26/11/2018	ALSE-Brisbane	EB1829402	Normal	-	<0.003	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-				
PNG LNG	LNGP-GW22	EB1829402006	LNGP-GW22	26/11/2018	ALSE-Brisbane	EB1829402	Normal	-	<0.003	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-				
PNG LNG	LNGP-GW21	EB1829402005	LNGP-GW21	26/11/2018	ALSE-Brisbane	EB1829402	Normal	-	<0.004	-	6410	210	2940	53	1600	516	2.6	101	95.8	-	-	-	-	-	-	-	174	<0.001	0.03				
PNG LNG	LNGL-GW5	EB1829402007	LNGP-GW5	26/11/2018	ALSE-Brisbane	EB1829402	Normal	-	<0.004	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-				
PNG LNG	LNGL-GW12	EB1829402008	LNGP-GW12	26/11/2018	ALSE-Brisbane	EB1829402	Normal	-	<0.002	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-				
PNG LNG	LNGL-GW14	EB1829402011	LNGP-GW14	26/11/2018	ALSE-Brisbane	EB1829402	Normal	-	<0.002	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-				
PNG LNG	LNGL-GW13	EB1829402009	LNGP-GW13	26/11/2018	ALSE-Brisbane	EB1829402	Normal	-	<0.01	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-				
PNG LNG		EB1829402014	LNGP-QC2	26/11/2018	ALSE-Brisbane	EB1829402	Normal	-	<0.005	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-				
PNG LNG	LNGL-GW11	EB1829402010	LNGP-GW11	26/11/2018	ALSE-Brisbane	EB1829402	Normal	-	<0.01	-	5920	516	2650	7	1040	276	0.99	83.8	82.2	-	-	-	-	-	-	-	134	0.002	0.421				
PNG LNG	LNGL-GW15	EB1829402012	LNGP-GW15	26/11/2018	ALSE-Brisbane	EB1829402	Normal	-	<0.004	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-				
PNG LNG	LNGP-GW17	EB1829402002	LNGP-GW17	26/11/2018	ALSE-Brisbane	EB1829402	Normal	-	<0.01	-	1560	72	562	8	603	127	8.11	28	32.9	-	-	-	-	-	-	-	35	<0.001	0.119				
PNG LNG	LNGP-GW19	EB1829402003	LNGP-GW19	26/11/2018	ALSE-Brisbane	EB1829402	Normal	-	<0.004	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-				
PNG LNG		EB1829402016	LNGP-QC4	26/11/2018	ALSE-Brisbane	EB1829402	Normal	-	<0.002	-	<10	<1	5	<1	4	<1	-	0.24	0.17	-	-	-	-	-	-	-	<1	<0.001	<0.001				
PNG LNG		EB1829402015	LNGP-QC3	26/11/2018	ALSE-Brisbane	EB1829402	Normal	-	<0.002	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-				
PNG LNG	LNGL-GW11	GW-11_Historical_020919	GW-11	2/09/2019			Normal	**7160**	-	-	-	-	-	-	-	-	-	-	-	-	-	**4880**	**3.18**	**2**	**6.97**	-	-	-				
PNG LNG	LNGL-GW11	GW-11-ALS_Historical_020919	GW-11	2/09/2019			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-				
PNG LNG	LNGL-GW11	GW-11-EM_Historical_020919	GW-11	2/09/2019			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-				
PNG LNG	LNGL-GW12	GW-12_Historical_020919	GW-12	2/09/2019			Normal	**3860**	-	-	-	-	-	-	-	-	-	-	-	-	-	**2090**	**3.64**	**44**	**7.38**	-	-	-				
PNG LNG	LNGL-GW12	GW-12-ALS_Historical_020919	GW-12	2/09/2019			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-				
PNG LNG	LNGL-GW12	GW-12-EM_Historical_020919	GW-12	2/09/2019			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-				
PNG LNG	LNGL-GW13	GW-13_Historical_020919	GW-13	2/09/2019			Normal	**6380**	-	-	-	-	-	-	-	-	-	-	-	-	-	**4100**	**3.96**	**87**	**7.12**	-	-	-				
PNG LNG	LNGL-GW13	GW-13-ALS_Historical_020919	GW-13	2/09/2019			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-				
PNG LNG	LNGL-GW13	GW-13-EM_Historical_020919	GW-13	2/09/2019			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-				
PNG LNG	LNGL-GW14	GW-14_Historical_020919	GW-14	2/09/2019			Normal	**61,500**	-	-	-	-	-	-	-	-	-	-	-	-	-	**7540**	**3.31**	**41**	**6.75**	-	-	-				
PNG LNG	LNGL-GW14	GW-14-ALS_Historical_020919	GW-14	2/09/2019			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-				
PNG LNG	LNGL-GW14	GW-14-EM_Historical_020919	GW-14	2/09/2019			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-				
PNG LNG	LNGL-GW15	GW-15_Historical_020919	GW-15	2/09/2019			Normal	**7510**	-	-	-	-	-	-	-	-	-	-	-	-	-	**3970**	**2.61**	-59	**7.51**	-	-	-				
PNG LNG	LNGL-GW15	GW-15-ALS_Historical_020919	GW-15	2/09/2019			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-				
PNG LNG	LNGL-GW15	GW-15-EM_Historical_020919	GW-15	2/09/2019			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-				
PNG LNG	LNGL-GW5	GW-5_Historical_020919	GW-5	2/09/2019			Normal	**10,480**	-	-	-	-	-	-	-	-	-	-	-	-	-	**6670**	**3.89**	**86**	**6.85**	-	-	-				
PNG LNG	LNGL-GW5	GW-5-ALS_Historical_020919	GW-5	2/09/2019			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-				
PNG LNG	LNGL-GW5	GW-5-EM_Historical_020919	GW-5	2/09/2019			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-				
PNG LNG	LNGP-GW17	GW-17_Historical_020919	GW-17	2/09/2019			Normal	**2920**	-	-	-	-	-	-	-	-	-	-	-	-	-	**1720**	**4.37**	**77**	**7.41**	-	-	-				
PNG LNG	LNGP-GW17	GW-17-EM_Historical_020919	GW-17	2/09/2019			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-				
PNG LNG	LNGP-GW19	GW-19_Historical_020919	GW-19	2/09/2019			Normal	**10,967**	-	-	-	-	-	-	-	-	-	-	-	-	-	**7380**	**3.72**	-25	**7.29**	-	-	-				

										Physical Parameters		Ions											Field							
										Electrical Conductivity (Non Compensated)	Chlorophyll a	Electrical Conductivity @ 25C (lab)	Total Dissolved Solids (TDS)	Calcium (Filtered)	Chloride	Potassium (Filtered)	Sodium (Filtered)	Sulfate as SO4 - Turbidimetric (Filtered)	Ionic Balance	Anions Total	Cations Total	Sulphide	Cyanide (Free)	TDS (Field)	DO (Field)	Redox Potential (Field)	pH (Field)	Turbidity	Magnesium (Filtered)	Arsenic (Filtered)	Barium (Filtered)
										µS/cm	mg/L	µS/cm	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	%	meq/L	meq/L	mg/L	mg/L	mg/L	mg/L	mV	-	NTU	mg/L	mg/L	mg/L
EQL										**1**	**0.001**	**1**	**10**	**1**	**1**	**1**	**1**	**1**	**0.01**	**0.01**	**0.01**			**1**	**0.001**	**1**	**0.01**	**0.1**	**1**	**0.001**	**0.001**
NHMRC 2008 Recreational Water																														0.07	7
PNG Water Quality Criteria for Freshwater Aquatic Ecosystem (guideline only)																5		400				0.002	0.005				>6.5<9	25		0.05	1
PNG Water Quality Criteria for Marine Aquatic Ecosystem (guideline only)																600						0.002	0.01					25		0.05	1
Environment Permit Criteria (Baseline Range)														1300		495	9000	4130				0.1	0.004		<9.9		>6.41<7.81		620	0.106	1.4
PNG DWG (1987)													1500	200	1000			400					0.05				>6.5<9.2	25	150	0.05	
Site_ID	**Location_Code**	**SampleCode**	**Field_ID**	**Sampled_Date_Time**	**Lab_Name**	**Lab_Report_Number**	**Sample_Type**																								
PNG LNG	LNGP-GW19	GW-19-EM_Historical_020919	GW-19	2/09/2019			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGP-GW20	GW-20_Historical_020919	GW-20	2/09/2019			Normal	**5300**	-	-	-	-	-	-	-	-	-	-	-	-	-	**4490**	**3.36**	-7	**7.25**	-	-	-	-
PNG LNG	LNGP-GW20	GW-20-EM_Historical_020919	GW-20	2/09/2019			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGP-GW21	GW-21 _Historical_020919	GW-21	2/09/2019			Normal	**48,600**	-	-	-	-	-	-	-	-	-	-	-	-	-	**38,000**	**2.39**	**5**	**6.57**	-	-	-	-
PNG LNG	LNGP-GW21	GW-21 -ALS_Historical_020919	GW-21	2/09/2019			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGP-GW21	GW-21 -EM_Historical_020919	GW-21	2/09/2019			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGP-GW22	GW-22_Historical_020919	GW-22	2/09/2019			Normal	**78,500**	-	-	-	-	-	-	-	-	-	-	-	-	-	**61,700**	**3.25**	-70	**6.71**	-	-	-	-
PNG LNG	LNGP-GW22	GW-22-ALS_Historical_020919	GW-22	2/09/2019			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGP-GW22	GW-22-EM_Historical_020919	GW-22	2/09/2019			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGP-GW23	GW-23_Historical_020919	GW-23	2/09/2019			Normal	**18,590**	-	-	-	-	-	-	-	-	-	-	-	-	-	**13,300**	**3.8**	**76**	**7.03**	-	-	-	-
PNG LNG	LNGP-GW23	GW-23-ALS_Historical_020919	GW-23	2/09/2019			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGP-GW23	GW-23-EM_Historical_020919	GW-23	2/09/2019			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGP-GW24	GW-24_Historical_020919	GW-24	2/09/2019			Normal	**8060**	-	-	-	-	-	-	-	-	-	-	-	-	-	**5340**	**3.01**	**50**	**7.28**	-	-	-	-
PNG LNG	LNGP-GW24	GW-24-ALS_Historical_020919	GW-24	2/09/2019			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGP-GW24	GW-24-EM_Historical_020919	GW-24	2/09/2019			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGP-MW2	MW-2_Historical_020919	MW-2	2/09/2019			Normal	**5810**	-	-	-	-	-	-	-	-	-	-	-	-	-	**919**	**3.61**	**86**	**7.08**	-	-	-	-
PNG LNG	LNGP-MW2	MW-2-ALS_Historical_020919	MW-2	2/09/2019			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGP-MW2	MW-2-EM_Historical_020919	MW-2	2/09/2019			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PNG LNG		EB1922977016	LNGP-QC2	2/09/2019	ALSE-Brisbane	EB1922977	Normal	-	-	-	**5280**	**251**	**2300**	**21**	**1430**	**666**	**0.12**	**85**	**85.2**	-	-	-	-	-	-	**4**	**121**	<0.001	**0.298**
PNG LNG	LNGP-GW20	EB1922977004	LNGP-GW20	2/09/2019	ALSE-Brisbane	EB1922977	Normal	-	-	-	**4490**	**391**	**860**	**7**	**874**	**1610**	**2.15**	**66.6**	**69.6**	-	-	-	-	-	-	**25.9**	**144**	<0.001	**0.231**
PNG LNG		EB1922977015	LNGP-QC1	2/09/2019	ALSE-Brisbane	EB1922977	Normal	-	-	-	**4430**	**392**	**851**	**7**	**820**	**1680**	**0.78**	**67.9**	**66.8**	-	-	-	-	-	-	**25**	**139**	<0.001	**0.239**
PNG LNG	LNGP-GW24	EB1922977010	LNGP-GW24	2/09/2019	ALSE-Brisbane	EB1922977	Normal	-	-	-	**5340**	**253**	**2320**	**21**	**1420**	**664**	**0.37**	**85.5**	**84.9**	-	-	-	-	-	-	**3.8**	**121**	<0.001	**0.3**
PNG LNG	LNGP-GW19	EB1922977003	LNGP-GW19	2/09/2019	ALSE-Brisbane	EB1922977	Normal	-	-	-	**7380**	**426**	**3480**	**11**	**1930**	**765**	**0.33**	**120**	**119**	-	-	-	-	-	-	**28.3**	**163**	**0.002**	**0.064**
PNG LNG	LNGP-GW17	EB1922977002	LNGP-GW17	2/09/2019	ALSE-Brisbane	EB1922977	Normal	-	-	-	**1720**	**74**	**624**	**3**	**557**	**121**	**0.03**	**30**	**30**	-	-	-	-	-	-	**304**	**24**	<0.001	**0.053**
PNG LNG	LNGP-MW2	EB1922977001	LNGP-MW2	2/09/2019	ALSE-Brisbane	EB1922977	Normal	-	-	-	**919**	**38**	**22**	<1	**265**	**37**	**5.8**	**13**	**14.6**	-	-	-	-	-	-	**12.5**	**15**	<0.001	**0.15**
PNG LNG		EB1922977017	LNGP-QC3	2/09/2019	ALSE-Brisbane	EB1922977	Normal	-	-	-	**6760**	**722**	**3380**	**13**	**1120**	**155**	**0.91**	**104**	**102**	-	-	-	-	-	-	**14.1**	**207**	<0.001	**0.234**
PNG LNG	LNGL-GW5	EB1922977007	LNGP-GW5	2/09/2019	ALSE-Brisbane	EB1922977	Normal	-	-	-	**6670**	**730**	**3410**	**13**	**1120**	**147**	**0.95**	**105**	**103**	-	-	-	-	-	-	**10.1**	**209**	<0.001	**0.228**
PNG LNG	LNGL-GW12	EB1922977008	LNGP-GW12	2/09/2019	ALSE-Brisbane	EB1922977	Normal	-	-	-	**2090**	**160**	**893**	**4**	**500**	**167**	**1.05**	**32.9**	**33.6**	-	-	-	-	-	-	**29.8**	**46**	**0.002**	**0.218**
PNG LNG	LNGL-GW14	EB1922977013	LNGP-GW14	2/09/2019	ALSE-Brisbane	EB1922977	Normal	-	-	-	**7540**	**624**	**2640**	**16**	**1440**	**1740**	**1.7**	**119**	**115**	-	-	-	-	-	-	**14.5**	**251**	**0.002**	**0.035**
PNG LNG	LNGP-GW23	EB1922977009	LNGP-GW23	2/09/2019	ALSE-Brisbane	EB1922977	Normal	-	-	-	**13,300**	**1240**	**6760**	**28**	**2330**	**546**	**0.11**	**206**	**206**	-	-	-	-	-	-	**82.4**	**514**	**0.001**	**0.884**
PNG LNG	LNGP-GW22	EB1922977006	LNGP-GW22	2/09/2019	ALSE-Brisbane	EB1922977	Normal	-	-	-	**61,700**	**799**	**31,200**	**298**	**17,800**	**2660**	**3.06**	**949**	**1010**	-	-	-	-	-	-	**105**	**2270**	<0.005	**0.124**
PNG LNG	LNGP-GW21	EB1922977005	LNGP-GW21	2/09/2019	ALSE-Brisbane	EB1922977	Normal	-	-	-	**38,000**	**1500**	**17,700**	**188**	**8790**	**2670**	**1.59**	**562**	**580**	-	-	-	-	-	-	**33**	**1440**	<0.005	**0.088**
PNG LNG	LNGL-GW15	EB1922977014	LNGP-GW15	2/09/2019	ALSE-Brisbane	EB1922977	Normal	-	-	-	**3970**	**337**	**1410**	**8**	**844**	**785**	**0.11**	**61.2**	**61**	-	-	-	-	-	-	**3.5**	**89**	<0.001	**0.05**
PNG LNG	LNGL-GW11	EB1922977012	LNGP-GW11	2/09/2019	ALSE-Brisbane	EB1922977	Normal	-	-	-	**4880**	**510**	**2380**	**11**	**914**	**258**	**0.63**	**77.1**	**76.1**	-	-	-	-	-	-	**38.1**	**129**	**0.004**	**0.416**
PNG LNG	LNGL-GW13	EB1922977011	LNGP-GW13	2/09/2019	ALSE-Brisbane	EB1922977	Normal	-	-	-	**4100**	**369**	**1890**	**5**	**848**	**193**	**1.33**	**61.2**	**62.8**	-	-	-	-	-	-	**224**	**90**	<0.001	**0.108**
PNG LNG		EB1922977019	LNGP-QC5	2/09/2019	ALSE-Brisbane	EB1922977	Normal	-	-	-	<10	<1	**5**	<1	**4**	<1	-	**0.22**	**0.17**	-	-	-	-	-	-	**0.7**	<1	<0.001	<0.001
PNG LNG		EB1922977018	LNGP-QC4	2/09/2019	ALSE-Brisbane	EB1922977	Normal	-	-	-	<10	<1	**5**	<1	**5**	<1	-	**0.26**	**0.22**	-	-	-	-	-	-	**0.5**	<1	<0.001	<0.001
PNG LNG	LNGL-GW11	GW-11_Historical_021219	GW-11	2/12/2019			Normal	**2243**	-	-	-	-	-	-	-	-	-	-	-	-	-	**3900**	**6.26**	-102	**7.26**	-	-	-	-
PNG LNG	LNGL-GW11	GW-11-EM_Historical_021219	GW-11	2/12/2019			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGL-GW11	PG04429-3	GW-11	2/12/2019	SGS EHS PNG Lab	PG04429	Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGL-GW12	GW-12_Historical_021219	GW-12	2/12/2019			Normal	**2559**	-	-	-	-	-	-	-	-	-	-	-	-	-	**1990**	**6.85**	**19**	**7.48**	-	-	-	-
PNG LNG	LNGL-GW12	GW-12-EM_Historical_021219	GW-12	2/12/2019			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGL-GW12	PG04429-4	GW-12	2/12/2019	SGS EHS PNG Lab	PG04429	Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGL-GW13	GW-13_Historical_021219	GW-13	2/12/2019			Normal	**4981**	-	-	-	-	-	-	-	-	-	-	-	-	-	**4100**	**6.96**	**33.85**	**7.045**	-	-	-	-
PNG LNG	LNGL-GW13	GW-13-EM_Historical_021219	GW-13	2/12/2019			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGL-GW13	PG04429-5	GW-13	2/12/2019	SGS EHS PNG Lab	PG04429	Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGL-GW14	GW-14_Historical_021219	GW-14	2/12/2019			Normal	**8226**	-	-	-	-	-	-	-	-	-	-	-	-	-	**7990**	**6.15**	-45.2	**6.765**	-	-	-	-
PNG LNG	LNGL-GW14	GW-14-EM_Historical_021219	GW-14	2/12/2019			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGL-GW14	PG04429-6	GW-14	2/12/2019	SGS EHS PNG Lab	PG04429	Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGL-GW15	GW-15_Historical_021219	GW-15	2/12/2019			Normal	**4402**	-	-	-	-	-	-	-	-	-	-	-	-	-	**4120**	**6.01**	-127	**7.05**	-	-	-	-
PNG LNG	LNGL-GW15	GW-15-EM_Historical_021219	GW-15	2/12/2019			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGL-GW15	PG04429-7	GW-15	2/12/2019	SGS EHS PNG Lab	PG04429	Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGL-GW5	GW-5_Historical_021219	GW-5	2/12/2019			Normal	**8538**	-	-	-	-	-	-	-	-	-	-	-	-	-	**6830**	**6.6**	-4	**7.08**	-	-	-	-
PNG LNG	LNGL-GW5	GW-5-EM_Historical_021219	GW-5	2/12/2019			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGL-GW5	PG04429-2	GW-5	2/12/2019	SGS EHS PNG Lab	PG04429	Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGP-GW17	GW-17_Historical_021219	GW-17	2/12/2019			Normal	**2465**	-	-	-	-	-	-	-	-	-	-	-	-	-	**1770**	**7.14**	**33**	**7.45**	-	-	-	-
PNG LNG	LNGP-GW17	GW-17-EM_Historical_021219	GW-17	2/12/2019			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGP-GW17	PG04429-8	GW17	2/12/2019	SGS EHS PNG Lab	PG04429	Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGP-GW19	GW-19_Historical_021219	GW-19	2/12/2019			Normal	**9139**	-	-	-	-	-	-	-	-	-	-	-	-	-	**8590**	**7.28**	**105**	**7**	-	-	-	-
PNG LNG	LNGP-GW19	GW-19-EM_Historical_021219	GW-19	2/12/2019			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGP-GW19	PG04429-9	GW19	2/12/2019	SGS EHS PNG Lab	PG04429	Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGP-GW20	GW-20_Historical_021219	GW-20	2/12/2019			Normal	**4328.5**	-	-	-	-	-	-	-	-	-	-	-	-	-	**5900**	**7.215**	-105	**7.295**	-	-	-	-
PNG LNG	LNGP-GW20	GW-20-EM_Historical_021219	GW-20	2/12/2019			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

									Physical Parameters		Ions									Field							
									Electrical Conductivity (Non Compensated)	Chlorophyll a	Electrical Conductivity @ 25C (lab)	Total Dissolved Solids (TDS)	Calcium (Filtered)	Chloride	Potassium (Filtered)	Sodium (Filtered)	Sulfate as SO4 - Turbidimetric (Filtered)	Ionic Balance	Anions Total	Cations Total	Sulphide	Cyanide (Free)	TDS (Field)	DO (Field)	Redox Potential (Field)	pH (Field)	Turbidity	Magnesium (Filtered)	Arsenic (Filtered)	Barium (Filtered)
									µS/cm	mg/L	µS/cm	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	%	meq/L	meq/L	mg/L	mg/L	mg/L	mg/L	mV	-	NTU	mg/L	mg/L	mg/L
EQL									**1**	**0.001**	**1**	**10**	**1**	**1**	**1**	**1**	**1**	**0.01**	**0.01**	**0.01**			**1**	**0.001**	**1**	**0.01**	**0.1**	**1**	**0.001**	**0.001**
NHMRC 2008 Recreational Water																													0.07	7
PNG Water Quality Criteria for Freshwater Aquatic Ecosystem (guideline only)															5		400				0.002	0.005				>6.5<9	25		0.05	1
PNG Water Quality Criteria for Marine Aquatic Ecosystem (guideline only)															600						0.002	0.01					25		0.05	1
Environment Permit Criteria (Baseline Range)													1300		495	9000	4130				0.1	0.004		<9.9		>6.41<7.81		620	0.106	1.4
PNG DWG (1987)												1500	200	1000			400					0.05				>6.5<9.2	25	150	0.05	
Site_ID	**Location_Code**	**SampleCode**	**Field_ID**	**Sampled_Date_Time**	**Lab_Name**	**Lab_Report_Number**	**Sample_Type**																							
PNG LNG	LNGP-GW20	PG04429-10	Gw20	2/12/2019	SGS EHS PNG Lab	PG04429	Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGP-GW20	PG04429-16	QC2	2/12/2019	SGS EHS PNG Lab	PG04429	Field_D	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGP-GW21	GW-21_Historical_021219	GW-21	2/12/2019			Normal	**38,540**	-	-	-	-	-	-	-	-	-	-	-	-	-	**44,600**	**6.3**	-150	**6.65**	-	-	-	-
PNG LNG	LNGP-GW21	GW-21-EM_Historical_021219	GW-21	2/12/2019			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGP-GW21	PG04429-11	GW21	2/12/2019	SGS EHS PNG Lab	PG04429	Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGP-GW22	GW-22_Historical_021219	GW-22	2/12/2019			Normal	**58,640**	-	-	-	-	-	-	-	-	-	-	-	-	-	**62,600**	**5.895**	-261	**6.89**	-	-	-	-
PNG LNG	LNGP-GW22	GW-22-EM_Historical_021219	GW-22	2/12/2019			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGP-GW22	PG04429-12	Gw22	2/12/2019	SGS EHS PNG Lab	PG04429	Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGP-GW22	PG04429-15	QC1	2/12/2019	SGS EHS PNG Lab	PG04429	Field_D	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGP-GW23	GW-23_Historical_021219	GW-23	2/12/2019			Normal	**16,160**	-	-	-	-	-	-	-	-	-	-	-	-	-	**6750**	**6.78**	-206	**6.85**	-	-	-	-
PNG LNG	LNGP-GW23	GW-23-EM_Historical_021219	GW-23	2/12/2019			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGP-GW23	PG04429-13	GW23	2/12/2019	SGS EHS PNG Lab	PG04429	Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGP-GW24	GW-24_Historical_021219	GW-24	2/12/2019			Normal	**0.33333333**	-	-	-	-	-	-	-	-	-	-	-	-	-	**14,900**	**6.08**	**3333333333**	**6.89**	-	-	-	-
PNG LNG	LNGP-GW24	GW-24-EM_Historical_021219	GW-24	2/12/2019			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGP-GW24	PG04429-14	GW24	2/12/2019	SGS EHS PNG Lab	PG04429	Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGP-MW2	MW-2_Historical_021219	MW-2	2/12/2019			Normal	**5333**	-	-	-	-	-	-	-	-	-	-	-	-	-	**6630**	**6.85**	**32**	**6.96**	-	-	-	-
PNG LNG	LNGP-MW2	MW-2-EM_Historical_021219	MW-2	2/12/2019			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGP-MW2	PG04429-1	MV-2	2/12/2019	SGS EHS PNG Lab	PG04429	Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PNG LNG	QC3	PG04429-17	QC3	2/12/2019	SGS EHS PNG Lab	PG04429	Field_B	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PNG LNG	QC4	PG04429-18	QC4	2/12/2019	SGS EHS PNG Lab	PG04429	Field_B	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGP-GW19	EB1932832009	LNGP-GW19	2/12/2019	ALSE-Brisbane	EB1932832	Normal	-	-	-	**8590**	**473**	**4020**	**12**	**2310**	**920**	**1.08**	**138**	**141**	-	-	-	-	-	-	**5.5**	**201**	**0.002**	**0.078**
PNG LNG	LNGP-GW17	EB1932832008	LNGP-GW17	2/12/2019	ALSE-Brisbane	EB1932832	Normal	-	-	-	**1770**	**76**	**646**	**3**	**600**	**133**	**2.04**	**30.8**	**32.1**	-	-	-	-	-	-	**218**	**26**	<0.001	**0.049**
PNG LNG	LNGP-MW2	EB1932832001	LNGP-MW2	2/12/2019	ALSE-Brisbane	EB1932832	Normal	-	-	-	**6630**	**598**	**612**	**16**	**973**	**3010**	**3.48**	**89**	**95.4**	-	-	-	-	-	-	**1.3**	**277**	<0.001	**0.066**
PNG LNG		EB1932832017	LNGP-QC3	2/12/2019	ALSE-Brisbane	EB1932832	Field_B	-	-	-	<10	<1	<1	<1	<1	<1	-	**0.08**	<0.01	-	-	-	-	-	-	**0.1**	<1	<0.001	<0.001
PNG LNG	LNGL-GW5	EB1932832002	LNGP-GW5	2/12/2019	ALSE-Brisbane	EB1932832	Normal	-	-	-	**6830**	**621**	**3310**	**12**	**1250**	**151**	**0.44**	**102**	**103**	-	-	-	-	-	-	**3.2**	**206**	<0.001	**0.18**
PNG LNG	LNGL-GW12	EB1932832004	LNGP-GW12	2/12/2019	ALSE-Brisbane	EB1932832	Normal	-	-	-	**1990**	**139**	**844**	**4**	**524**	**178**	**1.89**	**32**	**33.3**	-	-	-	-	-	-	**2**	**42**	<0.001	**0.091**
PNG LNG	LNGL-GW14	EB1932832006	LNGP-GW14	2/12/2019	ALSE-Brisbane	EB1932832	Normal	-	-	-	**7990**	**607**	**2660**	**17**	**1660**	**1980**	**0.88**	**124**	**127**	-	-	-	-	-	-	**1.6**	**288**	**0.002**	**0.032**
PNG LNG	LNGL-GW15	EB1932832007	LNGP-GW15	2/12/2019	ALSE-Brisbane	EB1932832	Normal	-	-	-	**4120**	**348**	**1480**	**9**	**975**	**724**	**4.71**	**62**	**68.2**	-	-	-	-	-	-	**1.2**	**99**	<0.001	**0.042**
PNG LNG	LNGL-GW11	EB1932832003	LNGP-GW11	2/12/2019	ALSE-Brisbane	EB1932832	Normal	-	-	-	**3900**	**348**	**1750**	**8**	**814**	**188**	**2.88**	**57.4**	**60.8**	-	-	-	-	-	-	**1.1**	**95**	**0.004**	**0.309**
PNG LNG	LNGL-GW13	EB1932832005	LNGP-GW13	2/12/2019	ALSE-Brisbane	EB1932832	Normal	-	-	-	**4100**	**340**	**1860**	**5**	**947**	**213**	**3.89**	**60.7**	**65.6**	-	-	-	-	-	-	**7.5**	**89**	<0.001	**0.097**
PNG LNG	LNGP-GW22	EB1932832012	LNGP-GW22	2/12/2019	ALSE-Brisbane	EB1932832	Normal	-	-	-	**62,600**	**719**	**33,900**	**280**	**18,500**	**2760**	**0.02**	**1030**	**1030**	-	-	-	-	-	-	**72.8**	**2170**	<0.005	**0.112**
PNG LNG	LNGP-GW22	EB1932832015	LNGP-QC1	2/12/2019	ALSE-Brisbane	EB1932832	Field_D	-	-	-	**62,400**	**748**	**33,900**	**286**	**18,400**	**2750**	**0.17**	**1030**	**1020**	-	-	-	-	-	-	**84.9**	**2170**	<0.005	**0.124**
PNG LNG	LNGP-GW24	EB1932832014	LNGP-GW24	2/12/2019	ALSE-Brisbane	EB1932832	Normal	-	-	-	**14,900**	**1060**	**7470**	**34**	**2800**	**590**	**0.91**	**227**	**223**	-	-	-	-	-	-	**1.7**	**579**	**0.005**	**0.656**
PNG LNG	LNGP-GW21	EB1932832011	LNGP-GW21	2/12/2019	ALSE-Brisbane	EB1932832	Normal	-	-	-	**44,600**	**1750**	**21,800**	**202**	**10,400**	**3080**	**0.05**	**686**	**686**	-	-	-	-	-	-	**4.2**	**1710**	<0.005	**0.091**
PNG LNG		EB1932832018	LNGP-QC4	2/12/2019	ALSE-Brisbane	EB1932832	Field_B	-	-	-	<10	<1	<1	<1	<1	<1	-	**0.08**	<0.01	-	-	-	-	-	-	**0.1**	<1	<0.001	<0.001
PNG LNG	LNGP-GW23	EB1932832013	LNGP-GW23	2/12/2019	ALSE-Brisbane	EB1932832	Normal	-	-	-	**6750**	**252**	**2960**	**26**	**1920**	**808**	**1.47**	**107**	**110**	-	-	-	-	-	-	**1.4**	**166**	**0.002**	**0.199**
PNG LNG	LNGP-GW20	EB1932832010	LNGP-GW20	2/12/2019	ALSE-Brisbane	EB1932832	Normal	-	-	-	**5900**	**489**	**1290**	**11**	**1230**	**2180**	**2.19**	**90.5**	**94.6**	-	-	-	-	-	-	**0.5**	**199**	<0.001	**0.117**
PNG LNG	LNGP-GW20	EB1932832016	LNGP-QC2	2/12/2019	ALSE-Brisbane	EB1932832	Field_D	-	-	-	**6030**	**480**	**1290**	**11**	**1210**	**2180**	**1.6**	**90.5**	**93.4**	-	-	-	-	-	-	**0.7**	**201**	<0.001	**0.123**

Statistical Summary

Number of Results	151	28	34	57	210	57	211	210	211	50	57	57	31	31	164	180	164	180	37	210	211	211
Number of Detects	151	0	34	50	195	53	191	202	196	50	57	53	18	18	164	180	164	180	37	193	63	194
Minimum Concentration	1030	<0.002	1	<10	<1	<1	<1	<1	<1	0.02	0.04	<0.01	<0.1	<0.004	14.04	0.39	-440.5	5.54	0.1	<1	<0.000001	<0.001
Minimum Detect	1030	ND	1	644	2	5	1	1	2	0.02	0.04	0.17	ND	ND	14.04	0.39	ND	5.54	0.1	6	0.000002	0.006
Maximum Concentration	110600	<0.01	84800	67000	1750	33900	495	21700	4130	9.11	1030	1070	<0.1	<0.004	71970	9.9	190.2	9.23	304	2740	0.106	1.4
Maximum Detect	110600	ND	84800	67000	1750	33900	495	21700	4130	9.11	1030	1070	ND	ND	71970	9.9	190.2	9.23	304	2740	0.106	1.4
Average Concentration	15285	0.0024	10516	10223	390	4851	37	2443	958	2.6	160	161	0.05	0.002	9787	4	-65	7.1	37	307	0.0049	0.14
Median Concentration	7152	0.002	5265	5020	384.5	1860	10	973	283	1.65	83.8	76.1	0.05	0.002	4800.5	4	-30.2	7.04	5.5	134	0.0005	0.0945
Standard Deviation	22109	0.0015	18654	16741	302	8758	82	4707	1093	2.6	264	270	0	0	14983	1.8	153	0.39	70	564	0.017	0.16
Number of Guideline Exceedances	0	0	0	47	132	38	142	13	98	0	0	0	13	0	0	0	0	6	12	86	13	2
Number of Guideline Exceedances(Detects Only)	0	0	0	47	132	38	141	13	98	0	0	0	0	0	0	0	0	6	12	86	10	2

																				Metals												Alkalinity				Nutrients									
																				Boron (Filtered)	Cadmium (Filtered)	Chromium (hexavalent) (Filtered)	Cobalt (Filtered)	Copper (Filtered)	Iron (Filtered)	Lead (Filtered)	Manganese (Filtered)	Mercury (Filtered)	Nickel (Filtered)	Silver (Filtered)	Selenium (Filtered)	Tin (Filtered)	Zinc (Filtered)	Alkalinity (total as CaCO3)	Alkalinity (Hydroxide) as CaCO3	Bicarbonate Alkalinity as CaCO3	Carbonate Alkalinity as CaCO3	Ammonia as N	Nitrite + Nitrate as N	Nitrate (as NO3-N)	Nitrite (as NO2-N)	Nitrogen (Total)	Total Kjeldahl Nitrogen (TKN)	Benzene	Toluene
																				mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	ug/L	ug/L
EQL																				**0.05**	**0.0001**	**0.01**	**0.001**	**0.001**	**0.05**	**0.001**	**0.001**	**0.0001**	**0.001**	**0.001**	**0.01**	**0.001**	**0.005**	**1**	**1**	**1**	**1**	**0.01**	**0.01**	**0.01**	**0.01**	**0.1**	**0.1**	**1**	**2**
NHMRC 2008 Recreational Water																				40	0.02			20		0.1	5	0.01	0.2		0.1							10	1					10	8000
PNG Water Quality Criteria for Freshwater Aquatic Ecosystem (guideline only)																				1	0.01	0.05	0.001	1	1	0.005	0.5	0.0002	1	0.05	0.01	0.5	5					Variable	45						
PNG Water Quality Criteria for Marine Aquatic Ecosystem (guideline only)																				2	0.001	0.01	0.001	0.03	1	0.004	2	0.0002	1	0.05	0.01	0.5	5						45						
Environment Permit Criteria (Baseline Range)																				4.6	0.34	0.12	0.03	0.025	17	0.052	3	0.0003	0.04	0.2	0.235	0.22	0.095					7.2		29	1.03	1.3		1	2
PNG DWG (1987)																					0.01			1.5	1	0.1	0.5	0.001		0.05	0.01		15	600						45					
Site_ID	**Location_Code**	**SampleCode**	**Field_ID**	**Sampled_Date_Time**	**Lab_Name**	**Lab_Report_Number**	**Sample_Type**																																				
PNG LNG	LNGP-MW2	MW-2_Historical_160310	MW-2	16/03/2010			Normal	**2.43**	<0.0001	**0.006**	-	**0.002**	**0.34**	<0.001	**1.76**	<0.001	**0.004**	<0.001	<0.01	**0.003**	**0.009**	-	-	-	-	-	-	**0.02**	<0.01	**0.02**	-	<1	<2
PNG LNG	LNGP-MW-1	MW-1_Historical_160310	MW-1	16/03/2010			Normal	<0.001	<0.0001	<0.001	-	<0.001	<0.001	<0.0001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	-	-	-	-	-	-	**0.57**	**0.03**	**0.6**	-	<1	<2
PNG LNG	LNGP-MW-3	MW-3_Historical_160310	MW-3	16/03/2010			Normal	**0.17**	<0.0001	<0.001	-	<0.001	<0.050	<0.001	**0.004**	<0.001	<0.001	<0.001	**0.01**	<0.001	<0.005	-	-	-	-	-	-	**0.15**	<0.01	**0.15**	-	<1	<2
PNG LNG	LNGP-MW-3B	MW-3B_Historical_160310	MW-3B	16/03/2010			Normal	**0.3**	<0.0001	**0.002**	-	<0.001	**0.36**	<0.001	**0.172**	**0.003**	**0.002**	<0.001	**0.03**	**0.001**	**0.014**	-	-	-	-	-	-	**0.03**	**0.06**	**0.09**	-	<1	<2
PNG LNG	LNGP-MW-4	MW-4_Historical_160310	MW-4	16/03/2010			Normal	**0.48**	<0.0001	<0.001	-	<0.001	<0.050	<0.001	<0.001	**0.001**	<0.001	<0.001	<0.010	**0.002**	<0.005	-	-	-	-	-	-	**0.44**	<0.01	**0.44**	-	<1	<2
PNG LNG	LNGP-MW-4	MW-4_Historical_121013	MW-4	12/10/2013			Normal	**4.6**	<0.0001	<0.005	<0.005	<0.001	**1.8**	<0.001	1	<0.0001	<0.001	<0.050	<0.003	<0.005	<0.005	-	-	-	-	0.3	-	**29**	-	-	-	-	-
PNG LNG	LNGP-MW-4	MW-4_Historical_100814	MW-4	10/08/2014			Normal	**0.45**	<0.0001	<0.01	<0.001	<0.001	<0.050	<0.001	<0.001	<0.0001	<0.001	<0.001	<0.010	<0.001	<0.005	-	-	-	-	**0.07**	-	**0.72**	<0.01	**0.11**	-	<1	<2
PNG LNG	LNGP-MW-4	MW-4_Historical_080315	MW-4	8/03/2015			Normal	**0.46**	<0.0001	<0.01	<0.001	<0.001	<0.050	<0.001	**0.002**	<0.0001	<0.001	<0.001	<0.010	<0.001	<0.005	-	-	-	-	**1.36**	-	**0.54**	<0.01	**0.08**	-	<1	<2
PNG LNG	LNGP-MW-4	MW-4_Historical_160815	MW-4	16/08/2015			Normal	**0.48**	<0.0001	<0.01	<0.001	<0.001	<0.050	<0.001	**0.026**	<0.0001	<0.001	<0.001	<0.010	<0.001	<0.005	-	-	-	-	**8.55**	-	**0.03**	-	-	-	<1	<2
PNG LNG	LNGP-MW-4	MW-4_Historical_130316	MW-4	13/03/2016			Normal	**0.59**	<0.0001	<0.01	<0.001	<0.001	<0.050	<0.001	<0.001	<0.0001	<0.001	<0.001	<0.010	<0.001	<0.005	-	-	-	-	**1.36**	-	**0.54**	-	-	-	<1	<2
PNG LNG	LNGP-MW-4	MW-4_Historical_170417	MW-4	17/04/2017			Normal	**0.75**	<0.0001	<0.01	<0.001	<0.001	<0.050	<0.001	<0.001	<0.0001	<0.001	**0.002**	<0.010	<0.001	**0.008**	-	-	-	-	**0.03**	-	**0.09**	-	-	-	<1	<2
PNG LNG	LNGP-MW-4A	MW-4A_Historical_160310	MW-4A	16/03/2010			Normal	**3.61**	**0.001**	**0.018**	-	**8**	**1.37**	<0.001	**1.55**	<0.001	**0.016**	<0.001	<0.010	<0.001	<0.005	-	-	-	-	**-**	-	**0.27**	**1.03**	**1.3**	-	<1	<2
PNG LNG	LNGP-MW-5	MW-5_Historical_160310	MW-5	16/03/2010			Normal	**0.36**	<0.0001	<0.001	-	**2**	**0.11**	<0.001	**0.03**	**0.001**	<0.001	<0.001	**0.08**	**0.002**	**0.006**	-	-	-	-	**-**	-	**0.79**	<0.01	**0.79**	-	<1	<2
PNG LNG	LNGP-MW-5A	MW-5A_Historical_160310	MW-5A	16/03/2010			Normal	**1.82**	<0.0001	**0.005**	-	**5**	**0.83**	<0.001	**0.864**	<0.001	**0.005**	<0.001	<0.010	**0.002**	**0.095**	-	-	-	-	**-**	-	<0.01	<0.01	<0.01	-	<1	<2
PNG LNG	LNGP-MW-6_NTH	MW-6_NTH_Historical_160310	MW-6_NTH	16/03/2010			Normal	**0.13**	<0.0001	<0.001	-	**10**	**0.12**	<0.001	**0.072**	<0.001	**0.01**	<0.001	**0.01**	**0.002**	**0.018**	-	-	-	-	**-**	-	**0.63**	**0.03**	**0.66**	-	<1	<2
PNG LNG	LNGP-MW-6_STH (MW6A)	MW-6_STH (MW6A)_Historical_16031	MW-6_STH (MW6A)	16/03/2010			Normal	**1.24**	<0.0001	<0.0001	-	<0.0001	<0.050	<0.001	<0.001	<0.001	<0.001	<0.001	<0.010	<0.001	<0.005	-	-	-	-	**-**	-	**0.04**	**0.22**	**0.26**	-	<1	<2
PNG LNG	LNGP-MW-7	MW-7_Historical_160310	MW-7	16/03/2010			Normal	**0.24**	**0.018**	<0.001	-	<0.001	**0.13**	<0.001	**0.004**	<0.001	<0.001	<0.001	<0.010	<0.001	**0.009**	-	-	-	-	**-**	-	**0.07**	<0.01	**0.07**	-	<1	<2
PNG LNG	LNGP-MW-8	MW-8_Historical_160310	MW-8	16/03/2010			Normal	**0.14**	<0.0001	<0.001	-	**0.001**	**0.06**	<0.001	**0.147**	**0.002**	<0.001	<0.001	<0.010	<0.001	<0.005	-	-	-	-	**-**	-	**0.03**	<0.01	**0.03**	-	<1	<2
PNG LNG	LNGP-GW-16	GW-16_Historical_131012	GW-16	13/10/2012			Normal	**0.4**	**0.04**	**0.08**	**0.03**	**0.006**	**0.098**	**0.046**	**0.34**	<0.0001	**0.04**	<0.050	**0.023**	**0.22**	**0.04**	-	-	-	-	**0.2**	-	<0.3	-	-	-	-	-
PNG LNG	LNGP-GW-16	GW-16_Historical_121013	GW-16	12/10/2013			Normal	**0.72**	<0.0001	<0.005	<0.005	<0.001	**17**	<0.001	**0.53**	<0.0001	<0.001	<0.050	<0.003	<0.005	<0.005	-	-	-	-	**1.2**	-	**15**	-	-	-	-	-
PNG LNG	LNGL-MW-9	MW-9_Historical_160310	MW-9	16/03/2010			Normal	**0.12**	<0.0001	<0.01	-	<0.001	<0.050	<0.001	**0.047**	<0.0001	<0.001	<0.001	<0.010	<0.001	**0.018**	-	-	-	-	**0.04**	-	**0.5**	<0.01	**0.07**	-	<1	<2
PNG LNG	LNGL-GW-6	GW-6_Historical_150611	GW-6	15/06/2011			Normal	**1.1**	<0.0001	<0.005	<0.005	**0.002**	**4.6**	**0.002**	**0.076**	<0.0001	**0.002**	<0.0005	<0.003	<0.005	<0.005	-	-	-	-	**0.04**	-	**0.9**	-	-	-	-	-
PNG LNG	LNGL-GW-6	GW-6_Historical_080811	GW-6	8/08/2011			Normal	**-**	-	-	-	-	**-**	-	**-**	-	-	-	-	-	-	-	-	-	-	-	-	**-**	-	-	-	-	-
PNG LNG	LNGL-GW-7	GW-7_Historical_150611	GW-7	15/06/2011			Normal	**0.53**	<0.0005	<0.005	<0.005	<0.005	**0.014**	<0.005	**0.18**	<0.0002	**0.006**	<0.0005	**0.017**	<0.005	**0.017**	-	-	-	-	<0.01	-	**0.8**	-	-	-	-	-
PNG LNG	LNGL-GW-7	GW-7_Historical_080811	GW-7	8/08/2011			Normal	**-**	-	-	-	-	**-**	-	**-**	-	-	-	-	-	-	-	-	-	-	-	-	**-**	-	-	-	-	-
PNG LNG	LNGL-GW-8	GW-8_Historical_150611	GW-8	15/06/2011			Normal	**0.35**	<0.0005	<0.005	<0.005	<0.005	**0.017**	<0.005	**0.14**	<0.0001	**0.012**	<0.0005	<0.015	**0.005**	**0.005**	-	-	-	-	**0.21**	-	**0.8**	-	-	-	-	-
PNG LNG	LNGL-GW-8	GW-8_Historical_080811	GW-8	8/08/2011			Normal	**-**	-	-	-	-	**-**	-	**-**	-	-	-	-	-	-	-	-	-	-	-	-	**-**	-	-	-	-	-
PNG LNG	LNGL-GW-9	GW-9_Historical_150611	GW-9	15/06/2011			Normal	**1.6**	<0.001	<0.005	**0.007**	**0.005**	**0.086**	<0.005	**1.2**	<0.0001	<0.005	<0.0005	<0.015	<0.005	**0.031**	-	-	-	-	<0.01	-	**3.9**	-	-	-	-	-
PNG LNG	LNGL-GW-9	GW-9_Historical_080811	GW-9	8/08/2011			Normal	**-**	-	-	-	-	**-**	-	**-**	-	-	-	-	-	-	-	-	-	-	-	-	**-**	-	-	-	-	-
PNG LNG	LNGL-GW-10	GW-10_Historical_150611	GW-10	15/06/2011			Normal	**1.8**	<0.0002	<0.005	<0.002	<0.002	**0.24**	<0.002	**0.09**	<0.0001	**0.002**	<0.0005	**0.049**	<0.005	**0.032**	-	-	-	-	**0.07**	-	**0.6**	-	-	-	-	-
PNG LNG	LNGL-GW-10	GW-10_Historical_080811	GW-10	8/08/2011			Normal	-	-	-	-	-	-	-	**-**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGL-GW5	GW-5_Historical_150611	GW-5	15/06/2011			Normal	**0.23**	<0.0002	<0.005	<0.002	<0.002	<0.005	<0.002	**0.026**	<0.0001	**0.002**	<0.0005	**0.008**	<0.005	**0.011**	-	-	-	-	**0.02**	-	**0.6**	-	-	-	-	-
PNG LNG	LNGL-GW5	GW-5-SGS_Historical_150611	GW-5	15/06/2011			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGL-GW5	GW-5_Historical_080811	GW-5	8/08/2011			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGL-GW5	GW-5-SGS_Historical_080811	GW-5	8/08/2011			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGL-GW11	GW-11_Historical_131012	GW-11	13/10/2012			Normal	**0.5**	**0.04**	**0.06**	**0.02**	**0.005**	**0.34**	**0.045**	**0.042**	<0.0001	**0.04**	**0.07**	**0.041**	**0.22**	**0.04**	-	-	-	-	**0.3**	-	**0.3**	-	-	-	-	-
PNG LNG	LNGL-GW11	GW-11-SGS_Historical_131012	GW-11	13/10/2012			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGL-GW12	GW-12_Historical_131012	GW-12	13/10/2012			Normal	**0.3**	**0.33**	**0.06**	**0.03**	**0.025**	**1.2**	**0.049**	**0.63**	<0.0001	**0.04**	<0.05	**0.023**	**0.22**	**0.04**	-	-	-	-	**3**	-	**0.3**	-	-	-	-	-
PNG LNG	LNGL-GW12	GW-12-SGS_Historical_131012	GW-12	13/10/2012			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGL-GW13	GW-13_Historical_131012	GW-13	13/10/2012			Normal	**0.6**	**0.33**	**0.06**	**0.03**	**0.005**	**1.1**	**0.052**	**1.1**	<0.0001	**0.04**	<0.05	**0.017**	**0.21**	**0.04**	-	-	-	-	**0.3**	-	**4.3**	-	-	-	-	-
PNG LNG	LNGL-GW13	GW-13-SGS_Historical_131012	GW-13	13/10/2012			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGL-GW14	GW-14_Historical_131012	GW-14	13/10/2012			Normal	**0.5**	**0.34**	**0.08**	**0.02**	**0.004**	**0.59**	**0.041**	**0.44**	<0.0001	**0.04**	<0.05	**0.019**	**0.21**	**0.04**	-	-	-	-	**2**	-	**1**	-	-	-	-	-
PNG LNG	LNGL-GW14	GW-14-SGS_Historical_131012	GW-14	13/10/2012			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGL-GW15	GW-15_Historical_131012	GW-15	13/10/2012			Normal	**0.2**	**0.33**	**0.04**	**0.03**	**0.011**	**0.79**	**0.047**	**0.11**	<0.0001	**0.04**	<0.05	**0.026**	**0.22**	**0.04**	-	-	-	-	**4**	-	<0.3	-	-	-	-	-
PNG LNG	LNGL-GW15	GW-15-SGS_Historical_131012	GW-15	13/10/2012			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGP-GW17	GW-17_Historical_131012	GW-17	13/10/2012			Normal	**1.2**	**0.04**	**0.08**	**0.03**	**0.005**	**0.086**	**0.037**	**1.5**	<0.0001	**0.04**	<0.05	**0.032**	**0.21**	**0.04**	-	-	-	-	**0.6**	-	**0.9**	-	-	-	-	-
PNG LNG	LNGP-GW17	GW-17-SGS_Historical_131012	GW-17	13/10/2012			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGP-GW19	GW-19_Historical_131012	GW-19	13/10/2012			Normal	**1.2**	**0.04**	**0.12**	**0.02**	**0.008**	**1.8**	**0.032**	**0.59**	<0.0001	**0.04**	<0.05	**0.02**	**0.22**	**0.04**	-	-	-	-	**1.2**	-	<0.3	-	-	-	-	-
PNG LNG	LNGP-GW19	GW-19-SGS_Historical_131012	GW-19	13/10/2012			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGP-GW20	GW-20_Historical_131012	GW-20	13/10/2012			Normal	**1.3**	**0.04**	**0.12**	**0.03**	**0.003**	**0.21**	**0.003**	**2.7**	<0.0001	**0.02**	**0.2**	**0.023**	**0.21**	**0.04**	-	-	-	-	**0.4**	-	<0.3	-	-	-	-	-
PNG LNG	LNGP-GW20	GW-20-SGS_Historical_131012	GW-20	13/10/2012			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGP-GW21	GW-21_Historical_131012	GW-21	13/10/2012			Normal	0.03	**0.04**	**0.02**	**0.03**	**0.006**	**0.08**	**0.047**	**0.026**	<0.0001	**0.04**	<0.05	0.008	**0.22**	**0.02**	-	-	-	-	**0.6**	-	**2.7**	-	-	-	-	-
PNG LNG	LNGP-GW21	GW-21-SGS_Historical_131012	GW-21	13/10/2012			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGP-GW22	GW-22_Historical_131012	GW-22	13/10/2012			Normal	0.004	**0.04**	**0.02**	**0.02**	**0.007**	**0.091**	**0.044**	**0.024**	<0.0001	**0.04**	<0.05	**0.013**	**0.21**	**0.02**	-	-	-	-	**7.2**	-	**1.6**	-	-	-	-	-
PNG LNG	LNGP-GW22	GW-22-SGS_Historical_131012	GW-22	13/10/2012			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGP-GW17	GW-17_Historical_121013	GW-17	12/10/2013			Normal	**0.31**	<0.0001	<0.005	<0.005	<0.001	<0.005	<0.001	**0.32**	<0.0001	<0.001	<0.05	<0.003	<0.005	<0.005	-	-	-	-	**0.26**	-	**1.1**	-	-	-	-	-
PNG LNG	LNGP-GW17	GW-17-SGS_Historical_121013	GW-17	12/10/2013			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGP-GW19	GW-19_Historical_121013	GW-19	12/10/2013			Normal	**0.48**	<0.0001	<0.005	<0.005	<0.001	**0.56**	<0.001	**0.61**	<0.0001	<0.001	<0.05	<0.003	<0.005	<0.005	-	-	-	-	**0.09**	-	**0.5**	-	-	-	-	-
PNG LNG	LNGP-GW19	GW-19-SGS_Historical_121013	GW-19	12/10/2013			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGP-GW20	GW-20_Historical_121013	GW-20	12/10/2013			Normal	**0.89**	<0.0001	<0.005	<0.005	<0.001	**0.05**	<0.001	**0.63**	<0.0001	<0.001	<0.05	<0.003	<0.005	<0.005	-	-	-	-	**0.01**	-	**1.1**	-	-	-	-	-
PNG LNG	LNGP-GW20	GW-20-SGS_Historical_121013	GW-20	12/10/2013			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGP-GW21	GW-21_Historical_121013	GW-21	12/10/2013			Normal	**2.3**	<0.0001	<0.005	<0.005	<0.001	<0.005	<0.001	**3.2**	<0.0001	<0.001	<0.05	<0.003	<0.005	<0.005	-	-	-	-	0.003	-	**5.1**	-	-	-	-	-
PNG LNG	LNGP-GW21	GW-21-SGS_Historical_121013	GW-21	12/10/2013			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Site_ID	Location_Code	SampleCode	Field_ID	Sampled_Date_Time	Lab_Name	Lab_Report_Number	Sample_Type	Metals														Alkalinity				Nutrients							
								Boron (Filtered)	Cadmium (Filtered)	Chromium (hexavalent) (Filtered)	Cobalt (Filtered)	Copper (Filtered)	Iron (Filtered)	Lead (Filtered)	Manganese (Filtered)	Mercury (Filtered)	Nickel (Filtered)	Silver (Filtered)	Selenium (Filtered)	Tin (Filtered)	Zinc (Filtered)	Alkalinity (total as CaCO3)	Alkalinity (Hydroxide) as CaCO3	Bicarbonate Alkalinity as CaCO3	Carbonate Alkalinity as CaCO3	Ammonia as N	Nitrite + Nitrate as N	Nitrate (as NO3-N)	Nitrite (as NO2-N)	Nitrogen (Total)	Total Kjeldahl Nitrogen (TKN)	Benzene	Toluene
								mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	ug/L	ug/L
EQL								0.05	0.0001	0.01	0.001	0.001	0.05	0.001	0.001	0.0001	0.001	0.001	0.01	0.001	0.005	1	1	1	1	0.01	0.01	0.01	0.01	0.1	0.1	1	2
NHMRC 2008 Recreational Water								40	0.02			20		0.1	5	0.01	0.2		0.1									10	1			10	8000
PNG Water Quality Criteria for Freshwater Aquatic Ecosystem (guideline only)								1	0.01	0.05	0.001	1	1	0.005	0.5	0.0002	1	0.05	0.01	0.5	5					Variable	45						
PNG Water Quality Criteria for Marine Aquatic Ecosystem (guideline only)								2	0.001	0.01	0.001	0.03	1	0.004	2	0.0002	1	0.05	0.01	0.5	5						45						
Environment Permit Criteria (Baseline Range)								4.6	0.34	0.12	0.03	0.025	17	0.052	3	0.0003	0.04	0.2	0.235	0.22	0.095					7.2		29	1.03	1.3		1	2
PNG DWG (1987)									0.01			1.5	1	0.1	0.5	0.001		0.05	0.01		15	600						45					
PNG LNG	LNGP-GW22	GW-22_Historical_121013	GW-22	12/10/2013			Normal	0.99	<0.0001	<0.005	<0.005	<0.001	1.3	<0.001	0.033	<0.0001	<0.001	<0.05	<0.003	<0.005	<0.005	-	-	-	-	0.08	-	0.9	-	-	-	-	-
PNG LNG	LNGP-GW22	GW-22-SGS_Historical_121013	GW-22	12/10/2013			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGL-GW11	GW-11_Historical_100814	GW-11	10/08/2014			Normal	0.27	<0.0001	<0.01	<0.001	<0.001	<0.05	<0.001	0.104	<0.0001	<0.001	<0.001	<0.01	<0.001	0.007	-	-	-	-	0.02	-	0.64	<0.01	0.57	-	<1	<2
PNG LNG	LNGL-GW11	GW-11-SGS_Historical_100814	GW-11	10/08/2014			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGL-GW12	GW-12_Historical_100814	GW-12	10/08/2014			Normal	0.19	<0.0001	<0.01	<0.001	<0.001	<0.05	<0.001	0.002	<0.0001	<0.001	<0.001	<0.01	<0.001	<0.005	-	-	-	-	1.36	-	0.09	<0.01	0.02	-	<1	<2
PNG LNG	LNGL-GW12	GW-12-SGS_Historical_100814	GW-12	10/08/2014			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGL-GW13	GW-13_Historical_100814	GW-13	10/08/2014			Normal	0.47	<0.0001	<0.01	<0.001	<0.001	<0.05	<0.001	0.006	<0.0001	<0.001	<0.001	<0.01	<0.001	0.005	-	-	-	-	0.07	-	0.54	<0.01	0.61	-	<1	<2
PNG LNG	LNGL-GW13	GW-13-SGS_Historical_100814	GW-13	10/08/2014			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGL-GW14	GW-14_Historical_100814	GW-14	10/08/2014			Normal	1.78	<0.0001	<0.01	<0.001	<0.001	<0.05	<0.001	0.861	<0.0001	<0.001	<0.001	<0.01	<0.001	<0.005	-	-	-	-	0.07	-	1.1	<0.01	<0.01	-	<1	<2
PNG LNG	LNGL-GW14	GW-14-SGS_Historical_100814	GW-14	10/08/2014			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGL-GW15	GW-15_Historical_100814	GW-15	10/08/2014			Normal	1.12	<0.0001	<0.01	<0.001	<0.001	<0.05	<0.001	0.538	<0.0001	<0.001	<0.001	<0.01	<0.001	0.005	-	-	-	-	0.07	-	0.72	0.01	0.01	-	<1	<2
PNG LNG	LNGL-GW15	GW-15-SGS_Historical_100814	GW-15	10/08/2014			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGL-GW5	GW-5_Historical_100814	GW-5	10/08/2014			Normal	0.45	<0.0001	<0.01	0.002	<0.001	<0.05	<0.001	0.837	<0.0001	<0.001	<0.001	<0.01	<0.001	0.009	-	-	-	-	0.03	-	0.71	<0.01	0.25	-	<1	<2
PNG LNG	LNGL-GW5	GW-5-SGS_Historical_100814	GW-5	10/08/2014			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGP-GW17	GW-17_Historical_100814	GW-17	10/08/2014			Normal	0.33	<0.0001	<0.01	<0.001	<0.001	<0.05	<0.001	<0.001	<0.0001	<0.001	<0.001	<0.001	<0.001	<0.005	-	-	-	-	0.03	-	0.12	<0.01	0.05	-	<1	<2
PNG LNG	LNGP-GW17	GW-17-SGS_Historical_100814	GW-17	10/08/2014			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGP-GW19	GW-19_Historical_100814	GW-19	10/08/2014			Normal	1.78	<0.0001	<0.01	0.002	<0.001	<0.05	<0.001	0.486	<0.0001	<0.001	<0.001	<0.001	<0.001	0.01	-	-	-	-	0.08	-	0.07	<0.01	<0.01	-	<1	<2
PNG LNG	LNGP-GW19	GW-19-SGS_Historical_100814	GW-19	10/08/2014			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGP-GW20	GW-20_Historical_100814	GW-20	10/08/2014			Normal	0.3	<0.0001	<0.01	0.001	<0.001	<0.05	<0.001	0.051	<0.0001	<0.001	<0.001	0.14	<0.001	<0.005	-	-	-	-	0.09	-	0.01	0.03	0.1	-	<1	<2
PNG LNG	LNGP-GW21	GW-21_Historical_100814	GW-21	10/08/2014			Normal	1.44	<0.0001	<0.01	<0.001	<0.001	<0.05	<0.001	1.48	<0.0001	<0.001	<0.001	<0.001	<0.001	0.009	-	-	-	-	0.02	-	0.64	<0.01	<0.01	-	<1	<2
PNG LNG	LNGP-GW21	GW-21-SGS_Historical_100814	GW-21	10/08/2014			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGP-GW22	GW-22_Historical_100814	GW-22	10/08/2014			Normal	2.38	<0.0001	<0.01	<0.001	<0.001	<0.05	<0.001	0.837	<0.0001	<0.001	<0.001	<0.01	<0.001	<0.05	-	-	-	-	0.09	-	0.01	<0.01	<0.01	-	<1	<2
PNG LNG	LNGP-MW2	MW-2_Historical_100814	MW-2	10/08/2014			Normal	2.67	0.0004	<0.01	0.004	0.002	<0.05	<0.001	1.66	<0.0001	0.001	<0.001	<0.01	0.003	0.01	-	-	-	-	0.35	-	0.01	<0.01	0.01	-	<1	<2
PNG LNG	LNGP-MW2	MW-2-SGS_Historical_100814	MW-2	10/08/2014			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGL-GW11	GW-11_Historical_080315	GW-11	8/03/2015			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGL-GW11	GW-11-SGS_Historical_080315	GW-11	8/03/2015			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGL-GW12	GW-12_Historical_080315	GW-12	8/03/2015			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGL-GW12	GW-12-SGS_Historical_080315	GW-12	8/03/2015			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGL-GW13	GW-13_Historical_080315	GW-13	8/03/2015			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGL-GW13	GW-13-SGS_Historical_080315	GW-13	8/03/2015			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGL-GW14	GW-14_Historical_080315	GW-14	8/03/2015			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGL-GW14	GW-14-SGS_Historical_080315	GW-14	8/03/2015			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGL-GW15	GW-15_Historical_080315	GW-15	8/03/2015			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGL-GW15	GW-15-SGS_Historical_080315	GW-15	8/03/2015			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGL-GW5	GW-5_Historical_080315	GW-5	8/03/2015			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGL-GW5	GW-5-SGS_Historical_080315	GW-5	8/03/2015			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGP-GW17	GW-17_Historical_080315	GW-17	8/03/2015			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGP-GW17	GW-17-SGS_Historical_080315	GW-17	8/03/2015			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGP-GW19	GW-19_Historical_080315	GW-19	8/03/2015			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGP-GW19	GW-19-SGS_Historical_080315	GW-19	8/03/2015			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGP-GW21	GW-21_Historical_080315	GW-21	8/03/2015			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGP-GW21	GW-21-SGS_Historical_080315	GW-21	8/03/2015			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGP-MW2	MW-2_Historical_080315	MW-2	8/03/2015			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGP-MW2	MW-2-SGS_Historical_080315	MW-2	8/03/2015			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PNG LNG		EB1514750012	QC1	8/03/2015	ALSE-Brisbane	EB1514750	Normal	0.6	<0.0001	<0.01	<0.001	<0.001	<0.05	<0.001	<0.001	<0.0001	0.002	<0.001	<0.01	<0.001	<0.005	-	-	-	-	<0.01	<0.01	<0.01	<0.01	-	-	<1	<2
PNG LNG		EB1514750013	QC2	8/03/2015	ALSE-Brisbane	EB1514750	Normal	0.63	<0.0001	<0.01	<0.001	<0.001	<0.05	<0.001	<0.001	<0.0001	0.002	<0.001	<0.01	<0.001	<0.005	-	-	-	-	0.02	0.02	0.02	<0.01	-	-	<1	<2
PNG LNG		EB1514750014	QC3	8/03/2015	ALSE-Brisbane	EB1514750	Normal	0.1	<0.0001	<0.01	<0.001	0.002	<0.05	<0.001	<0.001	<0.0001	0.002	<0.001	<0.01	<0.001	<0.005	-	-	-	-	0.04	0.1	0.1	<0.01	-	-	<1	<2
PNG LNG		EB1514750015	QC4	8/03/2015	ALSE-Brisbane	EB1514750	Normal	0.16	<0.0001	<0.01	<0.001	0.002	<0.05	<0.001	<0.001	<0.0001	0.003	<0.001	<0.01	<0.001	<0.005	-	-	-	-	0.04	0.02	0.02	<0.01	-	-	<1	<2
PNG LNG	LNGL-GW11	EB1514750009	LNGP Landfill GW11	8/03/2015	ALSE-Brisbane	EB1514750	Normal	0.6	<0.0001	<0.01	0.002	0.002	<0.05	<0.001	0.038	<0.0001	0.009	<0.001	<0.01	<0.001	<0.005	-	-	-	-	0.09	0.33	0.33	<0.01	-	-	<1	<2
PNG LNG	LNGL-GW12	EB1514750007	LNGP Landfill GW12	8/03/2015	ALSE-Brisbane	EB1514750	Normal	0.09	<0.0001	<0.01	<0.001	0.002	<0.05	<0.001	0.117	<0.0001	0.007	<0.001	<0.01	<0.001	0.011	-	-	-	-	0.06	0.1	0.1	<0.01	-	-	<1	<2
PNG LNG	LNGL-GW13	EB1514750008	LNGP Landfill GW13	8/03/2015	ALSE-Brisbane	EB1514750	Normal	0.39	<0.0001	<0.01	<0.001	<0.001	<0.05	<0.001	0.003	<0.0001	0.003	<0.001	0.02	<0.001	<0.005	-	-	-	-	0.07	0.65	0.65	<0.01	-	-	<1	<2
PNG LNG	LNGL-GW14	EB1514750010	LNGP Landfill GW14	8/03/2015	ALSE-Brisbane	EB1514750	Normal	1.54	<0.0001	<0.01	0.002	<0.001	3.13	<0.001	0.478	<0.0001	0.003	<0.001	<0.01	<0.001	<0.005	-	-	-	-	0.09	0.03	0.03	<0.01	-	-	<1	<2
PNG LNG	LNGL-GW15	EB1514750011	LNGP Landfill GW15	8/03/2015	ALSE-Brisbane	EB1514750	Normal	0.49	<0.0001	<0.01	<0.001	<0.001	<0.05	<0.001	0.082	<0.0001	0.003	<0.001	<0.01	<0.001	<0.005	-	-	-	-	0.08	0.02	0.02	<0.01	-	-	<1	<2
PNG LNG	LNGL-GW5	EB1514750006	LNGP Landfill GW5	8/03/2015	ALSE-Brisbane	EB1514750	Normal	0.37	<0.0001	<0.01	0.004	<0.001	<0.05	<0.001	1.03	<0.0001	0.004	<0.001	<0.01	<0.001	<0.005	-	-	-	-	0.09	0.38	0.38	<0.01	-	-	<1	<2
PNG LNG	LNGP-GW17	EB1514750003	LNGP Plant Site GW17	8/03/2015	ALSE-Brisbane	EB1514750	Normal	0.1	<0.0001	<0.01	<0.001	0.002	<0.05	<0.001	<0.001	<0.0001	0.002	<0.001	<0.01	<0.001	<0.005	-	-	-	-	0.04	0.13	0.13	<0.01	-	-	<1	<2
PNG LNG	LNGP-GW19	EB1514750004	LNGP Plant Site GW19	8/03/2015	ALSE-Brisbane	EB1514750	Normal	0.18	<0.0001	<0.01	<0.001	0.002	<0.05	<0.001	0.003	<0.0001	0.002	<0.001	<0.01	<0.001	<0.005	-	-	-	-	0.06	0.02	0.02	<0.01	-	-	<1	<2
PNG LNG	LNGP-GW21	EB1514750005	LNGP Plant Site GW21	8/03/2015	ALSE-Brisbane	EB1514750	Normal	0.54	<0.0001	<0.01	0.001	<0.001	<0.05	<0.001	0.281	<0.0001	0.005	<0.001	<0.01	0.001	<0.005	-	-	-	-	0.36	0.04	0.04	<0.01	-	-	<1	<2
PNG LNG	LNGP-MW2	EB1514750001	LNGP Plant Site MW2	8/03/2015	ALSE-Brisbane	EB1514750	Normal	1.46	0.0002	<0.01	<0.001	<0.001	<0.05	<0.001	0.688	<0.0001	0.002	<0.001	<0.01	0.002	<0.005	-	-	-	-	0.3	0.06	0.06	<0.01	-	-	<1	<2
PNG LNG	LNGP-MW4	EB1514750002	LNGP Plant Site MW4	8/03/2015	ALSE-Brisbane	EB1514750	Normal	0.46	<0.0001	<0.01	<0.001	<0.001	<0.05	<0.001	0.002	<0.0001	0.002	<0.001	<0.01	<0.001	<0.005	-	-	-	-	0.05	0.08	0.08	<0.01	-	-	<1	<2
PNG LNG	LNGP-GW20	GW-20_Historical_200415	GW-20	20/04/2015			Normal	0.26	<0.0001	<0.01	0.001	<0.001	<0.05	<0.001	0.173	<0.0001	<0.001	<0.001	0.14	<0.001	0.006	-	-	-	-	0.07	-	0.72	<0.01	0.09	-	<1	<2
PNG LNG	LNGP-GW20	GW-20-SGS_Historical_200415	GW-20	20/04/2015			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGP-GW22	GW-22_Historical_260415	GW-22	26/04/2015			Normal	2.27	<0.0001	<0.01	0.001	<0.001	<0.05	<0.001	0.67	<0.0001	<0.001	<0.001	<0.01	<0.001	<0.05	-	-	-	-	0.07	-	0.72	<0.01	0.05	-	<1	<2
PNG LNG	LNGP-GW22	GW-22-SGS_Historical_260415	GW-22	26/04/2015			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

								Metals														Alkalinity				Nutrients							
								Boron (Filtered)	Cadmium (Filtered)	Chromium (hexavalent) (Filtered)	Cobalt (Filtered)	Copper (Filtered)	Iron (Filtered)	Lead (Filtered)	Manganese (Filtered)	Mercury (Filtered)	Nickel (Filtered)	Silver (Filtered)	Selenium (Filtered)	Tin (Filtered)	Zinc (Filtered)	Alkalinity (total as CaCO3)	Alkalinity (Hydroxide) as CaCO3	Bicarbonate Alkalinity as CaCO3	Carbonate Alkalinity as CaCO3	Ammonia as N	Nitrite + Nitrate as N	Nitrate (as NO3-N)	Nitrite (as NO2-N)	Nitrogen (Total)	Total Kjeldahl Nitrogen (TKN)	Benzene	Toluene
								mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	ug/L	ug/L
EQL								**0.05**	**0.0001**	**0.01**	**0.001**	**0.001**	**0.05**	**0.001**	**0.001**	**0.0001**	**0.001**	**0.001**	**0.01**	**0.001**	**0.005**	**1**	**1**	**1**	**1**	**0.01**	**0.01**	**0.01**	**0.01**	**0.1**	**0.1**	**1**	**2**
NHMRC 2008 Recreational Water								40	0.02			20		0.1	5	0.01	0.2		0.1									10	1			10	8000
PNG Water Quality Criteria for Freshwater Aquatic Ecosystem (guideline only)								1	0.01	0.05	0.001	1	1	0.005	0.5	0.0002	1	0.05	0.01	0.5	5					Variable	45						
PNG Water Quality Criteria for Marine Aquatic Ecosystem (guideline only)								2	0.001	0.01	0.001	0.03	1	0.004	2	0.0002	1	0.05	0.01	0.5	5						45						
Environment Permit Criteria (Baseline Range)								4.6	0.34	0.12	0.03	0.025	17	0.052	3	0.0003	0.04	0.2	0.235	0.22	0.095					7.2		29	1.03	1.3		1	2
PNG DWG (1987)									0.01			1.5	1	0.1	0.5	0.001		0.05	0.01		15	600						45					
Site_ID	**Location_Code**	**SampleCode**	**Field_ID**	**Sampled_Date_Time**	**Lab_Name**	**Lab_Report_Number**	**Sample_Type**																										
PNG LNG		EB1526355015	QC2	15/08/2015	ALSE-Brisbane	EB1526355	Normal	**0.22**	<0.0001	<0.01	<0.001	<0.001	**0.32**	<0.001	**0.004**	<0.0001	<0.001	<0.001	**0.01**	<0.001	**0.01**	-	-	-	-	**0.07**	-	**0.04**	-	-	-	<1	<2
PNG LNG	LNGL-GW12	EB1526355009	LNGP Landfill GW12	15/08/2015	ALSE-Brisbane	EB1526355	Normal	**0.09**	<0.0001	<0.01	<0.001	<0.001	**0.84**	<0.001	**0.339**	<0.0001	<0.001	<0.001	<0.01	<0.001	<0.005	-	-	-	-	**0.15**	-	**0.19**	-	-	-	<1	<2
PNG LNG	LNGL-GW14	EB1526355012	LNGP Landfill GW14	15/08/2015	ALSE-Brisbane	EB1526355	Normal	**1.19**	<0.0001	<0.01	**0.004**	<0.001	**3.16**	<0.001	**0.406**	<0.0001	<0.005	<0.001	**0.03**	<0.001	**0.007**	-	-	-	-	**0.04**	-	**0.11**	-	-	-	<1	<2
PNG LNG	LNGP-GW17	EB1526355003	LNGP Plant Site GW17	15/08/2015	ALSE-Brisbane	EB1526355	Normal	**0.24**	**0.0003**	<0.01	<0.001	**0.001**	**0.35**	<0.001	**0.006**	<0.0001	<0.001	**0.002**	**0.01**	<0.001	**0.008**	-	-	-	-	**0.08**	-	**0.05**	-	-	-	<1	<2
PNG LNG	LNGP-GW19	EB1526355004	LNGP Plant Site GW19	15/08/2015	ALSE-Brisbane	EB1526355	Normal	**0.68**	<0.0001	<0.01	**0.001**	<0.001	**2.11**	<0.001	**0.323**	<0.0001	<0.001	**0.001**	**0.03**	<0.001	**0.007**	-	-	-	-	<0.01	-	**0.12**	-	-	-	<1	<2
PNG LNG	LNGP-GW20	EB1526355005	LNGP Plant Site GW20	15/08/2015	ALSE-Brisbane	EB1526355	Normal	**0.39**	<0.0001	<0.01	**0.002**	<0.001	**2**	<0.001	**0.225**	<0.0001	<0.001	<0.001	**0.04**	<0.001	**0.01**	-	-	-	-	**0.4**	-	**0.73**	-	-	-	<1	<2
PNG LNG	LNGP-GW21	EB1526355006	LNGP Plant Site GW21	15/08/2015	ALSE-Brisbane	EB1526355	Normal	**0.32**	<0.0001	<0.01	<0.001	<0.001	**0.64**	<0.001	**0.146**	<0.0001	<0.001	<0.001	<0.01	<0.001	**0.018**	-	-	-	-	**0.09**	-	**0.03**	-	-	-	<1	<2
PNG LNG	LNGP-GW22	EB1526355007	LNGP Plant Site GW22	15/08/2015	ALSE-Brisbane	EB1526355	Normal	**2.14**	<0.005	<0.01	<0.01	<0.05	**11.1**	<0.01	**0.91**	<0.0001	<0.05	<0.01	<0.1	<0.01	<0.05	-	-	-	-	**7.88**	-	**0.02**	-	-	-	<1	<2
PNG LNG	LNGP-MW4	EB1526355002	LNGP Plant Site MW4	15/08/2015	ALSE-Brisbane	EB1526355	Normal	**0.48**	<0.0001	<0.01	<0.001	<0.001	**0.32**	<0.001	**0.026**	<0.0001	<0.001	<0.001	<0.01	**0.002**	<0.005	-	-	-	-	<0.01	-	**0.24**	-	-	-	<1	<2
PNG LNG	LNGL-GW11	GW-11_Historical_160815	GW-11	16/08/2015			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGL-GW11	GW-11-SGS_Historical_160815	GW-11	16/08/2015			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGL-GW12	GW-12_Historical_160815	GW-12	16/08/2015			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGL-GW13	GW-13_Historical_160815	GW-13	16/08/2015			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGL-GW13	GW-13-SGS_Historical_160815	GW-13	16/08/2015			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGL-GW14	GW-14_Historical_160815	GW-14	16/08/2015			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGL-GW14	GW-14-SGS_Historical_160815	GW-14	16/08/2015			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGL-GW15	GW-15_Historical_160815	GW-15	16/08/2015			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGL-GW15	GW-15-SGS_Historical_160815	GW-15	16/08/2015			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGL-GW5	GW-5_Historical_160815	GW-5	16/08/2015			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGL-GW5	GW-5-SGS_Historical_160815	GW-5	16/08/2015			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGP-GW17	GW-17_Historical_160815	GW-17	16/08/2015			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGP-GW17	GW-17-SGS_Historical_160815	GW-17	16/08/2015			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGP-GW19	GW-19_Historical_160815	GW-19	16/08/2015			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGP-GW19	GW-19-SGS_Historical_160815	GW-19	16/08/2015			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGP-GW20	GW-20_Historical_160815	GW-20	16/08/2015			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGP-GW20	GW-20-SGS_Historical_160815	GW-20	16/08/2015			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGP-GW21	GW-21_Historical_160815	GW-21	16/08/2015			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGP-GW21	GW-21-SGS_Historical_160815	GW-21	16/08/2015			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGP-GW22	GW-22_Historical_160815	GW-22	16/08/2015			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGP-GW22	GW-22-SGS_Historical_160815	GW-22	16/08/2015			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGP-MW2	MW-2_Historical_160815	MW-2	16/08/2015			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGP-MW2	MW-2-SGS_Historical_160815	MW-2	16/08/2015			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PNG LNG		EB1526355014	QC1	16/08/2015	ALSE-Brisbane	EB1526355	Normal	<0.05	<0.0001	<0.01	<0.001	<0.001	<0.05	<0.001	<0.001	<0.0001	<0.001	<0.001	<0.01	<0.001	<0.005	-	-	-	-	<0.01	-	<0.01	-	-	-	<1	<2
PNG LNG		EB1526355016	QC3	16/08/2015	ALSE-Brisbane	EB1526355	Normal	**0.42**	<0.0001	<0.01	<0.001	<0.001	**1**	<0.001	**0.008**	<0.0001	<0.001	<0.001	**0.03**	<0.001	<0.005	-	-	-	-	<0.01	-	**0.61**	-	-	-	<1	<2
PNG LNG		EB1526355017	QC4	16/08/2015	ALSE-Brisbane	EB1526355	Normal	<0.05	<0.0001	<0.01	<0.001	<0.001	<0.05	<0.001	<0.001	<0.0001	<0.001	<0.001	<0.01	<0.001	<0.005	-	-	-	-	<0.01	-	<0.01	-	-	-	<1	<2
PNG LNG	LNGL-GW11	EB1526355011	LNGP Landfill GW11	16/08/2015	ALSE-Brisbane	EB1526355	Normal	**1.46**	<0.0001	<0.01	**0.003**	**0.003**	**2.64**	<0.001	**0.147**	<0.0001	**0.007**	<0.001	**0.02**	<0.001	**0.005**	-	-	-	-	**0.06**	-	**0.55**	-	-	-	<1	<2
PNG LNG	LNGL-GW13	EB1526355010	LNGP Landfill GW13	16/08/2015	ALSE-Brisbane	EB1526355	Normal	**0.4**	<0.0001	<0.01	<0.001	<0.001	**1.02**	<0.001	**0.01**	<0.0001	<0.001	<0.001	**0.03**	<0.001	<0.005	-	-	-	-	<0.01	-	**0.66**	-	-	-	<1	<2
PNG LNG	LNGL-GW15	EB1526355013	LNGP Landfill GW15	16/08/2015	ALSE-Brisbane	EB1526355	Normal	**0.73**	<0.0001	<0.01	<0.001	<0.001	**1.44**	<0.001	**0.22**	<0.0001	<0.001	<0.001	<0.01	<0.001	<0.005	-	-	-	-	**0.07**	-	**0.03**	-	-	-	<1	<2
PNG LNG	LNGL-GW5	EB1526355008	LNGP Landfill GW5	16/08/2015	ALSE-Brisbane	EB1526355	Normal	**0.4**	<0.0001	<0.01	**0.007**	**0.003**	**5.07**	<0.001	**1.9**	<0.0001	<0.005	<0.001	<0.01	<0.001	**0.011**	-	-	-	-	**0.22**	-	**0.06**	-	-	-	<1	<2
PNG LNG	LNGP-MW2	EB1526355001	LNGP Plant Site MW2	16/08/2015	ALSE-Brisbane	EB1526355	Normal	**1.85**	**0.0001**	<0.01	**0.003**	**0.002**	**2.91**	<0.001	**1.28**	<0.0001	<0.005	<0.001	<0.01	<0.001	**0.007**	-	-	-	-	**0.5**	-	**0.03**	-	-	-	<1	<2
PNG LNG	LNGL-GW11	GW-11_Historical_130316	GW-11	13/03/2016			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGL-GW11	GW-11-SGS_Historical_130316	GW-11	13/03/2016			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGL-GW12	GW-12_Historical_130316	GW-12	13/03/2016			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGL-GW12	GW-12-SGS_Historical_130316	GW-12	13/03/2016			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGL-GW13	GW-13_Historical_130316	GW-13	13/03/2016			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGL-GW13	GW-13-SGS_Historical_130316	GW-13	13/03/2016			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGL-GW14	GW-14_Historical_130316	GW-14	13/03/2016			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGL-GW14	GW-14-SGS_Historical_130316	GW-14	13/03/2016			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGL-GW15	GW-15_Historical_130316	GW-15	13/03/2016			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGL-GW15	GW-15-SGS_Historical_130316	GW-15	13/03/2016			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGL-GW5	GW-5_Historical_130316	GW-5	13/03/2016			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGL-GW5	GW-5-SGS_Historical_130316	GW-5	13/03/2016			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGP-GW17	GW-17_Historical_130316	GW-17	13/03/2016			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGP-GW17	GW-17-SGS_Historical_130316	GW-17	13/03/2016			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGP-GW19	GW-19_Historical_130316	GW-19	13/03/2016			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGP-GW19	GW-19-SGS_Historical_130316	GW-19	13/03/2016			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGP-GW20	GW-20_Historical_130316	GW-20	13/03/2016			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGP-GW20	GW-20-SGS_Historical_130316	GW-20	13/03/2016			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGP-GW21	GW-21_Historical_130316	GW-21	13/03/2016			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGP-GW21	GW-21-SGS_Historical_130316	GW-21	13/03/2016			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGP-GW22	GW-22_Historical_130316	GW-22	13/03/2016			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGP-GW22	GW-22-SGS_Historical_130316	GW-22	13/03/2016			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGP-MW2	MW-2_Historical_130316	MW-2	13/03/2016			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

																				Metals												Alkalinity				Nutrients									
																				Boron (Filtered)	Cadmium (Filtered)	Chromium (hexavalent) (Filtered)	Cobalt (Filtered)	Copper (Filtered)	Iron (Filtered)	Lead (Filtered)	Manganese (Filtered)	Mercury (Filtered)	Nickel (Filtered)	Silver (Filtered)	Selenium (Filtered)	Tin (Filtered)	Zinc (Filtered)	Alkalinity (total as CaCO3)	Alkalinity (Hydroxide) as CaCO3	Bicarbonate Alkalinity as CaCO3	Carbonate Alkalinity as CaCO3	Ammonia as N	Nitrite + Nitrate as N	Nitrate (as NO3-N)	Nitrite (as NO2-N)	Nitrogen (Total)	Total Kjeldahl Nitrogen (TKN)	Benzene	Toluene
																				mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	ug/L	ug/L
EQL																				**0.05**	**0.0001**	**0.01**	**0.001**	**0.001**	**0.05**	**0.001**	**0.001**	**0.0001**	**0.001**	**0.001**	**0.01**	**0.001**	**0.005**	**1**	**1**	**1**	**1**	**0.01**	**0.01**	**0.01**	**0.01**	**0.1**	**0.1**	**1**	**2**
NHMRC 2008 Recreational Water																				40	0.02			20		0.1	5	0.01	0.2		0.1										10	1			10	8000
PNG Water Quality Criteria for Freshwater Aquatic Ecosystem (guideline only)																				1	0.01	0.05	0.001	1	1	0.005	0.5	0.0002	1	0.05	0.01	0.5	5					Variable	45						
PNG Water Quality Criteria for Marine Aquatic Ecosystem (guideline only)																				2	0.001	0.01	0.001	0.03	1	0.004	2	0.0002	1	0.05	0.01	0.5	5						45						
Environment Permit Criteria (Baseline Range)																				4.6	0.34	0.12	0.03	0.025	17	0.052	3	0.0003	0.04	0.2	0.235	0.22	0.095					7.2		29	1.03	1.3		1	2
PNG DWG (1987)																					0.01			1.5	1	0.1	0.5	0.001		0.05	0.01		15	600						45					
Site_ID	**Location_Code**	**SampleCode**	**Field_ID**	**Sampled_Date_Time**	**Lab_Name**	**Lab_Report_Number**	**Sample_Type**																															
PNG LNG	LNGP-MW2	MW-2-SGS_Historical_130316	MW-2	13/03/2016			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PNG LNG		EB1607514014	QC1	13/03/2016	ALSE-Brisbane	EB1607514	Normal	**0.32**	<0.0001	<0.01	<0.001	**0.002**	<0.05	<0.001	<0.001	<0.0001	**0.002**	<0.001	**0.01**	<0.001	<0.005	-	-	-	-	**0.1**	-	**0.05**	-	-	-	<1	<2
PNG LNG		EB1607514015	QC2	13/03/2016	ALSE-Brisbane	EB1607514	Normal	**0.38**	<0.0001	<0.01	<0.001	**0.002**	<0.05	<0.001	**0.542**	<0.0001	**0.003**	<0.001	<0.01	<0.001	**0.006**	-	-	-	-	**0.05**	-	**0.75**	-	-	-	<1	<2
PNG LNG		EB1607514016	QC3	13/03/2016	ALSE-Brisbane	EB1607514	Normal	<0.05	<0.0001	<0.01	<0.001	**0.002**	<0.05	<0.001	<0.001	<0.0001	**0.002**	<0.001	<0.01	<0.001	<0.005	-	-	-	-	<0.01	-	**0.04**	-	-	-	<1	<2
PNG LNG		EB1607514017	QC4	13/03/2016	ALSE-Brisbane	EB1607514	Normal	<0.05	<0.0001	<0.01	<0.001	**0.002**	<0.05	<0.001	<0.001	<0.0001	**0.002**	<0.001	<0.01	<0.001	<0.005	-	-	-	-	**0.02**	-	**0.1**	-	-	-	<1	<2
PNG LNG	LNGL-GW11	EB1607514011	LNGP Landfill GW11	13/03/2016	ALSE-Brisbane	EB1607514	Normal	**1.6**	<0.0001	<0.01	<0.001	**0.004**	<0.05	<0.001	**0.192**	<0.0001	**0.005**	<0.001	**0.01**	<0.001	<0.005	-	-	-	-	<0.01	-	**0.29**	-	-	-	<1	<2
PNG LNG	LNGL-GW12	EB1607514009	LNGP Landfill GW12	13/03/2016	ALSE-Brisbane	EB1607514	Normal	**0.18**	<0.0001	<0.01	<0.001	**0.002**	<0.05	<0.001	**0.072**	<0.0001	**0.003**	<0.001	<0.01	<0.001	<0.005	-	-	-	-	**0.02**	-	**0.3**	-	-	-	<1	<2
PNG LNG	LNGL-GW13	EB1607514010	LNGP Landfill GW13	13/03/2016	ALSE-Brisbane	EB1607514	Normal	**0.53**	<0.0001	<0.01	<0.001	**0.001**	<0.05	<0.001	<0.001	<0.0001	**0.002**	<0.001	**0.03**	<0.001	<0.005	-	-	-	-	<0.01	-	**0.66**	-	-	-	<1	<2
PNG LNG	LNGL-GW14	EB1607514012	LNGP Landfill GW14	13/03/2016	ALSE-Brisbane	EB1607514	Normal	**1.76**	<0.0001	<0.01	**0.003**	**0.002**	<0.05	<0.001	**0.335**	<0.0001	**0.004**	<0.001	**0.02**	<0.001	<0.005	-	-	-	-	**0.05**	-	**0.05**	-	-	-	<1	<2
PNG LNG	LNGL-GW15	EB1607514013	LNGP Landfill GW15	13/03/2016	ALSE-Brisbane	EB1607514	Normal	**1.07**	<0.0001	<0.01	<0.001	**0.002**	<0.05	<0.001	**0.259**	<0.0001	**0.002**	<0.001	<0.01	<0.001	<0.005	-	-	-	-	**0.04**	-	**0.02**	-	-	-	<1	<2
PNG LNG	LNGL-GW5	EB1607514008	LNGP Landfill GW5	13/03/2016	ALSE-Brisbane	EB1607514	Normal	**0.36**	<0.0001	<0.01	<0.001	**0.003**	<0.05	<0.001	**0.517**	<0.0001	**0.002**	<0.001	<0.01	<0.001	**0.006**	-	-	-	-	**0.03**	-	**0.74**	-	-	-	<1	<2
PNG LNG	LNGP-GW17	EB1607514003	LNGP Plant Site GW17	13/03/2016	ALSE-Brisbane	EB1607514	Normal	**0.28**	<0.0001	<0.01	<0.001	<0.001	<0.05	<0.001	<0.001	<0.0001	<0.001	**0.001**	**0.01**	<0.001	<0.005	-	-	-	-	**0.08**	-	**0.02**	-	-	-	<1	<2
PNG LNG	LNGP-GW19	EB1607514004	LNGP Plant Site GW19	13/03/2016	ALSE-Brisbane	EB1607514	Normal	**1.22**	<0.0001	<0.01	<0.001	**0.001**	<0.05	<0.001	**0.501**	<0.0001	**0.002**	<0.001	<0.01	<0.001	<0.005	-	-	-	-	**0.04**	-	**0.05**	-	-	-	<1	<2
PNG LNG	LNGP-GW20	EB1607514005	LNGP Plant Site GW20	13/03/2016	ALSE-Brisbane	EB1607514	Normal	**0.86**	<0.0001	<0.01	**0.002**	<0.001	<0.05	<0.001	**0.44**	<0.0001	**0.002**	<0.001	**0.09**	<0.001	<0.005	-	-	-	-	**0.07**	-	**0.36**	-	-	-	<1	<2
PNG LNG	LNGP-GW21	EB1607514006	LNGP Plant Site GW21	13/03/2016	ALSE-Brisbane	EB1607514	Normal	**0.35**	<0.0001	<0.01	<0.001	<0.001	<0.05	<0.001	**0.184**	<0.0001	**0.001**	<0.001	<0.01	<0.001	<0.005	-	-	-	-	**0.08**	-	**0.05**	-	-	-	<1	<2
PNG LNG	LNGP-GW22	EB1607514007	LNGP Plant Site GW22	13/03/2016	ALSE-Brisbane	EB1607514	Normal	**3.54**	<0.001	<0.01	<0.01	<0.01	<0.1	<0.01	**0.72**	<0.0001	<0.01	<0.01	<0.1	<0.01	<0.05	-	-	-	-	**8.14**	-	**0.02**	-	-	-	<1	<2
PNG LNG	LNGP-MW2	EB1607514001	LNGP Plant Site MW2	13/03/2016	ALSE-Brisbane	EB1607514	Normal	**2.17**	<0.0001	<0.01	**0.002**	**0.001**	<0.05	<0.001	**1.11**	<0.0001	**0.002**	<0.001	<0.01	<0.001	<0.005	-	-	-	-	**0.29**	-	**0.21**	-	-	-	<1	<2
PNG LNG	LNGP-MW4	EB1607514002	LNGP Plant Site MW4	13/03/2016	ALSE-Brisbane	EB1607514	Normal	**0.59**	<0.0001	<0.01	<0.001	<0.001	<0.05	<0.001	<0.001	<0.0001	<0.001	<0.001	<0.01	<0.001	<0.005	-	-	-	-	**0.04**	-	**0.27**	-	-	-	<1	<2
PNG LNG	LNGL-GW11	GW-11_Historical_280816	GW-11	28/08/2016			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGL-GW11	GW-11-SGS_Historical_280816	GW-11	28/08/2016			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGL-GW12	GW-12_Historical_280816	GW-12	28/08/2016			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGL-GW13	GW-13_Historical_280816	GW-13	28/08/2016			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGL-GW13	GW-13-SGS_Historical_280816	GW-13	28/08/2016			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGL-GW14	GW-14_Historical_280816	GW-14	28/08/2016			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGL-GW14	GW-14-SGS_Historical_280816	GW-14	28/08/2016			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGL-GW5	GW-5_Historical_280816	GW-5	28/08/2016			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGL-GW5	GW-5-SGS_Historical_280816	GW-5	28/08/2016			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGP-GW20	GW-20_Historical_280816	GW-20	28/08/2016			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGP-GW20	GW-20-SGS_Historical_280816	GW-20	28/08/2016			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGP-GW21	GW-21_Historical_280816	GW-21	28/08/2016			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGP-GW21	GW-21-SGS_Historical_280816	GW-21	28/08/2016			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGP-GW22	GW-22_Historical_280816	GW-22	28/08/2016			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGP-GW22	GW-22-SGS_Historical_280816	GW-22	28/08/2016			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGP-MW2	MW-2_Historical_280816	MW-2	28/08/2016			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGP-MW2	MW-2-SGS_Historical_280816	MW-2	28/08/2016			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PNG LNG		EB1621459010	QC1	28/08/2016	ALSE-Brisbane	EB1621459	Normal	**1.5**	<0.0001	<0.01	**0.002**	<0.001	**1.31**	<0.001	**0.321**	<0.0001	**0.001**	<0.001	**0.01**	<0.001	**0.012**	-	-	-	-	**0.05**	-	**0.03**	-	-	-	<1	<2
PNG LNG		EB1621459011	QC2	28/08/2016	ALSE-Brisbane	EB1621459	Normal	**0.9**	<0.0001	<0.01	**0.004**	**0.001**	**0.61**	<0.001	**0.448**	<0.0001	**0.002**	<0.001	**0.11**	<0.001	**0.036**	-	-	-	-	**0.04**	-	**0.41**	-	-	-	<1	<2
PNG LNG		EB1621459012	QC3	28/08/2016	ALSE-Brisbane	EB1621459	Normal	**0.96**	<0.0001	<0.01	<0.001	<0.001	<0.05	<0.001	<0.001	<0.0001	<0.001	<0.001	<0.01	**0.001**	**0.015**	-	-	-	-	**0.02**	-	<0.01	-	-	-	<1	<2
PNG LNG	LNGL-GW11	EB1621459003	LNGP Landfill GW11	28/08/2016	ALSE-Brisbane	EB1621459	Normal	**1.12**	<0.0001	<0.01	**0.013**	**0.003**	**0.22**	<0.001	**5.09**	<0.0001	**0.005**	<0.001	<0.01	<0.001	<0.005	-	-	-	-	**0.43**	-	**0.18**	-	-	-	<1	<2
PNG LNG	LNGL-GW12	EB1621459004	LNGP Landfill GW12	28/08/2016	ALSE-Brisbane	EB1621459	Normal	**0.18**	<0.0001	<0.01	**0.002**	**0.005**	**1.08**	**0.001**	**0.569**	<0.0001	**0.003**	<0.001	<0.01	<0.001	**0.007**	-	-	-	-	**0.04**	-	**0.29**	-	-	-	<1	<2
PNG LNG	LNGL-GW13	EB1621459005	LNGP Landfill GW13	28/08/2016	ALSE-Brisbane	EB1621459	Normal	**0.5**	<0.0001	<0.01	**0.005**	**0.007**	**1.98**	**0.004**	**0.22**	<0.0001	**0.005**	<0.001	**0.02**	<0.001	**0.016**	-	-	-	-	**0.02**	-	**0.61**	-	-	-	<1	<2
PNG LNG	LNGL-GW14	EB1621459006	LNGP Landfill GW14	28/08/2016	ALSE-Brisbane	EB1621459	Normal	**1.52**	<0.0001	<0.01	**0.002**	<0.001	**1.35**	<0.001	**0.324**	<0.0001	**0.001**	<0.001	**0.01**	<0.001	**0.011**	-	-	-	-	**0.05**	-	**0.04**	-	-	-	<1	<2
PNG LNG	LNGL-GW5	EB1621459002	LNGP Landfill GW5	28/08/2016	ALSE-Brisbane	EB1621459	Normal	**0.32**	<0.0001	<0.01	**0.003**	<0.001	**0.07**	<0.001	**0.825**	<0.0001	<0.001	<0.001	<0.01	<0.001	**0.006**	-	-	-	-	**0.03**	-	**0.71**	-	-	-	<1	<2
PNG LNG	LNGP-GW20	EB1621459007	LNGP Landfill GW20	28/08/2016	ALSE-Brisbane	EB1621459	Normal	**0.9**	<0.0001	<0.01	**0.003**	**0.001**	**0.58**	<0.001	**0.446**	<0.0001	**0.002**	<0.001	**0.11**	<0.001	**0.035**	-	-	-	-	**0.04**	-	**0.38**	-	-	-	<1	<2
PNG LNG	LNGP-GW21	EB1621459008	LNGP Landfill GW21	28/08/2016	ALSE-Brisbane	EB1621459	Normal	**0.3**	<0.0001	<0.01	<0.001	**0.002**	**0.1**	<0.001	**0.513**	<0.0001	<0.001	<0.001	<0.01	<0.001	**0.008**	-	-	-	-	**0.14**	-	**2.26**	-	-	-	<1	<2
PNG LNG	LNGP-GW22	EB1621459009	LNGP Landfill GW22	28/08/2016	ALSE-Brisbane	EB1621459	Normal	**2.59**	<0.0005	<0.01	<0.005	<0.005	**12.6**	<0.005	**0.95**	<0.0001	<0.005	**0.015**	<0.05	<0.005	<0.025	-	-	-	-	**8.47**	-	<0.01	-	-	-	<1	<2
PNG LNG	LNGP-MW2	EB1621459001	LNGP MW2	28/08/2016	ALSE-Brisbane	EB1621459	Normal	**1.78**	<0.0001	<0.01	**0.006**	**0.006**	**1.54**	**0.002**	**1.15**	<0.0001	**0.004**	<0.001	<0.01	<0.001	**0.008**	-	-	-	-	**0.2**	-	**2.16**	-	-	-	<1	<2
PNG LNG	LNGL-GW11	GW-11_Historical_170417	GW-11	17/04/2017			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGL-GW11	GW-11-SGS_Historical_170417	GW-11	17/04/2017			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGL-GW12	GW-12_Historical_170417	GW-12	17/04/2017			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGL-GW12	GW-12-SGS_Historical_170417	GW-12	17/04/2017			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGL-GW13	GW-13_Historical_170417	GW-13	17/04/2017			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGL-GW13	GW-13-SGS_Historical_170417	GW-13	17/04/2017			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGL-GW14	GW-14_Historical_170417	GW-14	17/04/2017			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGL-GW14	GW-14-SGS_Historical_170417	GW-14	17/04/2017			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGL-GW15	GW-15_Historical_170417	GW-15	17/04/2017			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGL-GW15	GW-15-SGS_Historical_170417	GW-15	17/04/2017			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGL-GW5	GW-5_Historical_170417	GW-5	17/04/2017			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGL-GW5	GW-5-SGS_Historical_170417	GW-5	17/04/2017			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGP-GW17	GW-17_Historical_170417	GW-17	17/04/2017			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGP-GW17	GW-17-SGS_Historical_170417	GW-17	17/04/2017			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGP-GW19	GW-19_Historical_170417	GW-19	17/04/2017			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGP-GW19	GW-19-SGS_Historical_170417	GW-19	17/04/2017			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Site_ID	Location_Code	SampleCode	Field_ID	Sampled_Date_Time	Lab_Name	Lab_Report_Number	Sample_Type	Boron (Filtered)	Cadmium (Filtered)	Chromium (hexavalent) (Filtered)	Cobalt (Filtered)	Copper (Filtered)	Iron (Filtered)	Lead (Filtered)	Manganese (Filtered)	Mercury (Filtered)	Nickel (Filtered)	Silver (Filtered)	Selenium (Filtered)	Tin (Filtered)	Zinc (Filtered)	Alkalinity (total as CaCO3)	Alkalinity (Hydroxide) as CaCO3	Bicarbonate Alkalinity as CaCO3	Carbonate Alkalinity as CaCO3	Ammonia as N	Nitrite + Nitrate as N	Nitrate (as NO3-N)	Nitrite (as NO2-N)	Nitrogen (Total)	Total Kjeldahl Nitrogen (TKN)	Benzene	Toluene
								Metals														Alkalinity				Nutrients							
								mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	ug/L	ug/L
EQL								**0.05**	**0.0001**	**0.01**	**0.001**	**0.001**	**0.05**	**0.001**	**0.001**	**0.0001**	**0.001**	**0.001**	**0.01**	**0.001**	**0.005**	**1**	**1**	**1**	**1**	**0.01**	**0.01**	**0.01**	**0.01**	**0.1**	**0.1**	**1**	**2**
NHMRC 2008 Recreational Water								40	0.02			20		0.1	5	0.01	0.2		0.1									10	1			10	8000
PNG Water Quality Criteria for Freshwater Aquatic Ecosystem (guideline only)								1	0.01	0.05	0.001	1	1	0.005	0.5	0.0002	1	0.05	0.01	0.5	5					Variable	45						
PNG Water Quality Criteria for Marine Aquatic Ecosystem (guideline only)								2	0.001	0.01	0.001	0.03	1	0.004	2	0.0002	1	0.05	0.01	0.5	5						45						
Environment Permit Criteria (Baseline Range)								4.6	0.34	0.12	0.03	0.025	17	0.052	3	0.0003	0.04	0.2	0.235	0.22	0.095					7.2		29	1.03	1.3		1	2
PNG DWG (1987)									0.01			1.5	1	0.1	0.5	0.001		0.05	0.01		15	600						45					
PNG LNG	LNGP-GW20	GW-20_Historical_170417	GW-20	17/04/2017			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGP-GW20	GW-20-SGS_Historical_170417	GW-20	17/04/2017			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGP-GW21	GW-21_Historical_170417	GW-21	17/04/2017			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGP-GW21	GW-21-SGS_Historical_170417	GW-21	17/04/2017			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGP-GW22	GW-22_Historical_170417	GW-22	17/04/2017			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGP-GW22	GW-22-SGS_Historical_170417	GW-22	17/04/2017			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGP-MW2	MW-2_Historical_170417	MW-2	17/04/2017			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGP-MW2	MW-2-SGS_Historical_170417	MW-2	17/04/2017			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PNG LNG		EB1707968014	QC1	17/04/2017	ALSE-Brisbane	EB1707968	Normal	**0.67**	<0.0001	<0.01	<0.001	**0.001**	<0.05	<0.001	**0.177**	<0.0001	<0.001	<0.001	<0.01	<0.001	<0.005	-	-	-	-	**0.06**	-	**9.89**	-	-	-	<1	<2
PNG LNG		EB1707968015	QC2	17/04/2017	ALSE-Brisbane	EB1707968	Normal	**1.18**	**0.0004**	<0.01	**0.004**	**0.003**	<0.05	<0.001	**1.6**	<0.0001	**0.002**	<0.001	<0.01	**0.001**	**0.049**	-	-	-	-	**1.36**	-	**0.54**	-	-	-	<1	<2
PNG LNG		EB1707968016	QC3	17/04/2017	ALSE-Brisbane	EB1707968	Normal	<0.05	<0.0001	<0.01	<0.001	<0.001	<0.05	<0.001	<0.001	<0.0001	<0.001	<0.001	<0.01	<0.001	<0.005	-	-	-	-	**0.05**	-	<0.01	-	-	-	<1	<2
PNG LNG	LNGL-GW11	EB1707968011	LNGP Landfill GW11	17/04/2017	ALSE-Brisbane	EB1707968	Normal	**0.7**	<0.0001	<0.01	<0.001	**0.002**	<0.05	<0.001	**0.236**	<0.0001	**0.002**	<0.001	**0.02**	<0.001	**0.012**	-	-	-	-	**0.04**	-	**0.5**	-	-	-	<1	<2
PNG LNG	LNGL-GW12	EB1707968009	LNGP Landfill GW12	17/04/2017	ALSE-Brisbane	EB1707968	Normal	**0.19**	<0.0001	<0.01	<0.001	**0.001**	**0.07**	<0.001	**0.279**	<0.0001	<0.001	<0.001	**0.01**	<0.001	**0.022**	-	-	-	-	**0.03**	-	**0.71**	-	-	-	<1	<2
PNG LNG	LNGL-GW13	EB1707968010	LNGP Landfill GW13	17/04/2017	ALSE-Brisbane	EB1707968	Normal	**0.52**	<0.0001	<0.01	<0.001	<0.001	<0.05	<0.001	**0.002**	<0.0001	<0.001	<0.001	**0.03**	**0.002**	**0.044**	-	-	-	-	**0.02**	-	**0.64**	-	-	-	<1	<2
PNG LNG	LNGL-GW14	EB1707968012	LNGP Landfill GW14	17/04/2017	ALSE-Brisbane	EB1707968	Normal	**1.55**	<0.0001	<0.01	**0.002**	<0.001	**0.51**	<0.001	**0.262**	<0.0001	**0.001**	<0.001	**0.02**	<0.001	**0.021**	-	-	-	-	**0.08**	-	**0.07**	-	-	-	<1	<2
PNG LNG	LNGL-GW15	EB1707968013	LNGP Landfill GW15	17/04/2017	ALSE-Brisbane	EB1707968	Normal	**1.01**	<0.0001	<0.01	<0.001	<0.001	**0.26**	<0.001	**0.256**	<0.0001	<0.001	<0.001	<0.01	<0.001	**0.005**	-	-	-	-	**0.08**	-	**0.1**	-	-	-	<1	<2
PNG LNG	LNGL-GW5	EB1707968008	LNGP Landfill GW5	17/04/2017	ALSE-Brisbane	EB1707968	Normal	**0.32**	<0.0001	<0.01	**0.002**	**0.002**	<0.05	<0.001	**0.596**	<0.0001	<0.001	<0.001	<0.01	**0.001**	**0.018**	-	-	-	-	**0.07**	-	**1.1**	-	-	-	<1	<2
PNG LNG	LNGP-GW17	EB1707968003	LNGP Plant Site GW17	17/04/2017	ALSE-Brisbane	EB1707968	Normal	**0.14**	<0.0001	<0.01	<0.001	**0.002**	<0.05	<0.001	<0.001	<0.0001	<0.001	<0.001	**0.01**	**0.003**	<0.005	-	-	-	-	**0.05**	-	**0.12**	-	-	-	<1	<2
PNG LNG	LNGP-GW19	EB1707968004	LNGP Plant Site GW19	17/04/2017	ALSE-Brisbane	EB1707968	Normal	**1.34**	<0.0001	<0.01	**0.001**	<0.001	**0.69**	<0.001	**0.557**	<0.0001	<0.001	<0.001	<0.01	**0.001**	**0.011**	-	-	-	-	**0.09**	-	**0.01**	-	-	-	<1	<2
PNG LNG	LNGP-GW20	EB1707968005	LNGP Plant Site GW20	17/04/2017	ALSE-Brisbane	EB1707968	Normal	**0.72**	<0.0001	<0.01	**0.001**	<0.001	<0.05	<0.001	**0.172**	<0.0001	<0.001	<0.001	**0.14**	**0.002**	**0.01**	-	-	-	-	**0.07**	-	**0.72**	-	-	-	<1	<2
PNG LNG	LNGP-GW21	EB1707968006	LNGP Plant Site GW21	17/04/2017	ALSE-Brisbane	EB1707968	Normal	**1.18**	**0.0004**	<0.01	**0.004**	**0.002**	<0.05	<0.001	**1.6**	<0.0001	**0.002**	<0.001	<0.01	**0.001**	**0.049**	-	-	-	-	**1.36**	-	**0.54**	-	-	-	<1	<2
PNG LNG	LNGP-GW22	EB1707968007	LNGP Plant Site GW22	17/04/2017	ALSE-Brisbane	EB1707968	Normal	**2.99**	<0.0005	<0.01	<0.005	<0.005	**11.3**	<0.005	**1.02**	<0.0001	<0.005	<0.005	<0.05	<0.005	**0.036**	-	-	-	-	**8.55**	-	**0.03**	-	-	-	<1	<2
PNG LNG	LNGP-MW2	EB1707968001	LNGP Plant Site MW2	17/04/2017	ALSE-Brisbane	EB1707968	Normal	**0.65**	<0.0001	<0.01	<0.001	<0.001	<0.05	<0.001	**0.171**	<0.0001	<0.001	<0.001	<0.01	<0.001	<0.005	-	-	-	-	**0.07**	-	**9.84**	-	-	-	<1	<2
PNG LNG	LNGP-MW4	EB1707968002	LNGP Plant Site MW4	17/04/2017	ALSE-Brisbane	EB1707968	Normal	**0.75**	<0.0001	<0.01	<0.001	<0.001	<0.05	<0.001	<0.001	<0.0001	<0.001	**0.002**	<0.01	<0.001	**0.008**	-	-	-	-	**0.03**	-	**0.09**	-	-	-	<1	<2
PNG LNG	LNGP-GW17	EB1722826002	LNGP Plant Site - GW17	29/09/2017	ALSE-Brisbane	EB1722826	Normal	**0.24**	<0.0001	<0.01	<0.001	**0.001**	<0.05	<0.001	**0.003**	<0.0001	**0.001**	<0.001	<0.01	<0.001	<0.005	-	-	-	-	**0.16**	**0.02**	**0.02**	<0.01	-	-	<1	<2
PNG LNG	LNGP-MW2	EB1722826001	LNGP Plant Site - MW2	29/09/2017	ALSE-Brisbane	EB1722826	Normal	**1.78**	<0.0001	<0.01	<0.001	**0.002**	<0.05	<0.001	**0.779**	<0.0001	**0.001**	<0.001	<0.01	**0.001**	**0.009**	-	-	-	-	**0.23**	**3.27**	**3.27**	<0.01	-	-	<1	<2
PNG LNG	LNGL-GW5	EB1722826007	LNGP Landfill - GW5	29/09/2017	ALSE-Brisbane	EB1722826	Normal	**0.43**	<0.0001	<0.01	**0.004**	<0.001	<0.05	<0.001	**0.952**	<0.0001	<0.001	<0.001	<0.01	<0.001	**0.055**	-	-	-	-	**0.14**	**0.67**	**0.65**	**0.02**	-	-	<1	<2
PNG LNG	LNGL-GW14	EB1722826011	LNGP Landfill - G14	29/09/2017	ALSE-Brisbane	EB1722826	Normal	**1.56**	<0.0001	<0.01	**0.002**	<0.001	**1.04**	<0.001	**0.3**	<0.0001	<0.001	<0.001	<0.01	<0.001	**0.028**	-	-	-	-	**0.11**	<0.01	<0.01	<0.01	-	-	<1	<2
PNG LNG	LNGP-GW20	EB1722826004	LNGP Plant Site - GW20	29/09/2017	ALSE-Brisbane	EB1722826	Normal	**0.93**	<0.0001	<0.01	**0.002**	**0.001**	<0.05	<0.001	**0.326**	<0.0001	**0.001**	<0.001	**0.17**	<0.001	**0.019**	-	-	-	-	**0.1**	**0.93**	**0.87**	**0.06**	-	-	<1	<2
PNG LNG		EB1722826016	QC4	29/09/2017	ALSE-Brisbane	EB1722826	Normal	**1.15**	<0.0001	<0.01	<0.001	<0.001	<0.05	<0.001	<0.001	<0.0001	<0.001	<0.001	<0.01	**0.003**	**0.016**	-	-	-	-	**0.02**	**0.01**	**0.01**	<0.01	-	-	<1	<2
PNG LNG	LNGP-GW19	EB1722826003	LNGP Plant Site - GW19	29/09/2017	ALSE-Brisbane	EB1722826	Normal	**1.43**	<0.0001	<0.01	**0.001**	<0.001	**0.07**	<0.001	**0.54**	<0.0001	<0.001	<0.001	<0.01	<0.001	**0.069**	-	-	-	-	**0.14**	<0.01	<0.01	<0.01	-	-	<1	<2
PNG LNG		EB1722826013	QC1	29/09/2017	ALSE-Brisbane	EB1722826	Normal	**2.46**	<0.002	<0.01	<0.02	<0.02	**9.92**	<0.02	**0.932**	<0.0001	<0.02	<0.02	<0.2	<0.02	<0.1	-	-	-	-	**8.77**	<0.01	<0.01	<0.01	-	-	<1	<2
PNG LNG		EB1722826014	QC2	29/09/2017	ALSE-Brisbane	EB1722826	Normal	**1.15**	<0.0001	<0.01	<0.001	<0.001	<0.05	<0.001	<0.001	<0.0001	<0.001	<0.001	<0.01	<0.001	**0.005**	-	-	-	-	**0.03**	<0.01	<0.01	<0.01	-	-	<1	<2
PNG LNG		EB1722826015	QC3	29/09/2017	ALSE-Brisbane	EB1722826	Normal	**0.23**	<0.0001	<0.01	<0.001	<0.001	<0.05	<0.001	**0.191**	<0.0001	<0.001	<0.001	**0.02**	<0.001	**0.018**	-	-	-	-	**0.07**	**0.9**	**0.89**	**0.01**	-	-	<1	<2
PNG LNG	LNGL-GW11	EB1722826010	LNGP Landfill - GW11	29/09/2017	ALSE-Brisbane	EB1722826	Normal	**0.59**	<0.0001	<0.01	**0.005**	<0.001	<0.05	<0.001	**0.989**	<0.0001	**0.002**	<0.001	**0.02**	<0.001	<0.005	-	-	-	-	**0.13**	**0.55**	**0.53**	**0.02**	-	-	<1	<2
PNG LNG	LNGL-GW12	EB1722826008	LNGP Landfill - GW12	29/09/2017	ALSE-Brisbane	EB1722826	Normal	**0.2**	<0.0001	<0.01	<0.001	<0.001	<0.05	<0.001	**0.194**	<0.0001	<0.001	<0.001	**0.02**	<0.001	**0.023**	-	-	-	-	**0.07**	**0.9**	**0.89**	**0.01**	-	-	<1	<2
PNG LNG	LNGL-GW13	EB1722826009	LNGP Landfill - GW13	29/09/2017	ALSE-Brisbane	EB1722826	Normal	**0.51**	<0.0001	<0.01	<0.001	<0.001	<0.05	<0.001	**0.004**	<0.0001	<0.001	<0.001	**0.02**	<0.001	<0.005	-	-	-	-	**0.04**	**0.65**	**0.65**	<0.01	-	-	<1	<2
PNG LNG	LNGL-GW15	EB1722826012	LNGP Landfill - GW15	29/09/2017	ALSE-Brisbane	EB1722826	Normal	**0.87**	<0.0001	<0.01	<0.001	<0.001	<0.05	<0.001	**0.225**	<0.0001	<0.001	<0.001	<0.01	<0.001	**0.008**	-	-	-	-	**0.12**	**0.02**	**0.02**	<0.01	-	-	<1	<2
PNG LNG	LNGP-GW21	EB1722826005	LNGP Plant Site - GW21	29/09/2017	ALSE-Brisbane	EB1722826	Normal	**0.82**	<0.0001	<0.01	**0.001**	**0.002**	<0.05	<0.001	**0.664**	<0.0001	**0.001**	<0.001	<0.01	<0.001	**0.044**	-	-	-	-	**0.48**	**0.05**	**0.05**	<0.01	-	-	<1	<2
PNG LNG	LNGP-GW22	EB1722826006	LNGP Plant Site - GW22	29/09/2017	ALSE-Brisbane	EB1722826	Normal	**2.01**	<0.002	<0.01	<0.02	<0.02	**10.2**	<0.02	**0.974**	<0.0001	<0.02	**0.062**	<0.2	<0.02	<0.1	-	-	-	-	**8.55**	<0.01	<0.01	<0.01	-	-	<1	<2
PNG LNG	LNGL-GW11	GW-11_Historical_291017	GW-11	29/10/2017			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGL-GW11	GW-11-SGS_Historical_291017	GW-11	29/10/2017			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGL-GW12	GW-12_Historical_291017	GW-12	29/10/2017			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGL-GW12	GW-12-SGS_Historical_291017	GW-12	29/10/2017			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGL-GW13	GW-13_Historical_291017	GW-13	29/10/2017			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGL-GW13	GW-13-SGS_Historical_291017	GW-13	29/10/2017			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGL-GW14	GW-14_Historical_291017	GW-14	29/10/2017			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGL-GW14	GW-14-SGS_Historical_291017	GW-14	29/10/2017			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGL-GW15	GW-15_Historical_291017	GW-15	29/10/2017			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGL-GW15	GW-15-SGS_Historical_291017	GW-15	29/10/2017			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGL-GW5	GW-5_Historical_291017	GW-5	29/10/2017			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGL-GW5	GW-5-SGS_Historical_291017	GW-5	29/10/2017			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGP-GW17	GW-17_Historical_291017	GW-17	29/10/2017			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGP-GW17	GW-17-SGS_Historical_291017	GW-17	29/10/2017			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGP-GW19	GW-19_Historical_291017	GW-19	29/10/2017			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGP-GW19	GW-19-SGS_Historical_291017	GW-19	29/10/2017			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGP-GW20	GW-20_Historical_291017	GW-20	29/10/2017			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGP-GW20	GW-20-SGS_Historical_291017	GW-20	29/10/2017			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGP-GW21	GW-21_Historical_291017	GW-21	29/10/2017			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGP-GW21	GW-21-SGS_Historical_291017	GW-21	29/10/2017			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGP-GW22	GW-22_Historical_291017	GW-22	29/10/2017			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGP-GW22	GW-22-SGS_Historical_291017	GW-22	29/10/2017			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGP-MW2	MW-2_Historical_291017	MW-2	29/10/2017			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

																				Metals												Alkalinity				Nutrients									
																				Boron (Filtered)	Cadmium (Filtered)	Chromium (hexavalent) (Filtered)	Cobalt (Filtered)	Copper (Filtered)	Iron (Filtered)	Lead (Filtered)	Manganese (Filtered)	Mercury (Filtered)	Nickel (Filtered)	Silver (Filtered)	Selenium (Filtered)	Tin (Filtered)	Zinc (Filtered)	Alkalinity (total as CaCO3)	Alkalinity (Hydroxide) as CaCO3	Bicarbonate Alkalinity as CaCO3	Carbonate Alkalinity as CaCO3	Ammonia as N	Nitrite + Nitrate as N	Nitrate (as NO3-N)	Nitrite (as NO2-N)	Nitrogen (Total)	Total Kjeldahl Nitrogen (TKN)	Benzene	Toluene
																				mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	ug/L	ug/L
EQL																				**0.05**	**0.0001**	**0.01**	**0.001**	**0.001**	**0.05**	**0.001**	**0.001**	**0.0001**	**0.001**	**0.001**	**0.01**	**0.001**	**0.005**	**1**	**1**	**1**	**1**	**0.01**	**0.01**	**0.01**	**0.01**	**0.1**	**0.1**	**1**	**2**
NHMRC 2008 Recreational Water																				40	0.02			20		0.1	5	0.01	0.2		0.1								10	1					10	8000
PNG Water Quality Criteria for Freshwater Aquatic Ecosystem (guideline only)																				1	0.01	0.05	0.001	1	1	0.005	0.5	0.0002	1	0.05	0.01	0.5	5					Variable	45						
PNG Water Quality Criteria for Marine Aquatic Ecosystem (guideline only)																				2	0.001	0.01	0.001	0.03	1	0.004	2	0.0002	1	0.05	0.01	0.5	5						45						
Environment Permit Criteria (Baseline Range)																				4.6	0.34	0.12	0.03	0.025	17	0.052	3	0.0003	0.04	0.2	0.235	0.22	0.095					7.2		29	1.03	1.3		1	2
PNG DWG (1987)																					0.01			1.5	1	0.1	0.5	0.001		0.05	0.01		15	600						45						
Site_ID	**Location_Code**	**SampleCode**	**Field_ID**	**Sampled_Date_Time**	**Lab_Name**	**Lab_Report_Number**	**Sample_Type**																															
PNG LNG	LNGP-MW2	MW-2-SGS_Historical_291017	MW-2	29/10/2017			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGL-GW11	GW-11_Historical_280518	GW-11	28/05/2018			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGL-GW11	GW-11-EM_Historical_280518	GW-11	28/05/2018			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGL-GW11	GW-11-SGS_Historical_280518	GW-11	28/05/2018			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGL-GW12	GW-12_Historical_280518	GW-12	28/05/2018			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGL-GW12	GW-12-EM_Historical_280518	GW-12	28/05/2018			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGL-GW12	GW-12-SGS_Historical_280518	GW-12	28/05/2018			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGL-GW13	GW-13_Historical_280518	GW-13	28/05/2018			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGL-GW13	GW-13-EM_Historical_280518	GW-13	28/05/2018			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGL-GW13	GW-13-SGS_Historical_280518	GW-13	28/05/2018			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGL-GW14	GW-14_Historical_280518	GW-14	28/05/2018			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGL-GW14	GW-14-EM_Historical_280518	GW-14	28/05/2018			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGL-GW14	GW-14-SGS_Historical_280518	GW-14	28/05/2018			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGL-GW15	GW-15_Historical_280518	GW-15	28/05/2018			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGL-GW15	GW-15-EM_Historical_280518	GW-15	28/05/2018			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGL-GW15	GW-15-SGS_Historical_280518	GW-15	28/05/2018			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGL-GW5	GW-5_Historical_280518	GW-5	28/05/2018			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGL-GW5	GW-5-EM_Historical_280518	GW-5	28/05/2018			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGL-GW5	GW-5-SGS_Historical_280518	GW-5	28/05/2018			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGP-GW17	GW-17_Historical_280518	GW-17	28/05/2018			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGP-GW17	GW-17-EM_Historical_280518	GW-17	28/05/2018			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGP-GW17	GW-17-SGS_Historical_280518	GW-17	28/05/2018			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGP-GW19	GW-19_Historical_280518	GW-19	28/05/2018			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGP-GW19	GW-19-EM_Historical_280518	GW-19	28/05/2018			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGP-GW19	GW-19-SGS_Historical_280518	GW-19	28/05/2018			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGP-GW20	GW-20_Historical_280518	GW-20	28/05/2018			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGP-GW20	GW-20-EM_Historical_280518	GW-20	28/05/2018			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGP-GW20	GW-20-SGS_Historical_280518	GW-20	28/05/2018			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGP-GW21	GW-21_Historical_280518	GW-21	28/05/2018			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGP-GW21	GW-21-EM_Historical_280518	GW-21	28/05/2018			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGP-GW21	GW-21-SGS_Historical_280518	GW-21	28/05/2018			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGP-GW22	GW-22_Historical_280518	GW-22	28/05/2018			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGP-GW22	GW-22-EM_Historical_280518	GW-22	28/05/2018			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGP-GW22	GW-22-SGS_Historical_280518	GW-22	28/05/2018			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGP-MW2	MW-2_Historical_280518	MW-2	28/05/2018			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGP-MW2	MW-2-EM_Historical_280518	MW-2	28/05/2018			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGP-MW2	MW-2-SGS_Historical_280518	MW-2	28/05/2018			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGP-GW20	EB1813230004	LNGP-GW20	28/05/2018	ALSE-Brisbane	EB1813230	Normal	**0.4**	<0.0001	<0.01	<0.001	<0.001	<0.05	<0.001	**0.051**	<0.0001	<0.001	<0.001	**0.08**	<0.001	**0.01**	**456**	<1	**456**	<1	**0.01**	**0.45**	**0.45**	<0.01	**0.8**	**0.3**	<1	<2
PNG LNG	LNGP-GW21	EB1813230005	LNGP-GW21	28/05/2018	ALSE-Brisbane	EB1813230	Normal	**1.48**	<0.0005	<0.01	<0.005	<0.005	<0.05	<0.005	**1.52**	<0.0001	<0.005	<0.005	<0.05	<0.005	<0.025	**392**	<1	**392**	<1	**1.07**	**0.02**	**0.02**	<0.01	**1.5**	**1.5**	<1	<2
PNG LNG	LNGP-GW22	EB1813230006	LNGP-GW22	28/05/2018	ALSE-Brisbane	EB1813230	Normal	**2.39**	<0.0005	<0.01	<0.005	<0.005	**11**	<0.005	**0.841**	<0.0001	<0.005	<0.005	<0.05	<0.005	<0.025	**716**	<1	**716**	<1	**8.32**	<0.01	<0.01	<0.01	**7.8**	**7.8**	<1	<2
PNG LNG	LNGL-GW13	EB1813230009	LNGP-GW13	28/05/2018	ALSE-Brisbane	EB1813230	Normal	**0.5**	<0.0001	<0.01	<0.001	**0.002**	<0.05	<0.001	**0.007**	<0.0001	**0.001**	<0.001	**0.02**	<0.001	**0.012**	**210**	<1	**210**	<1	**0.04**	**0.62**	**0.62**	<0.01	**1**	**0.4**	<1	<2
PNG LNG	LNGL-GW11	EB1813230010	LNGP-GW11	28/05/2018	ALSE-Brisbane	EB1813230	Normal	**0.48**	<0.0001	<0.01	**0.004**	<0.001	<0.05	<0.001	**2.3**	<0.0001	**0.002**	<0.001	**0.01**	<0.001	**0.04**	**184**	<1	**184**	<1	**0.13**	**0.34**	**0.33**	**0.01**	**0.7**	**0.4**	<1	<2
PNG LNG	LNGL-GW15	EB1813230012	LNGP-GW15	28/05/2018	ALSE-Brisbane	EB1813230	Normal	**0.9**	<0.0001	<0.01	<0.001	<0.001	**0.3**	<0.001	**0.224**	<0.0001	<0.001	<0.001	<0.01	<0.001	**0.021**	**278**	<1	**278**	<1	**0.08**	<0.01	<0.01	<0.01	**0.2**	**0.2**	<1	<2
PNG LNG		EB1813230013	LNGP-QC1	28/05/2018	ALSE-Brisbane	EB1813230	Normal	**0.18**	<0.0001	<0.01	<0.001	<0.001	<0.05	<0.001	**0.16**	<0.0001	<0.001	<0.001	**0.02**	<0.001	**0.014**	**206**	<1	**206**	<1	**0.02**	**0.87**	**0.87**	<0.01	**1.3**	**0.4**	<1	<2
PNG LNG	LNGL-GW12	EB1813230008	LNGP-GW12	28/05/2018	ALSE-Brisbane	EB1813230	Normal	**0.19**	<0.0001	<0.01	<0.001	<0.001	<0.05	<0.001	**0.161**	<0.0001	<0.001	<0.001	**0.01**	<0.001	**0.049**	**204**	<1	**204**	<1	**0.03**	**0.84**	**0.84**	<0.01	**1.2**	**0.4**	<1	<2
PNG LNG		EB1813230014	LNGP-QC2	28/05/2018	ALSE-Brisbane	EB1813230	Normal	**0.34**	<0.0001	<0.01	**0.003**	<0.001	<0.05	<0.001	**0.85**	<0.0001	**0.001**	<0.001	<0.01	<0.001	**0.008**	**256**	<1	**256**	<1	**0.03**	**0.62**	**0.61**	**0.01**	**0.6**	<0.5	<1	<2
PNG LNG	LNGL-GW5	EB1813230007	LNGP-GW5	28/05/2018	ALSE-Brisbane	EB1813230	Normal	**0.35**	<0.0001	<0.01	**0.003**	**0.001**	<0.05	<0.001	**0.848**	<0.0001	**0.007**	<0.001	<0.01	<0.001	**0.009**	**267**	<1	**267**	<1	**0.03**	**0.6**	**0.59**	**0.01**	**0.6**	<0.5	<1	<2
PNG LNG	LNGL-GW14	EB1813230011	LNGP-GW14	28/05/2018	ALSE-Brisbane	EB1813230	Normal	**0.69**	<0.0001	<0.01	<0.001	**0.001**	<0.05	<0.001	**0.239**	<0.0001	<0.001	<0.001	<0.01	<0.001	**0.034**	**329**	<1	**329**	<1	**0.04**	**0.16**	**0.16**	<0.01	**0.4**	**0.2**	<1	<2
PNG LNG	LNGP-MW2	EB1813230001	LNGP-MW2	28/05/2018	ALSE-Brisbane	EB1813230	Normal	**0.09**	<0.0001	<0.01	<0.001	**0.001**	<0.05	<0.001	<0.001	<0.0001	<0.001	<0.001	<0.01	<0.001	**0.044**	**372**	<1	**372**	<1	<0.01	**33.6**	**33.6**	<0.01	**37.2**	**3.6**	<1	<2
PNG LNG	LNGP-GW17	EB1813230002	LNGP-GW17	28/05/2018	ALSE-Brisbane	EB1813230	Normal	**0.2**	<0.0001	<0.01	<0.001	**0.001**	<0.05	<0.001	**0.002**	<0.0001	<0.001	<0.001	**0.01**	<0.001	**0.01**	**499**	<1	**499**	<1	**0.19**	**0.13**	**0.13**	<0.01	**0.5**	**0.4**	<1	<2
PNG LNG	LNGP-GW19	EB1813230003	LNGP-GW19	28/05/2018	ALSE-Brisbane	EB1813230	Normal	**1.03**	<0.0001	<0.01	<0.001	**0.002**	<0.05	<0.001	**0.188**	<0.0001	**0.001**	<0.001	<0.01	<0.001	**0.012**	**258**	<1	**258**	<1	**0.05**	**0.07**	**0.07**	<0.01	<0.5	<0.5	<1	<2
PNG LNG		EB1813230015	LNGP-QC3	28/05/2018	ALSE-Brisbane	EB1813230	Normal	<0.05	<0.0001	<0.01	<0.001	<0.001	<0.05	<0.001	<0.001	<0.0001	<0.001	<0.001	<0.01	<0.001	<0.005	**4**	<1	**4**	<1	**0.01**	<0.01	<0.01	<0.01	<0.1	<0.1	<1	<2
PNG LNG		EB1813230016	LNGP-QC4	28/05/2018	ALSE-Brisbane	EB1813230	Normal	<0.05	<0.0001	<0.01	<0.001	<0.001	<0.05	<0.001	<0.001	<0.0001	<0.001	<0.001	<0.01	<0.001	<0.005	**2**	<1	**2**	<1	<0.01	**0.01**	**0.01**	<0.01	<0.1	<0.1	<1	<2
PNG LNG	LNGL-GW11	GW-11_Historical_261118	GW-11	26/11/2018			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGL-GW11	GW-11-ALS_Historical_261118	GW-11	26/11/2018			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGL-GW11	GW-11-EM_Historical_261118	GW-11	26/11/2018			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGL-GW12	GW-12_Historical_261118	GW-12	26/11/2018			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGL-GW12	GW-12-ALS_Historical_261118	GW-12	26/11/2018			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGL-GW12	GW-12-EM_Historical_261118	GW-12	26/11/2018			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGL-GW13	GW-13_Historical_261118	GW-13	26/11/2018			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGL-GW13	GW-13-ALS_Historical_261118	GW-13	26/11/2018			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGL-GW13	GW-13-EM_Historical_261118	GW-13	26/11/2018			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGL-GW14	GW-14_Historical_261118	GW-14	26/11/2018			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

																		Metals										Alkalinity				Nutrients									
																		Boron (Filtered)	Cadmium (Filtered)	Chromium (hexavalent) (Filtered)	Cobalt (Filtered)	Copper (Filtered)	Iron (Filtered)	Lead (Filtered)	Manganese (Filtered)	Mercury (Filtered)	Nickel (Filtered)	Silver (Filtered)	Selenium (Filtered)	Tin (Filtered)	Zinc (Filtered)	Alkalinity (total as CaCO3)	Alkalinity (Hydroxide) as CaCO3	Bicarbonate Alkalinity as CaCO3	Carbonate Alkalinity as CaCO3	Ammonia as N	Nitrite + Nitrate as N	Nitrite (as NO3-N)	Nitrite (as NO2-N)	Nitrogen (Total)	Total Kjeldahl Nitrogen (TKN)	Benzene	Toluene
																		mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	ug/L	ug/L
EQL																		**0.05**	**0.0001**	**0.01**	**0.001**	**0.001**	**0.05**	**0.001**	**0.001**	**0.0001**	**0.001**	**0.001**	**0.01**	**0.001**	**0.005**	**1**	**1**	**1**	**1**	**0.01**	**0.01**	**0.01**	**0.01**	**0.1**	**0.1**	**1**	**2**
NHMRC 2008 Recreational Water																		40	0.02			20		0.1	5	0.01	0.2		0.1									10	1					10	8000
PNG Water Quality Criteria for Freshwater Aquatic Ecosystem (guideline only)																		1	0.01	0.05	0.001	1	1	0.005	0.5	0.0002	1	0.05	0.01	0.5	5					Variable	45						
PNG Water Quality Criteria for Marine Aquatic Ecosystem (guideline only)																		2	0.001	0.01	0.001	0.03	1	0.004	2	0.0002	1	0.05	0.01	0.5	5						45						
Environment Permit Criteria (Baseline Range)																		4.6	0.34	0.12	0.03	0.025	17	0.052	3	0.0003	0.04	0.2	0.235	0.22	0.095					7.2		29	1.03	1.3		1	2
PNG DWG (1987)																			0.01			1.5	1	0.1	0.5	0.001		0.05	0.01		15	600						45						
Site_ID	**Location_Code**	**SampleCode**	**Field_ID**	**Sampled_Date_Time**	**Lab_Name**	**Lab_Report_Number**	**Sample_Type**																																		
PNG LNG	LNGL-GW14	GW-14-ALS_Historical_261118	GW-14	26/11/2018			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGL-GW14	GW-14-EM_Historical_261118	GW-14	26/11/2018			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGL-GW15	GW-15_Historical_261118	GW-15	26/11/2018			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGL-GW15	GW-15-ALS_Historical_261118	GW-15	26/11/2018			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGL-GW15	GW-15-EM_Historical_261118	GW-15	26/11/2018			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGL-GW5	GW-5_Historical_261118	GW-5	26/11/2018			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGL-GW5	GW-5-ALS_Historical_261118	GW-5	26/11/2018			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGL-GW5	GW-5-EM_Historical_261118	GW-5	26/11/2018			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGP-GW17	GW-17_Historical_261118	GW-17	26/11/2018			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGP-GW17	GW-17-ALS_Historical_261118	GW-17	26/11/2018			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGP-GW17	GW-17-EM_Historical_261118	GW-17	26/11/2018			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGP-GW19	GW-19_Historical_261118	GW-19	26/11/2018			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGP-GW19	GW-19-ALS_Historical_261118	GW-19	26/11/2018			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGP-GW19	GW-19-EM_Historical_261118	GW-19	26/11/2018			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGP-GW20	GW-20_Historical_261118	GW-20	26/11/2018			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGP-GW20	GW-20-ALS_Historical_261118	GW-20	26/11/2018			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGP-GW20	GW-20-EM_Historical_261118	GW-20	26/11/2018			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGP-GW21	GW-21_Historical_261118	GW-21	26/11/2018			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGP-GW21	GW-21-ALS_Historical_261118	GW-21	26/11/2018			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGP-GW21	GW-21-EM_Historical_261118	GW-21	26/11/2018			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGP-GW22	GW-22_Historical_261118	GW-22	26/11/2018			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGP-GW22	GW-22-ALS_Historical_261118	GW-22	26/11/2018			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGP-GW22	GW-22-EM_Historical_261118	GW-22	26/11/2018			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGP-MW2	MW-2_Historical_261118	MW-2	26/11/2018			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGP-MW2	MW-2-ALS_Historical_261118	MW-2	26/11/2018			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGP-MW2	MW-2-EM_Historical_261118	MW-2	26/11/2018			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGP-MW2	EB1829402001	LNGP-MW2	26/11/2018	ALSE-Brisbane	EB1829402	Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PNG LNG		EB1829402013	LNGP-QC1	26/11/2018	ALSE-Brisbane	EB1829402	Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGP-GW20	EB1829402004	LNGP-GW20	26/11/2018	ALSE-Brisbane	EB1829402	Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGP-GW22	EB1829402006	LNGP-GW22	26/11/2018	ALSE-Brisbane	EB1829402	Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGP-GW21	EB1829402005	LNGP-GW21	26/11/2018	ALSE-Brisbane	EB1829402	Normal	**0.56**	<0.0001	<0.01	**0.001**	**0.002**	<0.05	<0.001	**0.523**	<0.0001	**0.001**	<0.001	<0.01	<0.001	**0.009**	**360**	<1	**360**	<1	**0.02**	<0.01	<0.01	<0.01	<0.5	<0.5	<1	<2
PNG LNG	LNGL-GW5	EB1829402007	LNGP-GW5	26/11/2018	ALSE-Brisbane	EB1829402	Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGL-GW12	EB1829402008	LNGP-GW12	26/11/2018	ALSE-Brisbane	EB1829402	Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGL-GW14	EB1829402011	LNGP-GW14	26/11/2018	ALSE-Brisbane	EB1829402	Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGL-GW13	EB1829402009	LNGP-GW13	26/11/2018	ALSE-Brisbane	EB1829402	Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PNG LNG		EB1829402014	LNGP-QC2	26/11/2018	ALSE-Brisbane	EB1829402	Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGL-GW11	EB1829402010	LNGP-GW11	26/11/2018	ALSE-Brisbane	EB1829402	Normal	**0.54**	<0.0001	<0.01	**0.006**	<0.001	<0.05	<0.001	**2.13**	<0.0001	**0.001**	<0.001	<0.01	<0.001	**0.014**	**167**	<1	**167**	<1	**0.1**	**0.19**	**0.19**	<0.01	<0.5	<0.5	<1	<2
PNG LNG	LNGL-GW15	EB1829402012	LNGP-GW15	26/11/2018	ALSE-Brisbane	EB1829402	Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGP-GW17	EB1829402002	LNGP-GW17	26/11/2018	ALSE-Brisbane	EB1829402	Normal	**0.4**	<0.0001	<0.01	<0.001	**0.003**	<0.05	<0.001	**0.012**	<0.0001	<0.001	<0.001	**0.01**	<0.001	**0.169**	**474**	<1	**474**	<1	**0.07**	**0.05**	**0.05**	<0.01	**3**	**2.9**	<1	<2
PNG LNG	LNGP-GW19	EB1829402003	LNGP-GW19	26/11/2018	ALSE-Brisbane	EB1829402	Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PNG LNG		EB1829402016	LNGP-QC4	26/11/2018	ALSE-Brisbane	EB1829402	Normal	**1**	<0.0001	<0.01	<0.001	<0.001	<0.05	<0.001	<0.001	<0.0001	<0.001	<0.001	<0.01	<0.001	<0.005	**5**	<1	**5**	<1	**0.01**	<0.01	<0.01	<0.01	<0.1	<0.1	<1	<2
PNG LNG		EB1829402015	LNGP-QC3	26/11/2018	ALSE-Brisbane	EB1829402	Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGL-GW11	GW-11_Historical_020919	GW-11	2/09/2019			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGL-GW11	GW-11-ALS_Historical_020919	GW-11	2/09/2019			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGL-GW11	GW-11-EM_Historical_020919	GW-11	2/09/2019			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGL-GW12	GW-12_Historical_020919	GW-12	2/09/2019			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGL-GW12	GW-12-ALS_Historical_020919	GW-12	2/09/2019			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGL-GW12	GW-12-EM_Historical_020919	GW-12	2/09/2019			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGL-GW13	GW-13_Historical_020919	GW-13	2/09/2019			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGL-GW13	GW-13-ALS_Historical_020919	GW-13	2/09/2019			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGL-GW13	GW-13-EM_Historical_020919	GW-13	2/09/2019			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGL-GW14	GW-14_Historical_020919	GW-14	2/09/2019			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGL-GW14	GW-14-ALS_Historical_020919	GW-14	2/09/2019			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGL-GW14	GW-14-EM_Historical_020919	GW-14	2/09/2019			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGL-GW15	GW-15_Historical_020919	GW-15	2/09/2019			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGL-GW15	GW-15-ALS_Historical_020919	GW-15	2/09/2019			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGL-GW15	GW-15-EM_Historical_020919	GW-15	2/09/2019			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGL-GW5	GW-5_Historical_020919	GW-5	2/09/2019			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGL-GW5	GW-5-ALS_Historical_020919	GW-5	2/09/2019			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGL-GW5	GW-5-EM_Historical_020919	GW-5	2/09/2019			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGP-GW17	GW-17_Historical_020919	GW-17	2/09/2019			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGP-GW17	GW-17-EM_Historical_020919	GW-17	2/09/2019			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGP-GW19	GW-19_Historical_020919	GW-19	2/09/2019			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

																				Metals												Alkalinity				Nutrients									
																				Boron (Filtered)	Cadmium (Filtered)	Chromium (hexavalent) (Filtered)	Cobalt (Filtered)	Copper (Filtered)	Iron (Filtered)	Lead (Filtered)	Manganese (Filtered)	Mercury (Filtered)	Nickel (Filtered)	Silver (Filtered)	Selenium (Filtered)	Tin (Filtered)	Zinc (Filtered)	Alkalinity (total as CaCO3)	Alkalinity (Hydroxide) as CaCO3	Bicarbonate Alkalinity as CaCO3	Carbonate Alkalinity as CaCO3	Ammonia as N	Nitrite + Nitrate as N	Nitrate (as NO3-N)	Nitrite (as NO2-N)	Nitrogen (Total)	Total Kjeldahl Nitrogen (TKN)	Benzene	Toluene
																				mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	ug/L	ug/L
EQL																				**0.05**	**0.0001**	**0.01**	**0.001**	**0.001**	**0.05**	**0.001**	**0.001**	**0.0001**	**0.001**	**0.001**	**0.01**	**0.001**	**0.005**	**1**	**1**	**1**	**1**	**0.01**	**0.01**	**0.01**	**0.01**	**0.1**	**0.1**	**1**	**2**
NHMRC 2008 Recreational Water																				40	0.02			20		0.1	5	0.01	0.2		0.1							10	1					10	8000
PNG Water Quality Criteria for Freshwater Aquatic Ecosystem (guideline only)																				1	0.01	0.05	0.001	1	1	0.005	0.5	0.0002	1	0.05	0.01	0.5	5					Variable	45						
PNG Water Quality Criteria for Marine Aquatic Ecosystem (guideline only)																				2	0.001	0.01	0.001	0.03	1	0.004	2	0.0002	1	0.05	0.01	0.5	5						45						
Environment Permit Criteria (Baseline Range)																				4.6	0.34	0.12	0.03	0.025	17	0.052	3	0.0003	0.04	0.2	0.235	0.22	0.095					7.2		29	1.03	1.3		1	2
PNG DWG (1987)																					0.01			1.5	1	0.1	0.5	0.001		0.05	0.01		15	600						45						
Site_ID	**Location_Code**	**SampleCode**	**Field_ID**	**Sampled_Date_Time**	**Lab_Name**	**Lab_Report_Number**	**Sample_Type**																																				
PNG LNG	LNGP-GW19	GW-19-EM_Historical_020919	GW-19	2/09/2019			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGP-GW20	GW-20_Historical_020919	GW-20	2/09/2019			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGP-GW20	GW-20-EM_Historical_020919	GW-20	2/09/2019			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGP-GW21	GW-21 _Historical_020919	GW-21	2/09/2019			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGP-GW21	GW-21 -ALS_Historical_020919	GW-21	2/09/2019			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGP-GW21	GW-21 -EM_Historical_020919	GW-21	2/09/2019			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGP-GW22	GW-22_Historical_020919	GW-22	2/09/2019			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGP-GW22	GW-22-ALS_Historical_020919	GW-22	2/09/2019			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGP-GW22	GW-22-EM_Historical_020919	GW-22	2/09/2019			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGP-GW23	GW-23_Historical_020919	GW-23	2/09/2019			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGP-GW23	GW-23-ALS_Historical_020919	GW-23	2/09/2019			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGP-GW23	GW-23-EM_Historical_020919	GW-23	2/09/2019			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGP-GW24	GW-24_Historical_020919	GW-24	2/09/2019			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGP-GW24	GW-24-ALS_Historical_020919	GW-24	2/09/2019			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGP-GW24	GW-24-EM_Historical_020919	GW-24	2/09/2019			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGP-MW2	MW-2_Historical_020919	MW-2	2/09/2019			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGP-MW2	MW-2-ALS_Historical_020919	MW-2	2/09/2019			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGP-MW2	MW-2-EM_Historical_020919	MW-2	2/09/2019			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PNG LNG		EB1922977016	LNGP-QC2	2/09/2019	ALSE-Brisbane	EB1922977	Normal	**0.84**	<0.0001	<0.01	**0.001**	<0.001	<0.05	<0.001	**0.63**	<0.0001	<0.001	<0.001	<0.01	<0.001	**0.005**	**314**	<1	**314**	<1	**0.04**	<0.01	<0.01	<0.01	**0.1**	**0.1**	<1	<2
PNG LNG	LNGP-GW20	EB1922977004	LNGP-GW20	2/09/2019	ALSE-Brisbane	EB1922977	Normal	**0.5**	<0.0001	<0.01	<0.001	<0.001	<0.05	<0.001	**0.143**	<0.0001	<0.001	<0.001	**0.13**	<0.001	<0.005	**443**	<1	**443**	<1	**0.13**	**0.51**	**0.2**	**0.31**	**0.8**	**0.3**	<1	<2
PNG LNG		EB1922977015	LNGP-QC1	2/09/2019	ALSE-Brisbane	EB1922977	Normal	**0.51**	<0.0001	<0.01	<0.001	<0.001	<0.05	<0.001	**0.142**	<0.0001	<0.001	<0.001	**0.13**	<0.001	**0.006**	**446**	<1	**446**	<1	**0.13**	**0.53**	**0.23**	**0.3**	**0.7**	**0.2**	<1	<2
PNG LNG	LNGP-GW24	EB1922977010	LNGP-GW24	2/09/2019	ALSE-Brisbane	EB1922977	Normal	**0.81**	<0.0001	<0.01	**0.001**	<0.001	<0.05	<0.001	**0.631**	<0.0001	<0.001	<0.001	<0.01	<0.001	**0.005**	**313**	<1	**313**	<1	**0.04**	**0.02**	**0.02**	<0.01	**0.1**	**0.1**	<1	<2
PNG LNG	LNGP-GW19	EB1922977003	LNGP-GW19	2/09/2019	ALSE-Brisbane	EB1922977	Normal	**0.99**	<0.0001	<0.01	**0.001**	<0.001	<0.05	<0.001	**0.303**	<0.0001	<0.001	<0.001	<0.01	**0.001**	<0.005	**280**	<1	**280**	<1	**0.06**	**0.03**	**0.03**	<0.01	**0.2**	**0.2**	<1	<2
PNG LNG	LNGP-GW17	EB1922977002	LNGP-GW17	2/09/2019	ALSE-Brisbane	EB1922977	Normal	**0.29**	<0.0001	<0.01	<0.001	<0.001	<0.05	<0.001	**0.014**	<0.0001	<0.001	<0.001	<0.01	<0.001	<0.005	**494**	<1	**494**	<1	**0.09**	**0.18**	**0.18**	<0.01	**0.6**	**0.4**	<1	<2
PNG LNG	LNGP-MW2	EB1922977001	LNGP-MW2	2/09/2019	ALSE-Brisbane	EB1922977	Normal	**0.86**	<0.0001	<0.01	<0.001	<0.001	<0.05	<0.001	**0.256**	<0.0001	<0.001	<0.001	<0.01	<0.001	**0.009**	**526**	<1	**526**	<1	**0.08**	**14.9**	**14.9**	<0.01	**17.3**	**2.4**	<1	<2
PNG LNG		EB1922977017	LNGP-QC3	2/09/2019	ALSE-Brisbane	EB1922977	Normal	**0.47**	<0.0001	<0.01	**0.005**	<0.001	<0.05	<0.001	**1.29**	<0.0001	**0.001**	<0.001	<0.01	<0.001	**0.014**	**271**	<1	**271**	<1	**0.05**	**0.56**	**0.52**	**0.04**	**0.9**	**0.3**	<1	<2
PNG LNG	LNGL-GW5	EB1922977007	LNGP-GW5	2/09/2019	ALSE-Brisbane	EB1922977	Normal	**0.47**	<0.0001	<0.01	**0.005**	<0.001	<0.05	<0.001	**1.27**	<0.0001	<0.001	<0.001	<0.01	<0.001	**0.013**	**270**	<1	**270**	<1	**0.09**	**0.58**	**0.54**	**0.04**	**0.9**	**0.3**	<1	<2
PNG LNG	LNGL-GW12	EB1922977008	LNGP-GW12	2/09/2019	ALSE-Brisbane	EB1922977	Normal	**0.26**	<0.0001	<0.01	<0.001	<0.001	<0.05	<0.001	**0.33**	<0.0001	<0.001	<0.001	<0.01	<0.001	**0.009**	**213**	<1	**213**	<1	**0.05**	**0.63**	**0.63**	<0.01	**0.9**	**0.3**	<1	<2
PNG LNG	LNGL-GW14	EB1922977013	LNGP-GW14	2/09/2019	ALSE-Brisbane	EB1922977	Normal	**1.36**	<0.0001	<0.01	**0.001**	<0.001	**0.32**	<0.001	**0.274**	<0.0005	<0.001	<0.001	<0.01	<0.001	<0.005	**406**	<1	**406**	<1	**0.05**	<0.01	<0.01	<0.01	<1	<1	<1	<2
PNG LNG	LNGP-GW23	EB1922977009	LNGP-GW23	2/09/2019	ALSE-Brisbane	EB1922977	Normal	**0.69**	**0.0002**	<0.01	**0.003**	<0.001	<0.05	<0.001	**0.764**	<0.0001	**0.003**	<0.001	<0.01	<0.001	**0.009**	**186**	<1	**186**	<1	**0.05**	<0.01	<0.01	<0.01	<0.5	<0.5	<1	<2
PNG LNG	LNGP-GW22	EB1922977006	LNGP-GW22	2/09/2019	ALSE-Brisbane	EB1922977	Normal	**2.8**	<0.0005	<0.01	<0.005	<0.005	**7.78**	<0.005	**0.875**	<0.0005	<0.005	<0.005	<0.05	<0.005	<0.025	**660**	<1	**660**	<1	**6.58**	**0.01**	**0.01**	<0.01	**10.6**	**10.6**	<1	<2
PNG LNG	LNGP-GW21	EB1922977005	LNGP-GW21	2/09/2019	ALSE-Brisbane	EB1922977	Normal	**2.22**	<0.0005	<0.01	**0.009**	<0.005	**0.06**	<0.005	**2.53**	<0.0005	<0.005	<0.005	<0.05	<0.005	<0.025	**375**	<1	**375**	<1	**1.47**	<0.01	<0.01	<0.01	**1.8**	**1.8**	<1	<2
PNG LNG	LNGL-GW15	EB1922977014	LNGP-GW15	2/09/2019	ALSE-Brisbane	EB1922977	Normal	**0.95**	<0.0001	<0.01	<0.001	<0.001	**0.44**	<0.001	**0.226**	<0.0001	<0.001	<0.001	<0.01	<0.001	**0.008**	**254**	<1	**254**	<1	**0.05**	**0.01**	**0.01**	<0.01	<0.1	<0.1	<1	<2
PNG LNG	LNGL-GW11	EB1922977012	LNGP-GW11	2/09/2019	ALSE-Brisbane	EB1922977	Normal	**0.97**	<0.0001	<0.01	**0.008**	<0.001	<0.05	<0.001	**3.55**	<0.0001	**0.003**	<0.001	**0.01**	<0.001	**0.014**	**228**	<1	**228**	<1	**2.59**	**0.15**	**0.13**	**0.02**	**3**	**2.9**	<1	<2
PNG LNG	LNGL-GW13	EB1922977011	LNGP-GW13	2/09/2019	ALSE-Brisbane	EB1922977	Normal	**0.56**	<0.0001	<0.01	<0.001	<0.001	<0.05	<0.001	**0.004**	<0.0001	<0.001	<0.001	**0.02**	<0.001	<0.005	**193**	<1	**193**	<1	**0.06**	**0.56**	**0.56**	<0.01	**0.8**	**0.2**	<1	<2
PNG LNG		EB1922977019	LNGP-QC5	2/09/2019	ALSE-Brisbane	EB1922977	Normal	**1.2**	<0.0001	<0.01	<0.001	<0.001	<0.05	<0.001	<0.001	<0.0001	<0.001	<0.001	<0.01	<0.001	<0.005	**4**	<1	**4**	<1	**0.05**	<0.01	<0.01	<0.01	<0.1	<0.1	<1	<2
PNG LNG		EB1922977018	LNGP-QC4	2/09/2019	ALSE-Brisbane	EB1922977	Normal	**1.19**	<0.0001	<0.01	<0.001	<0.001	<0.05	<0.001	<0.001	<0.0001	<0.001	<0.001	<0.01	<0.001	<0.005	**6**	<1	**6**	<1	**0.05**	<0.01	<0.01	<0.01	<0.1	<0.1	<1	<2
PNG LNG	LNGL-GW11	GW-11_Historical_021219	GW-11	2/12/2019			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGL-GW11	GW-11-EM_Historical_021219	GW-11	2/12/2019			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGL-GW11	PG04429-3	GW-11	2/12/2019	SGS EHS PNG Lab	PG04429	Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGL-GW12	GW-12_Historical_021219	GW-12	2/12/2019			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGL-GW12	GW-12-EM_Historical_021219	GW-12	2/12/2019			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGL-GW12	PG04429-4	GW-12	2/12/2019	SGS EHS PNG Lab	PG04429	Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGL-GW13	GW-13_Historical_021219	GW-13	2/12/2019			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGL-GW13	GW-13-EM_Historical_021219	GW-13	2/12/2019			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGL-GW13	PG04429-5	GW-13	2/12/2019	SGS EHS PNG Lab	PG04429	Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGL-GW14	GW-14_Historical_021219	GW-14	2/12/2019			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGL-GW14	GW-14-EM_Historical_021219	GW-14	2/12/2019			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGL-GW14	PG04429-6	GW-14	2/12/2019	SGS EHS PNG Lab	PG04429	Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGL-GW15	GW-15_Historical_021219	GW-15	2/12/2019			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGL-GW15	GW-15-EM_Historical_021219	GW-15	2/12/2019			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGL-GW15	PG04429-7	GW-15	2/12/2019	SGS EHS PNG Lab	PG04429	Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGL-GW5	GW-5_Historical_021219	GW-5	2/12/2019			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGL-GW5	GW-5-EM_Historical_021219	GW-5	2/12/2019			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGL-GW5	PG04429-2	GW-5	2/12/2019	SGS EHS PNG Lab	PG04429	Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGP-GW17	GW-17_Historical_021219	GW-17	2/12/2019			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGP-GW17	GW-17-EM_Historical_021219	GW-17	2/12/2019			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGP-GW17	PG04429-8	GW17	2/12/2019	SGS EHS PNG Lab	PG04429	Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGP-GW19	GW-19_Historical_021219	GW-19	2/12/2019			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGP-GW19	GW-19-EM_Historical_021219	GW-19	2/12/2019			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGP-GW19	PG04429-9	GW19	2/12/2019	SGS EHS PNG Lab	PG04429	Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGP-GW20	GW-20_Historical_021219	GW-20	2/12/2019			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGP-GW20	GW-20-EM_Historical_021219	GW-20	2/12/2019			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

																		Metals										Alkalinity				Nutrients									
																		Boron (Filtered)	Cadmium (Filtered)	Chromium (hexavalent) (Filtered)	Cobalt (Filtered)	Copper (Filtered)	Iron (Filtered)	Lead (Filtered)	Manganese (Filtered)	Mercury (Filtered)	Nickel (Filtered)	Silver (Filtered)	Selenium (Filtered)	Tin (Filtered)	Zinc (Filtered)	Alkalinity (total as CaCO3)	Alkalinity (Hydroxide) as CaCO3	Bicarbonate Alkalinity as CaCO3	Carbonate Alkalinity as CaCO3	Ammonia as N	Nitrite + Nitrate as N	Nitrate (as NO3-N)	Nitrite (as NO2-N)	Nitrogen (Total)	Total Kjeldahl Nitrogen (TKN)	Benzene	Toluene
																		mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	ug/L	ug/L
EQL																		**0.05**	**0.0001**	**0.01**	**0.001**	**0.001**	**0.05**	**0.001**	**0.001**	**0.0001**	**0.001**	**0.001**	**0.01**	**0.001**	**0.005**	**1**	**1**	**1**	**1**	**0.01**	**0.01**	**0.01**	**0.01**	**0.1**	**0.1**	**1**	**2**
NHMRC 2008 Recreational Water																		40	0.02			20		0.1	5	0.01	0.2		0.1									10	1					10	8000
PNG Water Quality Criteria for Freshwater Aquatic Ecosystem (guideline only)																		1	0.01	0.05	0.001	1	1	0.005	0.5	0.0002	1	0.05	0.01	0.5	5					Variable	45						
PNG Water Quality Criteria for Marine Aquatic Ecosystem (guideline only)																		2	0.001	0.01	0.001	0.03	1	0.004	2	0.0002	1	0.05	0.01	0.5	5						45						
Environment Permit Criteria (Baseline Range)																		4.6	0.34	0.12	0.03	0.025	17	0.052	3	0.0003	0.04	0.2	0.235	0.22	0.095					7.2		29	1.03	1.3		1	2
PNG DWG (1987)																			0.01			1.5	1	0.1	0.5	0.001		0.05	0.01		15	600						45						
Site_ID	**Location_Code**	**SampleCode**	**Field_ID**	**Sampled_Date_Time**	**Lab_Name**	**Lab_Report_Number**	**Sample_Type**																																		
PNG LNG	LNGP-GW20	PG04429-10	Gw20	2/12/2019	SGS EHS PNG Lab	PG04429	Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGP-GW20	PG04429-16	QC2	2/12/2019	SGS EHS PNG Lab	PG04429	Field_D	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGP-GW21	GW-21_Historical_021219	GW-21	2/12/2019			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGP-GW21	GW-21-EM_Historical_021219	GW-21	2/12/2019			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGP-GW21	PG04429-11	GW21	2/12/2019	SGS EHS PNG Lab	PG04429	Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGP-GW22	GW-22_Historical_021219	GW-22	2/12/2019			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGP-GW22	GW-22-EM_Historical_021219	GW-22	2/12/2019			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGP-GW22	PG04429-12	Gw22	2/12/2019	SGS EHS PNG Lab	PG04429	Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGP-GW22	PG04429-15	QC1	2/12/2019	SGS EHS PNG Lab	PG04429	Field_D	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGP-GW23	GW-23_Historical_021219	GW-23	2/12/2019			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGP-GW23	GW-23-EM_Historical_021219	GW-23	2/12/2019			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGP-GW23	PG04429-13	GW23	2/12/2019	SGS EHS PNG Lab	PG04429	Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGP-GW24	GW-24_Historical_021219	GW-24	2/12/2019			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGP-GW24	GW-24-EM_Historical_021219	GW-24	2/12/2019			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGP-GW24	PG04429-14	GW24	2/12/2019	SGS EHS PNG Lab	PG04429	Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGP-MW2	MW-2_Historical_021219	MW-2	2/12/2019			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGP-MW2	MW-2-EM_Historical_021219	MW-2	2/12/2019			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGP-MW2	PG04429-1	MV-2	2/12/2019	SGS EHS PNG Lab	PG04429	Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PNG LNG	QC3	PG04429-17	QC3	2/12/2019	SGS EHS PNG Lab	PG04429	Field_B	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PNG LNG	QC4	PG04429-18	QC4	2/12/2019	SGS EHS PNG Lab	PG04429	Field_B	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGP-GW19	EB1932832009	LNGP-GW19	2/12/2019	ALSE-Brisbane	EB1932832	Normal	**0.95**	<0.0001	<0.01	**0.001**	<0.001	**0.38**	<0.001	**0.404**	<0.0001	<0.001	<0.001	<0.01	<0.001	**0.006**	**268**	<1	**268**	<1	**0.04**	<0.01	<0.01	<0.01	<0.5	<0.5	<1	<2
PNG LNG	LNGP-GW17	EB1932832008	LNGP-GW17	2/12/2019	ALSE-Brisbane	EB1932832	Normal	**0.19**	<0.0001	<0.01	<0.001	<0.001	<0.05	<0.001	**0.006**	<0.0001	<0.001	<0.001	**0.01**	<0.001	<0.005	**492**	<1	**492**	<1	**0.02**	**0.09**	**0.09**	<0.01	**0.4**	**0.3**	<1	<2
PNG LNG	LNGP-MW2	EB1932832001	LNGP-MW2	2/12/2019	ALSE-Brisbane	EB1932832	Normal	**1.09**	<0.0001	<0.01	<0.001	<0.001	<0.05	<0.001	**0.693**	<0.0001	**0.001**	<0.001	<0.01	<0.001	<0.005	**452**	<1	**452**	<1	**0.02**	**12.4**	**12.3**	**0.07**	**14.2**	**1.8**	<1	<2
PNG LNG		EB1932832017	LNGP-QC3	2/12/2019	ALSE-Brisbane	EB1932832	Field_B	<0.05	<0.0001	<0.01	<0.001	<0.001	<0.05	<0.001	<0.001	<0.0001	<0.001	<0.001	<0.01	<0.001	<0.005	**4**	<1	**4**	<1	<0.01	<0.01	<0.01	<0.01	<0.1	<0.1	<1	<2
PNG LNG	LNGL-GW5	EB1932832002	LNGP-GW5	2/12/2019	ALSE-Brisbane	EB1932832	Normal	**0.28**	<0.0001	<0.01	**0.005**	<0.001	<0.05	<0.001	**1.01**	<0.0001	**0.001**	<0.001	<0.01	<0.001	<0.005	**261**	<1	**261**	<1	<0.01	**0.52**	**0.46**	**0.06**	**0.6**	**0.1**	<1	<2
PNG LNG	LNGL-GW12	EB1932832004	LNGP-GW12	2/12/2019	ALSE-Brisbane	EB1932832	Normal	**0.13**	<0.0001	<0.01	<0.001	**0.002**	<0.05	<0.001	**0.078**	<0.0001	<0.001	<0.001	**0.01**	<0.001	<0.005	**227**	<1	**227**	<1	<0.01	**0.54**	**0.48**	**0.06**	**0.7**	**0.2**	<1	<2
PNG LNG	LNGL-GW14	EB1932832006	LNGP-GW14	2/12/2019	ALSE-Brisbane	EB1932832	Normal	**1.17**	<0.0001	<0.01	**0.001**	<0.001	**1.51**	<0.001	**0.23**	<0.0001	<0.001	<0.001	<0.01	<0.001	<0.005	**409**	<1	**409**	<1	<0.01	<0.01	<0.01	<0.01	<0.1	<0.1	<1	<2
PNG LNG	LNGL-GW15	EB1932832007	LNGP-GW15	2/12/2019	ALSE-Brisbane	EB1932832	Normal	**0.64**	<0.0001	<0.01	<0.001	<0.001	**0.12**	<0.001	**0.132**	<0.0001	<0.001	<0.001	<0.01	<0.001	<0.005	**260**	<1	**260**	<1	<0.01	<0.01	<0.01	<0.01	**0.2**	**0.2**	<1	<2
PNG LNG	LNGL-GW11	EB1932832003	LNGP-GW11	2/12/2019	ALSE-Brisbane	EB1932832	Normal	**0.45**	**0.0002**	<0.01	**0.003**	<0.001	<0.05	<0.001	**2.42**	<0.0001	**0.002**	<0.001	<0.01	<0.001	<0.005	**206**	<1	**206**	<1	**0.71**	**0.17**	**0.16**	**0.01**	**1.4**	**1.2**	<1	<2
PNG LNG	LNGL-GW13	EB1932832005	LNGP-GW13	2/12/2019	ALSE-Brisbane	EB1932832	Normal	**0.41**	<0.0001	<0.01	<0.001	<0.001	<0.05	<0.001	**0.007**	<0.0001	<0.001	<0.001	**0.02**	<0.001	**0.006**	**190**	<1	**190**	<1	<0.01	**0.57**	**0.57**	<0.01	**0.7**	**0.1**	<1	<2
PNG LNG	LNGP-GW22	EB1932832012	LNGP-GW22	2/12/2019	ALSE-Brisbane	EB1932832	Normal	**1.85**	<0.0005	<0.01	<0.005	<0.005	**12.6**	<0.005	**0.82**	<0.0005	<0.005	<0.005	<0.05	<0.005	<0.025	**654**	<1	**654**	<1	**8.04**	<0.01	<0.01	**0.01**	**8.4**	**8.4**	<1	<2
PNG LNG	LNGP-GW22	EB1932832015	LNGP-QC1	2/12/2019	ALSE-Brisbane	EB1932832	Field_D	**1.91**	<0.0005	<0.01	<0.005	<0.005	**12.4**	<0.005	**0.842**	<0.0005	<0.005	<0.005	<0.05	<0.005	<0.025	**677**	<1	**677**	<1	**8.01**	<0.01	<0.01	**0.01**	**8.3**	**8.3**	<1	<2
PNG LNG	LNGP-GW24	EB1932832014	LNGP-GW24	2/12/2019	ALSE-Brisbane	EB1932832	Normal	**0.42**	<0.0001	<0.01	**0.002**	<0.001	**0.32**	<0.001	**1.68**	<0.0001	**0.002**	<0.001	<0.01	<0.001	<0.005	**216**	<1	**216**	<1	**1.46**	**0.08**	**0.07**	**0.01**	**2**	**1.9**	<1	<2
PNG LNG	LNGP-GW21	EB1932832011	LNGP-GW21	2/12/2019	ALSE-Brisbane	EB1932832	Normal	**1.64**	<0.0005	<0.01	**0.008**	<0.005	**0.26**	<0.005	**4.6**	<0.0005	<0.005	<0.005	<0.05	<0.005	<0.025	**359**	<1	**359**	<1	**1.5**	<0.01	<0.01	<0.01	**2.3**	**2.3**	<1	<2
PNG LNG		EB1932832018	LNGP-QC4	2/12/2019	ALSE-Brisbane	EB1932832	Field_B	<0.05	<0.0001	<0.01	<0.001	<0.001	<0.05	<0.001	<0.001	<0.0001	<0.001	<0.001	<0.01	<0.001	<0.005	**4**	<1	**4**	<1	<0.01	<0.01	<0.01	<0.01	<0.1	<0.1	<1	<2
PNG LNG	LNGP-GW23	EB1932832013	LNGP-GW23	2/12/2019	ALSE-Brisbane	EB1932832	Normal	**0.61**	<0.0001	<0.01	**0.002**	<0.001	<0.05	<0.001	**1.22**	<0.0001	<0.001	<0.001	<0.01	<0.001	**0.006**	**345**	<1	**345**	<1	**0.1**	<0.01	<0.01	<0.01	**0.2**	**0.2**	<1	<2
PNG LNG	LNGP-GW20	EB1932832010	LNGP-GW20	2/12/2019	ALSE-Brisbane	EB1932832	Normal	**0.63**	<0.0001	<0.01	**0.002**	<0.001	<0.05	<0.001	**0.19**	<0.0001	<0.001	<0.001	**0.17**	<0.001	<0.005	**437**	<1	**437**	<1	**0.05**	**1.02**	**1**	**0.02**	**1.2**	**0.2**	<1	<2
PNG LNG	LNGP-GW20	EB1932832016	LNGP-QC2	2/12/2019	ALSE-Brisbane	EB1932832	Field_D	**0.61**	<0.0001	<0.01	**0.002**	<0.001	<0.05	<0.001	**0.19**	<0.0001	<0.001	<0.001	**0.17**	<0.001	<0.005	**435**	<1	**435**	<1	**0.04**	**1.01**	**0.99**	**0.02**	**1.2**	**0.2**	<1	<2

Statistical Summary

Number of Results	211	211	211	210	211	211	211	211	211	211	211	211	211	211	57	57	57	57	210	88	211	133	102	57	195	195
Number of Detects	201	26	20	92	74	83	20	177	9	88	14	72	38	110	57	0	57	0	189	62	175	45	82	40	13	13
Minimum Concentration	<0.001	<0.0001	<0.0001	<0.001	<0.0001	<0.001	<0.0001	<0.001	<0.0001	<0.001	<0.0005	<0.001	<0.001	<0.001	2	<1	2	<1	0.003	<0.01	<0.01	<0.01	<0.01	<0.1	<1	<2
Minimum Detect	0.004	0.0001	0.002	0.001	0.001	0.014	0.001	0.002	0.001	0.001	0.001	0.008	0.001	0.005	2	ND	2	ND	0.003	0.01	0.01	0.01	0.01	0.1	ND	ND
Maximum Concentration	4.6	0.34	0.12	0.03	10	17	0.052	5.09	0.003	<0.05	0.2	<0.2	0.22	0.169	716	<1	716	<1	8.77	33.6	33.6	1.03	37.2	10.6	<1	<2
Maximum Detect	4.6	0.34	0.12	0.03	10	17	0.052	5.09	0.003	0.04	0.2	0.17	0.22	0.169	716	ND	716	ND	8.77	33.6	33.6	1.03	37.2	10.6	ND	ND
Average Concentration	0.83	0.008	0.008	0.0032	0.12	0.87	0.0029	0.51	0.00011	0.0037	0.0043	0.018	0.012	0.013	306	0.5	306	0.5	0.71	0.95	1	0.025	1.7	1.2	0.5	1
Median Concentration	0.56	0.00005	0.005	0.001	0.0005	0.025	0.0005	0.225	0.00005	0.0005	0.0005	0.005	0.0005	0.006	271	0.5	271	0.5	0.07	0.065	0.155	0.005	0.4	0.25	0.5	1
Standard Deviation	0.76	0.046	0.016	0.0062	0.96	2.6	0.0095	0.75	0.00028	0.0087	0.016	0.032	0.048	0.018	174	0	174	0	2	4.1	3.6	0.1	4.9	2.3	0	0
Number of Guideline Exceedances	62	15	12	82	5	33	26	72	18	1	3	62	0	3	4	0	0	0	10	0	5	1	14	0	0	0
Number of Guideline Exceedances(Detects Only)	62	12	12	59	4	33	10	72	4	0	3	47	0	1	4	0	0	0	10	0	5	1	14	0	0	0

									BTEX						Total Petroleum Hydrocarbons					Total Recoverable Hydrocarbons							Inorganics					Biological		
									Ethylbenzene	Xylene Total	Naphthalene (VOC)	Total BTEX	Xylene (o)	Xylene (m & p)	C6 - C9	C10 - C14	C15 - C28	C29 - C36	C10 - C36 (Sum of total)	F1 (C6 - C10)	F1 (C6 - C10) less BTEX	F2 (C10 - C16)	F2 C10 - C16 (minus Naphthalene)	F3 (C16 - C34)	F4 (C34 - C40)	C10 - C40 (Sum of total)	Reactive Phosphorus as P (Orthophosphate as P)	Total Phosphorus as P (Organic Phosphate as P)	Total Suspended Solids (TSS)	Biochemical Oxygen Demand (BOD)	Chemical Oxygen Demand (COD)	Faecal Coliforms	E. Coli	Enterococci
									ug/L	ug/L	mg/L	mg/L	mg/L	mg/L	ug/L	ug/L	ug/L	ug/L	ug/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	CFU/100mL	cfu/100 ml	org/100ml
EQL									**2**	**2**	**0.005**	**0.001**	**0.002**	**0.002**	**20**	**50**	**100**	**50**	**50**	**0.02**	**0.02**	**0.1**	**0.1**	**0.1**	**0.1**	**0.1**	**0.01**	**0.01**	**5**		**10**			
NHMRC 2008 Recreational Water									3000	6000																							
PNG Water Quality Criteria for Freshwater Aquatic Ecosystem (guideline only)																													50	25	125	200	1000	500
PNG Water Quality Criteria for Marine Aquatic Ecosystem (guideline only)																													50	25	125	200	1000	500
Environment Permit Criteria (Baseline Range)									2	2	0.0544		0.002	0.002	1600	17,000	13,000	800											3230	22	1020	336	1	2419.6
PNG DWG (1987)																																3	0	
Site_ID	**Location_Code**	**SampleCode**	**Field_ID**	**Sampled_Date_Time**	**Lab_Name**	**Lab_Report_Number**	**Sample_Type**																											
PNG LNG	LNGP-MW2	MW-2_Historical_160310	MW-2	16/03/2010			Normal	<2	-	<0.001	-	<0.002	<0.002	<20	<50	<100	<50	-	-	-	-	-	-	-	-	-	**11**	<2	**69**	-	-	-
PNG LNG	LNGP-MW-1	MW-1_Historical_160310	MW-1	16/03/2010			Normal	<2	-	<0.001	-	<2	<2	<20	**60**	**380**	**80**	-	-	-	-	-	-	-	-	-	-	**6**	**34**	-	-	-
PNG LNG	LNGP-MW-3	MW-3_Historical_160310	MW-3	16/03/2010			Normal	<2	-	<0.001	-	<2	<2	<20	<50	<100	<50	-	-	-	-	-	-	-	-	-	-	-	<2	**60**	-	-	-
PNG LNG	LNGP-MW-3B	MW-3B_Historical_160310	MW-3B	16/03/2010			Normal	<2	-	<0.001	-	<2	<2	<20	**140**	<100	<50	-	-	-	-	-	-	-	-	-	-	-	<2	**139**	-	-	-
PNG LNG	LNGP-MW-4	MW-4_Historical_160310	MW-4	16/03/2010			Normal	<2	-	<0.001	-	<2	<2	<20	<50	<100	<50	-	-	-	-	-	-	-	-	-	-	-	<2	**33**	-	-	-
PNG LNG	LNGP-MW-4	MW-4_Historical_121013	MW-4	12/10/2013			Normal	-	-	-	-	-	-	<40	<50	<200	<200	-	-	-	-	-	-	-	-	-	-	-	-	-	12	-	-
PNG LNG	LNGP-MW-4	MW-4_Historical_100814	MW-4	10/08/2014			Normal	<2	-	<0.005	-	<2	<2	<20	<50	<100	<50	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGP-MW-4	MW-4_Historical_080315	MW-4	8/03/2015			Normal	<2	-	<0.005	-	<2	<2	<20	<50	<100	<50	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-
PNG LNG	LNGP-MW-4	MW-4_Historical_160815	MW-4	16/08/2015			Normal	<2	-	<0.005	-	<2	<2	<20	<50	<100	<50	-	-	-	-	-	-	-	-	-	-	-	-	-	0	-	-
PNG LNG	LNGP-MW-4	MW-4_Historical_130316	MW-4	13/03/2016			Normal	<2	-	<0.005	-	<2	<2	<20	<50	<100	<50	-	-	-	-	-	-	-	-	-	-	-	-	-	0	-	-
PNG LNG	LNGP-MW-4	MW-4_Historical_170417	MW-4	17/04/2017			Normal	<2	-	<0.005	-	<2	<2	<20	<50	<100	<50	-	-	-	-	-	-	-	-	-	-	-	-	-	**>2,419.6**	-	-
PNG LNG	LNGP-MW-4A	MW-4A_Historical_160310	MW-4A	16/03/2010			Normal	<2	-	<0.001	-	<2	<2	<20	**150**	**240**	<50	-	-	-	-	-	-	-	-	-	-	-	<2	**1020**	-	-	-
PNG LNG	LNGP-MW-5	MW-5_Historical_160310	MW-5	16/03/2010			Normal	<2	-	<0.001	-	<2	<2	<20	<50	<100	<50	-	-	-	-	-	-	-	-	-	-	-	<2	**145**	-	-	-
PNG LNG	LNGP-MW-5A	MW-5A_Historical_160310	MW-5A	16/03/2010			Normal	<2	-	<0.001	-	<2	<2	<20	<50	<100	<50	-	-	-	-	-	-	-	-	-	-	-	<2	**234**	-	-	-
PNG LNG	LNGP-MW-6_NTH	MW-6_NTH_Historical_160310	MW-6_NTH	16/03/2010			Normal	<2	-	<0.001	-	<2	<2	<20	**150**	<100	<50	-	-	-	-	-	-	-	-	-	-	-	2	**173**	-	-	-
PNG LNG	LNGP-MW-6_STH (MW6A)	MW-6_STH (MW6A)_Historical_16031	MW-6_STH (MW6A)	16/03/2010			Normal	<2	-	**0.0544**	-	<2	<2	<20	**920**	**800**	**170**	-	-	-	-	-	-	-	-	-	-	-	22	**471**	-	-	-
PNG LNG	LNGP-MW-7	MW-7_Historical_160310	MW-7	16/03/2010			Normal	<2	-	<0.001	-	<2	<2	<20	<50	<100	<50	-	-	-	-	-	-	-	-	-	-	-	<2	**149**	-	-	-
PNG LNG	LNGP-MW-8	MW-8_Historical_160310	MW-8	16/03/2010			Normal	<2	-	<0.001	-	<2	<2	<20	<50	<100	<50	-	-	-	-	-	-	-	-	-	-	-	<2	**35**	-	-	-
PNG LNG	LNGP-GW-16	GW-16_Historical_131012	GW-16	13/10/2012			Normal	-	-	-	-	-	-	<40	<50	<200	<200	-	-	-	-	-	-	-	-	-	-	-	-	-	8	-	-
PNG LNG	LNGP-GW-16	GW-16_Historical_121013	GW-16	12/10/2013			Normal	-	-	-	-	-	-	<40	<50	<200	<200	-	-	-	-	-	-	-	-	-	-	-	-	-	0	-	-
PNG LNG	LNGL-MW-9	MW-9_Historical_160310	MW-9	16/03/2010			Normal	<2	-	<0.005	-	<2	<2	<20	<50	<100	<50	-	-	-	-	-	-	-	-	-	-	-	<2	**19**	-	-	-
PNG LNG	LNGL-GW-6	GW-6_Historical_150611	GW-6	15/06/2011			Normal	-	-	-	-	-	-	**1600**	<100	<200	<200	-	-	-	-	-	-	-	-	-	-	-	-	-	98	-	-
PNG LNG	LNGL-GW-6	GW-6_Historical_080811	GW-6	8/08/2011			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGL-GW-7	GW-7_Historical_150611	GW-7	15/06/2011			Normal	-	-	-	-	-	-	<40	<100	<200	<200	-	-	-	-	-	-	-	-	-	-	-	-	-	100	-	-
PNG LNG	LNGL-GW-7	GW-7_Historical_080811	GW-7	8/08/2011			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGL-GW-8	GW-8_Historical_150611	GW-8	15/06/2011			Normal	-	-	-	-	-	-	**70**	<100	<200	<200	-	-	-	-	-	-	-	-	-	-	-	-	-	30	-	-
PNG LNG	LNGL-GW-8	GW-8_Historical_080811	GW-8	8/08/2011			Normal	-	-	-	-	-	-	**-**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGL-GW-9	GW-9_Historical_150611	GW-9	15/06/2011			Normal	-	-	-	-	-	-	**90**	<100	<200	<200	-	-	-	-	-	-	-	-	-	-	-	-	-	26	-	-
PNG LNG	LNGL-GW-9	GW-9_Historical_080811	GW-9	8/08/2011			Normal	-	-	-	-	-	-	**-**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGL-GW-10	GW-10_Historical_150611	GW-10	15/06/2011			Normal	-	-	-	-	-	-	**180**	<100	<200	<200	-	-	-	-	-	-	-	-	-	-	-	-	-	>200	-	-
PNG LNG	LNGL-GW-10	GW-10_Historical_080811	GW-10	8/08/2011			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0	-	-
PNG LNG	LNGL-GW5	GW-5_Historical_150611	GW-5	15/06/2011			Normal	-	-	-	-	-	-	**50**	<100	<200	<200	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGL-GW5	GW-5-SGS_Historical_150611	GW-5	15/06/2011			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	>200	-	-
PNG LNG	LNGL-GW5	GW-5_Historical_080811	GW-5	8/08/2011			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGL-GW5	GW-5-SGS_Historical_080811	GW-5	8/08/2011			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0	-	-
PNG LNG	LNGL-GW11	GW-11_Historical_131012	GW-11	13/10/2012			Normal	-	-	-	-	-	-	<40	<50	<200	<200	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGL-GW11	GW-11-SGS_Historical_131012	GW-11	13/10/2012			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	161	-	-
PNG LNG	LNGL-GW12	GW-12_Historical_131012	GW-12	13/10/2012			Normal	-	-	-	-	-	-	**130**	**17,000**	**13,000**	<200	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGL-GW12	GW-12-SGS_Historical_131012	GW-12	13/10/2012			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	130	-	-
PNG LNG	LNGL-GW13	GW-13_Historical_131012	GW-13	13/10/2012			Normal	-	-	-	-	-	-	<200	<50	<200	<200	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGL-GW13	GW-13-SGS_Historical_131012	GW-13	13/10/2012			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	18	-	-
PNG LNG	LNGL-GW14	GW-14_Historical_131012	GW-14	13/10/2012			Normal	-	-	-	-	-	-	<40	**8700**	**6600**	<200	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGL-GW14	GW-14-SGS_Historical_131012	GW-14	13/10/2012			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	10	-	-
PNG LNG	LNGL-GW15	GW-15_Historical_131012	GW-15	13/10/2012			Normal	-	-	-	-	-	-	**210**	**560**	**510**	<200	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGL-GW15	GW-15-SGS_Historical_131012	GW-15	13/10/2012			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	44	-	-
PNG LNG	LNGP-GW17	GW-17_Historical_131012	GW-17	13/10/2012			Normal	-	-	-	-	-	-	<40	**4300**	**4700**	**800**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGP-GW17	GW-17-SGS_Historical_131012	GW-17	13/10/2012			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	215	-	-
PNG LNG	LNGP-GW19	GW-19_Historical_131012	GW-19	13/10/2012			Normal	-	-	-	-	-	-	<40	**2000**	**1500**	<200	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGP-GW19	GW-19-SGS_Historical_131012	GW-19	13/10/2012			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	30	-	-
PNG LNG	LNGP-GW20	GW-20_Historical_131012	GW-20	13/10/2012			Normal	-	-	-	-	-	-	<40	**360**	**300**	<200	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGP-GW20	GW-20-SGS_Historical_131012	GW-20	13/10/2012			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	18	-	-
PNG LNG	LNGP-GW21	GW-21_Historical_131012	GW-21	13/10/2012			Normal	-	-	-	-	-	-	**270**	<50	<200	<200	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGP-GW21	GW-21-SGS_Historical_131012	GW-21	13/10/2012			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2	-	-
PNG LNG	LNGP-GW22	GW-22_Historical_131012	GW-22	13/10/2012			Normal	-	-	-	-	-	-	**130**	**2700**	**2000**	<200	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGP-GW22	GW-22-SGS_Historical_131012	GW-22	13/10/2012			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	60	-	-
PNG LNG	LNGP-GW17	GW-17_Historical_121013	GW-17	12/10/2013			Normal	-	-	-	-	-	-	<40	<50	<200	<200	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGP-GW17	GW-17-SGS_Historical_121013	GW-17	12/10/2013			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	15	-	-
PNG LNG	LNGP-GW19	GW-19_Historical_121013	GW-19	12/10/2013			Normal	-	-	-	-	-	-	<40	<50	<200	<200	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGP-GW19	GW-19-SGS_Historical_121013	GW-19	12/10/2013			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	50	-	-
PNG LNG	LNGP-GW20	GW-20_Historical_121013	GW-20	12/10/2013			Normal	-	-	-	-	-	-	<40	<50	<200	<200	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGP-GW20	GW-20-SGS_Historical_121013	GW-20	12/10/2013			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	14	-	-
PNG LNG	LNGP-GW21	GW-21_Historical_121013	GW-21	12/10/2013			Normal	-	-	-	-	-	-	<40	<50	<200	<200	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGP-GW21	GW-21-SGS_Historical_121013	GW-21	12/10/2013			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	20	-	-

									BTEX						Total Petroleum Hydrocarbons					Total Recoverable Hydrocarbons								Inorganics					Biological		
									Ethylbenzene	Xylene Total	Naphthalene (VOC)	Total BTEX	Xylene (o)	Xylene (m & p)	C6 - C9	C10 - C14	C15 - C28	C29 - C36	C10 - C36 (Sum of total)	F1 (C6 - C10)	F1 (C6 - C10) less BTEX	F2 (C10 - C16)	F2 C10 - C16 (minus Naphthalene)	F3 (C16 - C34)	F4 (C34 - C40)	C10 - C40 (Sum of total)	Reactive Phosphorus as P (Orthophosphate as P)	Total Phosphorus as P (Organic Phosphate as P)	Total Suspended Solids (TSS)	Biochemical Oxygen Demand (BOD)	Chemical Oxygen Demand (COD)	Faecal Coliforms	E. Coli	Enterococci
									ug/L	ug/L	mg/L	mg/L	mg/L	mg/L	ug/L	ug/L	ug/L	ug/L	ug/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	CFU/100mL	cfu/100 ml	org/100ml
EQL									**2**	**2**	**0.005**	**0.001**	**0.002**	**0.002**	**20**	**50**	**100**	**50**	**50**	**0.02**	**0.02**	**0.1**	**0.1**	**0.1**	**0.1**	**0.1**	**0.01**	**0.01**	**5**		**10**			
NHMRC 2008 Recreational Water									3000	6000																								
PNG Water Quality Criteria for Freshwater Aquatic Ecosystem (guideline only)																													50	25	125	200	1000	500
PNG Water Quality Criteria for Marine Aquatic Ecosystem (guideline only)																													50	25	125	200	1000	500
Environment Permit Criteria (Baseline Range)									2	2	0.0544		0.002	0.002	1600	17,000	13,000	800											3230	22	1020	336	1	2419.6
PNG DWG (1987)																																3	0	
Site_ID	**Location_Code**	**SampleCode**	**Field_ID**	**Sampled_Date_Time**	**Lab_Name**	**Lab_Report_Number**	**Sample_Type**																											
PNG LNG	LNGP-GW22	GW-22_Historical_121013	GW-22	12/10/2013			Normal	-	-	-	-	-	-	<40	<50	<200	<200	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGP-GW22	GW-22-SGS_Historical_121013	GW-22	12/10/2013			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	336	-	-
PNG LNG	LNGL-GW11	GW-11_Historical_100814	GW-11	10/08/2014			Normal	<2	-	<0.005	-	<0.002	<0.002	<20	<50	<100	<50	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGL-GW11	GW-11-SGS_Historical_100814	GW-11	10/08/2014			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0	-	-
PNG LNG	LNGL-GW12	GW-12_Historical_100814	GW-12	10/08/2014			Normal	<2	-	<0.005	-	<0.002	<0.002	<20	<50	<100	<50	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGL-GW12	GW-12-SGS_Historical_100814	GW-12	10/08/2014			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-
PNG LNG	LNGL-GW13	GW-13_Historical_100814	GW-13	10/08/2014			Normal	<2	-	<0.005	-	<0.002	<0.002	<20	<50	<100	<50	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGL-GW13	GW-13-SGS_Historical_100814	GW-13	10/08/2014			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	10	-	-
PNG LNG	LNGL-GW14	GW-14_Historical_100814	GW-14	10/08/2014			Normal	<2	-	<0.005	-	<0.002	<0.002	<20	<50	<100	<50	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGL-GW14	GW-14-SGS_Historical_100814	GW-14	10/08/2014			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0	-	-
PNG LNG	LNGL-GW15	GW-15_Historical_100814	GW-15	10/08/2014			Normal	<2	-	<0.005	-	<0.002	<0.002	<20	<50	<100	<50	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGL-GW15	GW-15-SGS_Historical_100814	GW-15	10/08/2014			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2	-	-
PNG LNG	LNGL-GW5	GW-5_Historical_100814	GW-5	10/08/2014			Normal	<2	-	<0.005	-	<0.002	<0.002	<20	<50	<100	<50	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGL-GW5	GW-5-SGS_Historical_100814	GW-5	10/08/2014			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	9	-	-
PNG LNG	LNGP-GW17	GW-17_Historical_100814	GW-17	10/08/2014			Normal	<2	-	<0.005	-	<0.002	<0.002	<20	<50	<100	<50	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGP-GW17	GW-17-SGS_Historical_100814	GW-17	10/08/2014			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-
PNG LNG	LNGP-GW19	GW-19_Historical_100814	GW-19	10/08/2014			Normal	<2	-	<0.005	-	<0.002	<0.002	<20	<50	<100	<50	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGP-GW19	GW-19-SGS_Historical_100814	GW-19	10/08/2014			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	10	-	-
PNG LNG	LNGP-GW20	GW-20_Historical_100814	GW-20	10/08/2014			Normal	<2	-	<0.005	-	<0.002	<0.002	<20	<50	<100	<50	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGP-GW21	GW-21_Historical_100814	GW-21	10/08/2014			Normal	<2	-	<0.005	-	<0.002	<0.002	<20	<50	<100	<50	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGP-GW21	GW-21-SGS_Historical_100814	GW-21	10/08/2014			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	8	-	-
PNG LNG	LNGP-GW22	GW-22_Historical_100814	GW-22	10/08/2014			Normal	<2	-	<0.005	-	<0.002	<0.002	<20	<50	<100	<50	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGP-MW2	MW-2_Historical_100814	MW-2	10/08/2014			Normal	<2	-	<0.005	-	<0.002	<0.002	<20	**290**	<100	<50	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGP-MW2	MW-2-SGS_Historical_100814	MW-2	10/08/2014			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	99	-	-
PNG LNG	LNGL-GW11	GW-11_Historical_080315	GW-11	8/03/2015			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGL-GW11	GW-11-SGS_Historical_080315	GW-11	8/03/2015			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	4	-	-
PNG LNG	LNGL-GW12	GW-12_Historical_080315	GW-12	8/03/2015			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGL-GW12	GW-12-SGS_Historical_080315	GW-12	8/03/2015			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0	-	-
PNG LNG	LNGL-GW13	GW-13_Historical_080315	GW-13	8/03/2015			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGL-GW13	GW-13-SGS_Historical_080315	GW-13	8/03/2015			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0	-	-
PNG LNG	LNGL-GW14	GW-14_Historical_080315	GW-14	8/03/2015			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGL-GW14	GW-14-SGS_Historical_080315	GW-14	8/03/2015			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0	-	-
PNG LNG	LNGL-GW15	GW-15_Historical_080315	GW-15	8/03/2015			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGL-GW15	GW-15-SGS_Historical_080315	GW-15	8/03/2015			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0	-	-
PNG LNG	LNGL-GW5	GW-5_Historical_080315	GW-5	8/03/2015			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGL-GW5	GW-5-SGS_Historical_080315	GW-5	8/03/2015			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	7	-	-
PNG LNG	LNGP-GW17	GW-17_Historical_080315	GW-17	8/03/2015			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGP-GW17	GW-17-SGS_Historical_080315	GW-17	8/03/2015			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	3	-	-
PNG LNG	LNGP-GW19	GW-19_Historical_080315	GW-19	8/03/2015			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGP-GW19	GW-19-SGS_Historical_080315	GW-19	8/03/2015			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	26	-	-
PNG LNG	LNGP-GW21	GW-21_Historical_080315	GW-21	8/03/2015			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGP-GW21	GW-21-SGS_Historical_080315	GW-21	8/03/2015			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0	-	-
PNG LNG	LNGP-MW2	MW-2_Historical_080315	MW-2	8/03/2015			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGP-MW2	MW-2-SGS_Historical_080315	MW-2	8/03/2015			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	15	-	-
PNG LNG		EB1514750012	QC1	8/03/2015	ALSE-Brisbane	EB1514750	Normal	<2	<2	<0.005	<0.001	<0.002	<0.002	<20	<50	<100	<50	<50	<0.02	<0.02	<0.1	<0.1	<0.1	<0.1	<0.1	-	-	-	-	-	-	-	-
PNG LNG		EB1514750013	QC2	8/03/2015	ALSE-Brisbane	EB1514750	Normal	<2	<2	<0.005	<0.001	<0.002	<0.002	<20	<50	<100	<50	<50	<0.02	<0.02	<0.1	<0.1	<0.1	<0.1	<0.1	-	-	-	-	-	-	-	-
PNG LNG		EB1514750014	QC3	8/03/2015	ALSE-Brisbane	EB1514750	Normal	<2	<2	<0.005	<0.001	<0.002	<0.002	<20	<50	<100	<50	<50	<0.02	<0.02	<0.1	<0.1	<0.1	<0.1	<0.1	-	-	-	-	-	-	-	-
PNG LNG		EB1514750015	QC4	8/03/2015	ALSE-Brisbane	EB1514750	Normal	<2	<2	<0.005	<0.001	<0.002	<0.002	<20	<50	<100	<50	<50	<0.02	<0.02	<0.1	<0.1	<0.1	<0.1	<0.1	-	-	-	-	-	-	-	-
PNG LNG	LNGL-GW11	EB1514750009	LNGP Landfill GW11	8/03/2015	ALSE-Brisbane	EB1514750	Normal	<2	<2	<0.005	<0.001	<0.002	<0.002	<20	<50	<100	<50	<50	<0.02	<0.02	<0.1	<0.1	<0.1	<0.1	<0.1	-	-	-	-	-	-	-	-
PNG LNG	LNGL-GW12	EB1514750007	LNGP Landfill GW12	8/03/2015	ALSE-Brisbane	EB1514750	Normal	<2	<2	<0.005	<0.001	<0.002	<0.002	<20	<50	<100	<50	<50	<0.02	<0.02	<0.1	<0.1	<0.1	<0.1	<0.1	-	-	-	-	-	-	-	-
PNG LNG	LNGL-GW13	EB1514750008	LNGP Landfill GW13	8/03/2015	ALSE-Brisbane	EB1514750	Normal	<2	<2	<0.005	<0.001	<0.002	<0.002	<20	<50	<100	<50	<50	<0.02	<0.02	<0.1	<0.1	<0.1	<0.1	<0.1	-	-	-	-	-	-	-	-
PNG LNG	LNGL-GW14	EB1514750010	LNGP Landfill GW14	8/03/2015	ALSE-Brisbane	EB1514750	Normal	<2	<2	<0.005	<0.001	<0.002	<0.002	<20	<50	<100	<50	<50	<0.02	<0.02	<0.1	<0.1	<0.1	<0.1	<0.1	-	-	-	-	-	-	-	-
PNG LNG	LNGL-GW15	EB1514750011	LNGP Landfill GW15	8/03/2015	ALSE-Brisbane	EB1514750	Normal	<2	<2	<0.005	<0.001	<0.002	<0.002	<20	<50	<100	<50	<50	<0.02	<0.02	<0.1	<0.1	<0.1	<0.1	<0.1	-	-	-	-	-	-	-	-
PNG LNG	LNGL-GW5	EB1514750006	LNGP Landfill GW5	8/03/2015	ALSE-Brisbane	EB1514750	Normal	<2	<2	<0.005	<0.001	<0.002	<0.002	<20	<50	<100	<50	<50	<0.02	<0.02	<0.1	<0.1	<0.1	<0.1	<0.1	-	-	-	-	-	-	-	-
PNG LNG	LNGP-GW17	EB1514750003	LNGP Plant Site GW17	8/03/2015	ALSE-Brisbane	EB1514750	Normal	<2	<2	<0.005	<0.001	<0.002	<0.002	<20	<50	<100	<50	<50	<0.02	<0.02	<0.1	<0.1	<0.1	<0.1	<0.1	-	-	-	-	-	-	-	-
PNG LNG	LNGP-GW19	EB1514750004	LNGP Plant Site GW19	8/03/2015	ALSE-Brisbane	EB1514750	Normal	<2	<2	<0.005	<0.001	<0.002	<0.002	<20	<50	<100	<50	<50	<0.02	<0.02	<0.1	<0.1	<0.1	<0.1	<0.1	-	-	-	-	-	-	-	-
PNG LNG	LNGP-GW21	EB1514750005	LNGP Plant Site GW21	8/03/2015	ALSE-Brisbane	EB1514750	Normal	<2	<2	<0.005	<0.001	<0.002	<0.002	<20	<50	<100	<50	<50	<0.02	<0.02	<0.1	<0.1	<0.1	<0.1	<0.1	-	-	-	-	-	-	-	-
PNG LNG	LNGP-MW2	EB1514750001	LNGP Plant Site MW2	8/03/2015	ALSE-Brisbane	EB1514750	Normal	<2	<2	<0.005	<0.001	<0.002	<0.002	<20	<50	<100	<50	<50	<0.02	<0.02	<0.1	<0.1	<0.1	<0.1	<0.1	-	-	-	-	-	-	-	-
PNG LNG	LNGP-MW4	EB1514750002	LNGP Plant Site MW4	8/03/2015	ALSE-Brisbane	EB1514750	Normal	<2	<2	<0.005	<0.001	<0.002	<0.002	<20	<50	<100	<50	<50	<0.02	<0.02	<0.1	<0.1	<0.1	<0.1	<0.1	-	-	-	-	-	-	-	-
PNG LNG	LNGP-GW20	GW-20_Historical_200415	GW-20	20/04/2015			Normal	<2	-	<0.005	-	<0.002	<0.002	<20	<50	<100	<50	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGP-GW20	GW-20-SGS_Historical_200415	GW-20	20/04/2015			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0	-	-
PNG LNG	LNGP-GW22	GW-22_Historical_260415	GW-22	26/04/2015			Normal	<2	-	<0.005	-	<0.002	<0.002	<20	<50	<100	<50	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGP-GW22	GW-22-SGS_Historical_260415	GW-22	26/04/2015			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0	-	-

									BTEX						Total Petroleum Hydrocarbons					Total Recoverable Hydrocarbons							Inorganics					Biological		
									Ethylbenzene	Xylene Total	Naphthalene (VOC)	Total BTEX	Xylene (o)	Xylene (m & p)	C6 - C9	C10 - C14	C15 - C28	C29 - C36	C10 - C36 (Sum of total)	F1 (C6 - C10)	F1 (C6 - C10) less BTEX	F2 (C10 - C16)	F2 C10 - C16 (minus Naphthalene)	F3 (C16 - C34)	F4 (C34 - C40)	C10 - C40 (Sum of total)	Reactive Phosphorus as P (Orthophosphate as P)	Total Phosphorus as P (Organic Phosphate as P)	Total Suspended Solids (TSS)	Biochemical Oxygen Demand (BOD)	Chemical Oxygen Demand (COD)	Faecal Coliforms	E. Coli	Enterococci
									ug/L	ug/L	mg/L	mg/L	mg/L	mg/L	ug/L	ug/L	ug/L	ug/L	ug/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	CFU/100mL	cfu/100 ml	org/100ml
EQL									**2**	**2**	**0.005**	**0.001**	**0.002**	**0.002**	**20**	**50**	**100**	**50**	**50**	**0.02**	**0.02**	**0.1**	**0.1**	**0.1**	**0.1**	**0.1**	**0.01**	**0.01**	**5**		**10**			
NHMRC 2008 Recreational Water									3000	6000																								
PNG Water Quality Criteria for Freshwater Aquatic Ecosystem (guideline only)																													50	25	125	200	1000	500
PNG Water Quality Criteria for Marine Aquatic Ecosystem (guideline only)																													50	25	125	200	1000	500
Environment Permit Criteria (Baseline Range)									2	2	0.0544		0.002	0.002	1600	17,000	13,000	800											3230	22	1020	336	1	2419.6
PNG DWG (1987)																																3	0	
Site_ID	**Location_Code**	**SampleCode**	**Field_ID**	**Sampled_Date_Time**	**Lab_Name**	**Lab_Report_Number**	**Sample_Type**																											
PNG LNG		EB1526355015	QC2	15/08/2015	ALSE-Brisbane	EB1526355	Normal	<2	<2	<0.005	<0.001	<0.002	<0.002	<20	**90**	**140**	<50	**230**	<0.02	<0.02	**0.18**	**0.18**	<0.1	<0.1	**0.18**	-	-	-	-	-	-	-	-
PNG LNG	LNGL-GW12	EB1526355009	LNGP Landfill GW12	15/08/2015	ALSE-Brisbane	EB1526355	Normal	<2	<2	<0.005	<0.001	<0.002	<0.002	<20	<50	<100	<50	<50	<0.02	<0.02	<0.1	<0.1	<0.1	<0.1	<0.1	-	-	-	-	-	-	-	-
PNG LNG	LNGL-GW14	EB1526355012	LNGP Landfill GW14	15/08/2015	ALSE-Brisbane	EB1526355	Normal	<2	<2	<0.005	<0.001	<0.002	<0.002	<20	<50	<100	<50	<50	<0.02	<0.02	<0.1	<0.1	<0.1	<0.1	<0.1	-	-	-	-	-	-	-	-
PNG LNG	LNGP-GW17	EB1526355003	LNGP Plant Site GW17	15/08/2015	ALSE-Brisbane	EB1526355	Normal	<2	<2	<0.005	<0.001	<0.002	<0.002	<20	<50	<100	<50	<50	<0.02	<0.02	**0.1**	**0.1**	<0.1	<0.1	**0.1**	-	-	-	-	-	-	-	-
PNG LNG	LNGP-GW19	EB1526355004	LNGP Plant Site GW19	15/08/2015	ALSE-Brisbane	EB1526355	Normal	<2	<2	<0.005	<0.001	<0.002	<0.002	<20	<50	<100	<50	<50	<0.02	<0.02	<0.1	<0.1	<0.1	<0.1	<0.1	-	-	-	-	-	-	-	-
PNG LNG	LNGP-GW20	EB1526355005	LNGP Plant Site GW20	15/08/2015	ALSE-Brisbane	EB1526355	Normal	<2	<2	<0.005	<0.001	<0.002	<0.002	<20	<50	<100	<50	<50	<0.02	<0.02	<0.1	<0.1	<0.1	<0.1	<0.1	-	-	-	-	-	-	-	-
PNG LNG	LNGP-GW21	EB1526355006	LNGP Plant Site GW21	15/08/2015	ALSE-Brisbane	EB1526355	Normal	<2	<2	<0.005	<0.001	<0.002	<0.002	<20	<50	<100	<50	<50	<0.02	<0.02	<0.1	<0.1	<0.1	<0.1	<0.1	-	-	-	-	-	-	-	-
PNG LNG	LNGP-GW22	EB1526355007	LNGP Plant Site GW22	15/08/2015	ALSE-Brisbane	EB1526355	Normal	<2	<2	<0.005	<0.001	<0.002	<0.002	<20	<50	<100	<50	<50	<0.02	<0.02	<0.1	<0.1	<0.1	<0.1	<0.1	-	-	-	-	-	-	-	-
PNG LNG	LNGP-MW4	EB1526355002	LNGP Plant Site MW4	15/08/2015	ALSE-Brisbane	EB1526355	Normal	<2	<2	<0.005	<0.001	<0.002	<0.002	<20	<50	<100	<50	<50	<0.02	<0.02	<0.1	<0.1	<0.1	<0.1	<0.1	-	-	-	-	-	-	-	-
PNG LNG	LNGL-GW11	GW-11_Historical_160815	GW-11	16/08/2015			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGL-GW11	GW-11-SGS_Historical_160815	GW-11	16/08/2015			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0	-	-
PNG LNG	LNGL-GW12	GW-12_Historical_160815	GW-12	16/08/2015			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGL-GW13	GW-13_Historical_160815	GW-13	16/08/2015			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGL-GW13	GW-13-SGS_Historical_160815	GW-13	16/08/2015			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0	-	-
PNG LNG	LNGL-GW14	GW-14_Historical_160815	GW-14	16/08/2015			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGL-GW14	GW-14-SGS_Historical_160815	GW-14	16/08/2015			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0	-	-
PNG LNG	LNGL-GW15	GW-15_Historical_160815	GW-15	16/08/2015			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGL-GW15	GW-15-SGS_Historical_160815	GW-15	16/08/2015			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0	-	-
PNG LNG	LNGL-GW5	GW-5_Historical_160815	GW-5	16/08/2015			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGL-GW5	GW-5-SGS_Historical_160815	GW-5	16/08/2015			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0	-	-
PNG LNG	LNGP-GW17	GW-17_Historical_160815	GW-17	16/08/2015			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGP-GW17	GW-17-SGS_Historical_160815	GW-17	16/08/2015			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0	-	-
PNG LNG	LNGP-GW19	GW-19_Historical_160815	GW-19	16/08/2015			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGP-GW19	GW-19-SGS_Historical_160815	GW-19	16/08/2015			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0	-	-
PNG LNG	LNGP-GW20	GW-20_Historical_160815	GW-20	16/08/2015			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGP-GW20	GW-20-SGS_Historical_160815	GW-20	16/08/2015			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0	-	-
PNG LNG	LNGP-GW21	GW-21_Historical_160815	GW-21	16/08/2015			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGP-GW21	GW-21-SGS_Historical_160815	GW-21	16/08/2015			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0	-	-
PNG LNG	LNGP-GW22	GW-22_Historical_160815	GW-22	16/08/2015			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGP-GW22	GW-22-SGS_Historical_160815	GW-22	16/08/2015			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0	-	-
PNG LNG	LNGP-MW2	MW-2_Historical_160815	MW-2	16/08/2015			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGP-MW2	MW-2-SGS_Historical_160815	MW-2	16/08/2015			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0	-	-
PNG LNG		EB1526355014	QC1	16/08/2015	ALSE-Brisbane	EB1526355	Normal	<2	<2	<0.005	<0.001	<0.002	<0.002	<20	<50	<100	<50	<50	<0.02	<0.02	<0.1	<0.1	<0.1	<0.1	<0.1	-	-	-	-	-	-	-	-
PNG LNG		EB1526355016	QC3	16/08/2015	ALSE-Brisbane	EB1526355	Normal	<2	<2	<0.005	<0.001	<0.002	<0.002	<20	<50	<100	<50	<50	<0.02	<0.02	<0.1	<0.1	<0.1	<0.1	<0.1	-	-	-	-	-	-	-	-
PNG LNG		EB1526355017	QC4	16/08/2015	ALSE-Brisbane	EB1526355	Normal	<2	<2	<0.005	<0.001	<0.002	<0.002	<20	<50	<100	<50	<50	<0.02	<0.02	<0.1	<0.1	<0.1	<0.1	<0.1	-	-	-	-	-	-	-	-
PNG LNG	LNGL-GW11	EB1526355011	LNGP Landfill GW11	16/08/2015	ALSE-Brisbane	EB1526355	Normal	<2	<2	<0.005	<0.001	<0.002	<0.002	<20	<50	<100	<50	<50	<0.02	<0.02	<0.1	<0.1	<0.1	<0.1	<0.1	-	-	-	-	-	-	-	-
PNG LNG	LNGL-GW13	EB1526355010	LNGP Landfill GW13	16/08/2015	ALSE-Brisbane	EB1526355	Normal	<2	<2	<0.005	<0.001	<0.002	<0.002	<20	<50	<100	<50	<50	<0.02	<0.02	<0.1	<0.1	<0.1	<0.1	<0.1	-	-	-	-	-	-	-	-
PNG LNG	LNGL-GW15	EB1526355013	LNGP Landfill GW15	16/08/2015	ALSE-Brisbane	EB1526355	Normal	<2	<2	<0.005	<0.001	<0.002	<0.002	<20	**100**	**350**	<50	**450**	<0.02	<0.02	**0.15**	**0.15**	**0.31**	<0.1	**0.46**	-	-	-	-	-	-	-	-
PNG LNG	LNGL-GW5	EB1526355008	LNGP Landfill GW5	16/08/2015	ALSE-Brisbane	EB1526355	Normal	<2	<2	<0.005	<0.001	<0.002	<0.002	<20	<50	<100	<50	<50	<0.02	<0.02	<0.1	<0.1	<0.1	<0.1	<0.1	-	-	-	-	-	-	-	-
PNG LNG	LNGP-MW2	EB1526355001	LNGP Plant Site MW2	16/08/2015	ALSE-Brisbane	EB1526355	Normal	<2	<2	<0.005	<0.001	<0.002	<0.002	<20	<50	<100	<50	<50	<0.02	<0.02	<0.1	<0.1	<0.1	<0.1	<0.1	-	-	-	-	-	-	-	-
PNG LNG	LNGL-GW11	GW-11_Historical_130316	GW-11	13/03/2016			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGL-GW11	GW-11-SGS_Historical_130316	GW-11	13/03/2016			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0	-	-
PNG LNG	LNGL-GW12	GW-12_Historical_130316	GW-12	13/03/2016			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGL-GW12	GW-12-SGS_Historical_130316	GW-12	13/03/2016			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-
PNG LNG	LNGL-GW13	GW-13_Historical_130316	GW-13	13/03/2016			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGL-GW13	GW-13-SGS_Historical_130316	GW-13	13/03/2016			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	6	-	-
PNG LNG	LNGL-GW14	GW-14_Historical_130316	GW-14	13/03/2016			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGL-GW14	GW-14-SGS_Historical_130316	GW-14	13/03/2016			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0	-	-
PNG LNG	LNGL-GW15	GW-15_Historical_130316	GW-15	13/03/2016			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGL-GW15	GW-15-SGS_Historical_130316	GW-15	13/03/2016			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0	-	-
PNG LNG	LNGL-GW5	GW-5_Historical_130316	GW-5	13/03/2016			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGL-GW5	GW-5-SGS_Historical_130316	GW-5	13/03/2016			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-
PNG LNG	LNGP-GW17	GW-17_Historical_130316	GW-17	13/03/2016			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGP-GW17	GW-17-SGS_Historical_130316	GW-17	13/03/2016			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-
PNG LNG	LNGP-GW19	GW-19_Historical_130316	GW-19	13/03/2016			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGP-GW19	GW-19-SGS_Historical_130316	GW-19	13/03/2016			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0	-	-
PNG LNG	LNGP-GW20	GW-20_Historical_130316	GW-20	13/03/2016			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGP-GW20	GW-20-SGS_Historical_130316	GW-20	13/03/2016			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0	-	-
PNG LNG	LNGP-GW21	GW-21_Historical_130316	GW-21	13/03/2016			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGP-GW21	GW-21-SGS_Historical_130316	GW-21	13/03/2016			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0	-	-
PNG LNG	LNGP-GW22	GW-22_Historical_130316	GW-22	13/03/2016			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGP-GW22	GW-22-SGS_Historical_130316	GW-22	13/03/2016			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-
PNG LNG	LNGP-MW2	MW-2_Historical_130316	MW-2	13/03/2016			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

									BTEX						Total Petroleum Hydrocarbons					Total Recoverable Hydrocarbons							Inorganics					Biological		
									Ethylbenzene	Xylene Total	Naphthalene (VOC)	Total BTEX	Xylene (o)	Xylene (m & p)	C6 - C9	C10 - C14	C15 - C28	C29 - C36	C10 - C36 (Sum of total)	F1 (C6 - C10)	F1 (C6 - C10) less BTEX	F2 (C10 - C16)	F2 C10 - C16 (minus Naphthalene)	F3 (C16 - C34)	F4 (C34 - C40)	C10 - C40 (Sum of total)	Reactive Phosphorus as P (Orthophosphate as P)	Total Phosphorus as P (Organic Phosphate as P)	Total Suspended Solids (TSS)	Biochemical Oxygen Demand (BOD)	Chemical Oxygen Demand (COD)	Faecal Coliforms	E. Coli	Enterococci
									ug/L	ug/L	mg/L	mg/L	mg/L	mg/L	ug/L	ug/L	ug/L	ug/L	ug/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	CFU/100mL	cfu/100 ml	org/100ml
EQL									**2**	**2**	**0.005**	**0.001**	**0.002**	**0.002**	**20**	**50**	**100**	**50**	**50**	**0.02**	**0.02**	**0.1**	**0.1**	**0.1**	**0.1**	**0.1**	**0.01**	**0.01**	**5**		**10**			
NHMRC 2008 Recreational Water									3000	6000																							
PNG Water Quality Criteria for Freshwater Aquatic Ecosystem (guideline only)																													50	25	125	200	1000	500
PNG Water Quality Criteria for Marine Aquatic Ecosystem (guideline only)																													50	25	125	200	1000	500
Environment Permit Criteria (Baseline Range)									2	2	0.0544		0.002	0.002	1600	17,000	13,000	800											3230	22	1020	336	1	2419.6
PNG DWG (1987)																																3	0	
Site_ID	**Location_Code**	**SampleCode**	**Field_ID**	**Sampled_Date_Time**	**Lab_Name**	**Lab_Report_Number**	**Sample_Type**																											
PNG LNG	LNGP-MW2	MW-2-SGS_Historical_130316	MW-2	13/03/2016			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	3	-	-
PNG LNG		EB1607514014	QC1	13/03/2016	ALSE-Brisbane	EB1607514	Normal	<2	<2	<0.005	<0.001	<0.002	<0.002	<20	**130**	**260**	<50	**390**	<0.02	<0.02	**0.3**	**0.3**	**0.11**	<0.1	**0.41**	-	-	-	-	-	-	-	-
PNG LNG		EB1607514015	QC2	13/03/2016	ALSE-Brisbane	EB1607514	Normal	<2	<2	<0.005	<0.001	<0.002	<0.002	<20	<50	<100	<50	<50	<0.02	<0.02	<0.1	<0.1	<0.1	<0.1	<0.1	-	-	-	-	-	-	-	-
PNG LNG		EB1607514016	QC3	13/03/2016	ALSE-Brisbane	EB1607514	Normal	<2	<2	<0.005	<0.001	<0.002	<0.002	<20	<50	<100	<50	<50	<0.02	<0.02	<0.1	<0.1	<0.1	<0.1	<0.1	-	-	-	-	-	-	-	-
PNG LNG		EB1607514017	QC4	13/03/2016	ALSE-Brisbane	EB1607514	Normal	<2	<2	<0.005	<0.001	<0.002	<0.002	<20	<50	<100	<50	<50	<0.02	<0.02	<0.1	<0.1	<0.1	<0.1	<0.1	-	-	-	-	-	-	-	-
PNG LNG	LNGL-GW11	EB1607514011	LNGP Landfill GW11	13/03/2016	ALSE-Brisbane	EB1607514	Normal	<2	<2	<0.005	<0.001	<0.002	<0.002	<20	<50	<100	<50	<50	<0.02	<0.02	<0.1	<0.1	<0.1	<0.1	<0.1	-	-	-	-	-	-	-	-
PNG LNG	LNGL-GW12	EB1607514009	LNGP Landfill GW12	13/03/2016	ALSE-Brisbane	EB1607514	Normal	<2	<2	<0.005	<0.001	<0.002	<0.002	<20	<50	<100	<50	<50	<0.02	<0.02	<0.1	<0.1	<0.1	<0.1	<0.1	-	-	-	-	-	-	-	-
PNG LNG	LNGL-GW13	EB1607514010	LNGP Landfill GW13	13/03/2016	ALSE-Brisbane	EB1607514	Normal	<2	<2	<0.005	<0.001	<0.002	<0.002	<20	<50	<100	<50	<50	<0.02	<0.02	<0.1	<0.1	<0.1	<0.1	<0.1	-	-	-	-	-	-	-	-
PNG LNG	LNGL-GW14	EB1607514012	LNGP Landfill GW14	13/03/2016	ALSE-Brisbane	EB1607514	Normal	<2	<2	<0.005	<0.001	<0.002	<0.002	<20	<50	<100	<50	<50	<0.02	<0.02	<0.1	<0.1	<0.1	<0.1	<0.1	-	-	-	-	-	-	-	-
PNG LNG	LNGL-GW15	EB1607514013	LNGP Landfill GW15	13/03/2016	ALSE-Brisbane	EB1607514	Normal	<2	<2	<0.005	<0.001	<0.002	<0.002	<20	**90**	**180**	<50	**270**	<0.02	<0.02	**0.14**	**0.14**	**0.13**	<0.1	**0.27**	-	-	-	-	-	-	-	-
PNG LNG	LNGL-GW5	EB1607514008	LNGP Landfill GW5	13/03/2016	ALSE-Brisbane	EB1607514	Normal	<2	<2	<0.005	<0.001	<0.002	<0.002	<20	<50	<100	<50	<50	<0.02	<0.02	<0.1	<0.1	<0.1	<0.1	<0.1	-	-	-	-	-	-	-	-
PNG LNG	LNGP-GW17	EB1607514003	LNGP Plant Site GW17	13/03/2016	ALSE-Brisbane	EB1607514	Normal	<2	<2	<0.005	<0.001	<0.002	<0.002	<20	**100**	**280**	<50	**380**	<0.02	<0.02	**0.29**	**0.29**	**0.11**	<0.1	**0.4**	-	-	-	-	-	-	-	-
PNG LNG	LNGP-GW19	EB1607514004	LNGP Plant Site GW19	13/03/2016	ALSE-Brisbane	EB1607514	Normal	<2	<2	<0.005	<0.001	<0.002	<0.002	<20	<50	<100	<50	<50	<0.02	<0.02	<0.1	<0.1	<0.1	<0.1	<0.1	-	-	-	-	-	-	-	-
PNG LNG	LNGP-GW20	EB1607514005	LNGP Plant Site GW20	13/03/2016	ALSE-Brisbane	EB1607514	Normal	<2	<2	<0.005	<0.001	<0.002	<0.002	<20	<50	<100	<50	<50	<0.02	<0.02	<0.1	<0.1	<0.1	<0.1	<0.1	-	-	-	-	-	-	-	-
PNG LNG	LNGP-GW21	EB1607514006	LNGP Plant Site GW21	13/03/2016	ALSE-Brisbane	EB1607514	Normal	<2	<2	<0.005	<0.001	<0.002	<0.002	<20	<50	**340**	<50	**340**	<0.02	<0.02	<0.1	<0.1	**0.32**	<0.1	**0.32**	-	-	-	-	-	-	-	-
PNG LNG	LNGP-GW22	EB1607514007	LNGP Plant Site GW22	13/03/2016	ALSE-Brisbane	EB1607514	Normal	<2	<2	<0.005	<0.001	<0.002	<0.002	<20	<50	<100	<50	<50	<0.02	<0.02	<0.1	<0.1	<0.1	<0.1	<0.1	-	-	-	-	-	-	-	-
PNG LNG	LNGP-MW2	EB1607514001	LNGP Plant Site MW2	13/03/2016	ALSE-Brisbane	EB1607514	Normal	<2	<2	<0.005	<0.001	<0.002	<0.002	<20	<50	<100	<50	<50	<0.02	<0.02	<0.1	<0.1	<0.1	<0.1	<0.1	-	-	-	-	-	-	-	-
PNG LNG	LNGP-MW4	EB1607514002	LNGP Plant Site MW4	13/03/2016	ALSE-Brisbane	EB1607514	Normal	<2	<2	<0.005	<0.001	<0.002	<0.002	<20	<50	<100	<50	<50	<0.02	<0.02	<0.1	<0.1	<0.1	<0.1	<0.1	-	-	-	-	-	-	-	-
PNG LNG	LNGL-GW11	GW-11_Historical_280816	GW-11	28/08/2016			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGL-GW11	GW-11-SGS_Historical_280816	GW-11	28/08/2016			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0	-	-
PNG LNG	LNGL-GW12	GW-12_Historical_280816	GW-12	28/08/2016			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGL-GW13	GW-13_Historical_280816	GW-13	28/08/2016			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGL-GW13	GW-13-SGS_Historical_280816	GW-13	28/08/2016			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0	-	-
PNG LNG	LNGL-GW14	GW-14_Historical_280816	GW-14	28/08/2016			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGL-GW14	GW-14-SGS_Historical_280816	GW-14	28/08/2016			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0	-	-
PNG LNG	LNGL-GW5	GW-5_Historical_280816	GW-5	28/08/2016			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGL-GW5	GW-5-SGS_Historical_280816	GW-5	28/08/2016			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0	-	-
PNG LNG	LNGP-GW20	GW-20_Historical_280816	GW-20	28/08/2016			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGP-GW20	GW-20-SGS_Historical_280816	GW-20	28/08/2016			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0	-	-
PNG LNG	LNGP-GW21	GW-21_Historical_280816	GW-21	28/08/2016			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGP-GW21	GW-21-SGS_Historical_280816	GW-21	28/08/2016			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0	-	-
PNG LNG	LNGP-GW22	GW-22_Historical_280816	GW-22	28/08/2016			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGP-GW22	GW-22-SGS_Historical_280816	GW-22	28/08/2016			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0	-	-
PNG LNG	LNGP-MW2	MW-2_Historical_280816	MW-2	28/08/2016			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGP-MW2	MW-2-SGS_Historical_280816	MW-2	28/08/2016			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0	-	-
PNG LNG		EB1621459010	QC1	28/08/2016	ALSE-Brisbane	EB1621459	Normal	<2	<2	<0.005	<0.001	<0.002	<0.002	<20	<50	<100	<50	<50	<0.02	<0.02	<0.1	<0.1	<0.1	<0.1	<0.1	-	-	-	-	-	-	-	-
PNG LNG		EB1621459011	QC2	28/08/2016	ALSE-Brisbane	EB1621459	Normal	<2	<2	<0.005	<0.001	<0.002	<0.002	<20	<50	<100	<50	<50	<0.02	<0.02	<0.1	<0.1	<0.1	<0.1	<0.1	-	-	-	-	-	-	-	-
PNG LNG		EB1621459012	QC3	28/08/2016	ALSE-Brisbane	EB1621459	Normal	<2	<2	<0.005	<0.001	<0.002	<0.002	<20	<50	<100	<50	<50	<0.02	<0.02	<0.1	<0.1	<0.1	<0.1	<0.1	-	-	-	-	-	-	-	-
PNG LNG	LNGL-GW11	EB1621459003	LNGP Landfill GW11	28/08/2016	ALSE-Brisbane	EB1621459	Normal	<2	<2	<0.005	<0.001	<0.002	<0.002	<20	<50	<100	<50	<50	<0.02	<0.02	<0.1	<0.1	<0.1	<0.1	<0.1	-	-	-	-	-	-	-	-
PNG LNG	LNGL-GW12	EB1621459004	LNGP Landfill GW12	28/08/2016	ALSE-Brisbane	EB1621459	Normal	<2	<2	<0.005	<0.001	<0.002	<0.002	<20	**90**	**130**	<50	**220**	<0.02	<0.02	**0.15**	**0.15**	<0.1	<0.1	**0.15**	-	-	-	-	-	-	-	-
PNG LNG	LNGL-GW13	EB1621459005	LNGP Landfill GW13	28/08/2016	ALSE-Brisbane	EB1621459	Normal	<2	<2	<0.005	<0.001	<0.002	<0.002	<20	<50	<100	<50	<50	<0.02	<0.02	<0.1	<0.1	<0.1	<0.1	<0.1	-	-	-	-	-	-	-	-
PNG LNG	LNGL-GW14	EB1621459006	LNGP Landfill GW14	28/08/2016	ALSE-Brisbane	EB1621459	Normal	<2	<2	<0.005	<0.001	<0.002	<0.002	<20	<50	<100	<50	<50	<0.02	<0.02	<0.1	<0.1	<0.1	<0.1	<0.1	-	-	-	-	-	-	-	-
PNG LNG	LNGL-GW5	EB1621459002	LNGP Landfill GW5	28/08/2016	ALSE-Brisbane	EB1621459	Normal	<2	<2	<0.005	<0.001	<0.002	<0.002	<20	<50	<100	<50	<50	<0.02	<0.02	<0.1	<0.1	<0.1	<0.1	<0.1	-	-	-	-	-	-	-	-
PNG LNG	LNGP-GW20	EB1621459007	LNGP Landfill GW20	28/08/2016	ALSE-Brisbane	EB1621459	Normal	<2	<2	<0.005	<0.001	<0.002	<0.002	<20	<50	<100	<50	<50	<0.02	<0.02	<0.1	<0.1	<0.1	<0.1	<0.1	-	-	-	-	-	-	-	-
PNG LNG	LNGP-GW21	EB1621459008	LNGP Landfill GW21	28/08/2016	ALSE-Brisbane	EB1621459	Normal	<2	<2	<0.005	<0.001	<0.002	<0.002	<20	<50	<100	<50	<50	<0.02	<0.02	<0.1	<0.1	<0.1	<0.1	<0.1	-	-	-	-	-	-	-	-
PNG LNG	LNGP-GW22	EB1621459009	LNGP Landfill GW22	28/08/2016	ALSE-Brisbane	EB1621459	Normal	<2	<2	<0.005	<0.001	<0.002	<0.002	<20	<50	**110**	<50	**110**	<0.02	<0.02	<0.1	<0.1	**0.11**	<0.1	**0.11**	-	-	-	-	-	-	-	-
PNG LNG	LNGP-MW2	EB1621459001	LNGP MW2	28/08/2016	ALSE-Brisbane	EB1621459	Normal	<2	<2	<0.005	<0.001	<0.002	<0.002	<20	<50	<100	<50	<50	<0.02	<0.02	<0.1	<0.1	<0.1	<0.1	<0.1	-	-	-	-	-	-	-	-
PNG LNG	LNGL-GW11	GW-11_Historical_170417	GW-11	17/04/2017			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGL-GW11	GW-11-SGS_Historical_170417	GW-11	17/04/2017			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1986.3	-	-
PNG LNG	LNGL-GW12	GW-12_Historical_170417	GW-12	17/04/2017			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGL-GW12	GW-12-SGS_Historical_170417	GW-12	17/04/2017			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	461.1	-	-
PNG LNG	LNGL-GW13	GW-13_Historical_170417	GW-13	17/04/2017			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGL-GW13	GW-13-SGS_Historical_170417	GW-13	17/04/2017			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	7.4	-	-
PNG LNG	LNGL-GW14	GW-14_Historical_170417	GW-14	17/04/2017			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGL-GW14	GW-14-SGS_Historical_170417	GW-14	17/04/2017			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1986.3	-	-
PNG LNG	LNGL-GW15	GW-15_Historical_170417	GW-15	17/04/2017			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGL-GW15	GW-15-SGS_Historical_170417	GW-15	17/04/2017			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1553.1	-	-
PNG LNG	LNGL-GW5	GW-5_Historical_170417	GW-5	17/04/2017			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGL-GW5	GW-5-SGS_Historical_170417	GW-5	17/04/2017			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	>2419.6	-	-
PNG LNG	LNGP-GW17	GW-17_Historical_170417	GW-17	17/04/2017			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGP-GW17	GW-17-SGS_Historical_170417	GW-17	17/04/2017			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	325.5	-	-
PNG LNG	LNGP-GW19	GW-19_Historical_170417	GW-19	17/04/2017			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGP-GW19	GW-19-SGS_Historical_170417	GW-19	17/04/2017			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	>2419.6	-	-

								BTEX						Total Petroleum Hydrocarbons					Total Recoverable Hydrocarbons							Inorganics					Biological		
								Ethylbenzene	Xylene Total	Naphthalene (VOC)	Total BTEX	Xylene (o)	Xylene (m & p)	C6 - C9	C10 - C14	C15 - C28	C29 - C36	C10 - C36 (Sum of total)	F1 (C6 - C10)	F1 (C6 - C10) less BTEX	F2 (C10 - C16)	F2 C10 - C16 (minus Naphthalene)	F3 (C16 - C34)	F4 (C34 - C40)	C10 - C40 (Sum of total)	Reactive Phosphorus as P (Orthophosphate as P)	Total Phosphorus as P (Organic Phosphate as P)	Total Suspended Solids (TSS)	Biochemical Oxygen Demand (BOD)	Chemical Oxygen Demand (COD)	Faecal Coliforms	E. Coli	Enterococci
								ug/L	ug/L	mg/L	mg/L	mg/L	mg/L	ug/L	ug/L	ug/L	ug/L	ug/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	CFU/100mL	cfu/100 ml	org/100ml
EQL								**2**	**2**	**0.005**	**0.001**	**0.002**	**0.002**	**20**	**50**	**100**	**50**	**50**	**0.02**	**0.02**	**0.1**	**0.1**	**0.1**	**0.1**	**0.1**	**0.01**	**0.01**	**5**		**10**			
NHMRC 2008 Recreational Water								3000	6000																							
PNG Water Quality Criteria for Freshwater Aquatic Ecosystem (guideline only)																												50	25	125	200	1000	500
PNG Water Quality Criteria for Marine Aquatic Ecosystem (guideline only)																												50	25	125	200	1000	500
Environment Permit Criteria (Baseline Range)								2	2	0.0544		0.002	0.002	1600	17,000	13,000	800											3230	22	1020	336	1	2419.6
PNG DWG (1987)																															3	0	
Site_ID	**Location_Code**	**SampleCode**	**Field_ID**	**Sampled_Date_Time**	**Lab_Name**	**Lab_Report_Number**	**Sample_Type**																										
PNG LNG	LNGP-GW20	GW-20_Historical_170417	GW-20	17/04/2017			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGP-GW20	GW-20-SGS_Historical_170417	GW-20	17/04/2017			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1011.2	-	-
PNG LNG	LNGP-GW21	GW-21_Historical_170417	GW-21	17/04/2017			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGP-GW21	GW-21-SGS_Historical_170417	GW-21	17/04/2017			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	>2419.6	-	-
PNG LNG	LNGP-GW22	GW-22_Historical_170417	GW-22	17/04/2017			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGP-GW22	GW-22-SGS_Historical_170417	GW-22	17/04/2017			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<1	-	-
PNG LNG	LNGP-MW2	MW-2_Historical_170417	MW-2	17/04/2017			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGP-MW2	MW-2-SGS_Historical_170417	MW-2	17/04/2017			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	>2419.6	-	-
PNG LNG		EB1707968014	QC1	17/04/2017	ALSE-Brisbane	EB1707968	Normal	<2	<2	<0.005	<0.001	<0.002	<0.002	<20	<50	<100	<50	<50	<0.02	<0.02	<0.1	<0.1	<0.1	<0.1	<0.1	-	-	-	-	-	-	-	-
PNG LNG		EB1707968015	QC2	17/04/2017	ALSE-Brisbane	EB1707968	Normal	<2	<2	<0.005	<0.001	<0.002	<0.002	<20	<50	<100	<50	<50	<0.02	<0.02	<0.1	<0.1	<0.1	<0.1	<0.1	-	-	-	-	-	-	-	-
PNG LNG		EB1707968016	QC3	17/04/2017	ALSE-Brisbane	EB1707968	Normal	<2	<2	<0.005	<0.001	<0.002	<0.002	<20	<50	<100	<50	<50	<0.02	<0.02	<0.1	<0.1	<0.1	<0.1	<0.1	-	-	-	-	-	-	-	-
PNG LNG	LNGL-GW11	EB1707968011	LNGP Landfill GW11	17/04/2017	ALSE-Brisbane	EB1707968	Normal	<2	<2	<0.005	<0.001	<0.002	<0.002	<20	<50	<100	<50	<50	<0.02	<0.02	<0.1	<0.1	<0.1	<0.1	<0.1	-	-	-	-	-	-	-	-
PNG LNG	LNGL-GW12	EB1707968009	LNGP Landfill GW12	17/04/2017	ALSE-Brisbane	EB1707968	Normal	<2	<2	<0.005	<0.001	<0.002	<0.002	<20	<50	<100	<50	<50	<0.02	<0.02	<0.1	<0.1	<0.1	<0.1	<0.1	-	-	-	-	-	-	-	-
PNG LNG	LNGL-GW13	EB1707968010	LNGP Landfill GW13	17/04/2017	ALSE-Brisbane	EB1707968	Normal	<2	<2	<0.005	<0.001	<0.002	<0.002	<20	<50	<100	<50	<50	<0.02	<0.02	<0.1	<0.1	<0.1	<0.1	<0.1	-	-	-	-	-	-	-	-
PNG LNG	LNGL-GW14	EB1707968012	LNGP Landfill GW14	17/04/2017	ALSE-Brisbane	EB1707968	Normal	<2	<2	<0.005	<0.001	<0.002	<0.002	<20	<50	<100	<50	<50	<0.02	<0.02	<0.1	<0.1	<0.1	<0.1	<0.1	-	-	-	-	-	-	-	-
PNG LNG	LNGL-GW15	EB1707968013	LNGP Landfill GW15	17/04/2017	ALSE-Brisbane	EB1707968	Normal	<2	<2	<0.005	<0.001	<0.002	<0.002	<20	**80**	**150**	<50	**230**	<0.02	<0.02	**0.13**	**0.13**	**0.11**	<0.1	**0.24**	-	-	-	-	-	-	-	-
PNG LNG	LNGL-GW5	EB1707968008	LNGP Landfill GW5	17/04/2017	ALSE-Brisbane	EB1707968	Normal	<2	<2	<0.005	<0.001	<0.002	<0.002	<20	<50	<100	<50	<50	<0.02	<0.02	<0.1	<0.1	<0.1	<0.1	<0.1	-	-	-	-	-	-	-	-
PNG LNG	LNGP-GW17	EB1707968003	LNGP Plant Site GW17	17/04/2017	ALSE-Brisbane	EB1707968	Normal	<2	<2	<0.005	<0.001	<0.002	<0.002	<20	<50	<100	<50	<50	<0.02	<0.02	<0.1	<0.1	<0.1	<0.1	<0.1	-	-	-	-	-	-	-	-
PNG LNG	LNGP-GW19	EB1707968004	LNGP Plant Site GW19	17/04/2017	ALSE-Brisbane	EB1707968	Normal	<2	<2	<0.005	<0.001	<0.002	<0.002	<20	<50	<100	<50	<50	<0.02	<0.02	<0.1	<0.1	<0.1	<0.1	<0.1	-	-	-	-	-	-	-	-
PNG LNG	LNGP-GW20	EB1707968005	LNGP Plant Site GW20	17/04/2017	ALSE-Brisbane	EB1707968	Normal	<2	<2	<0.005	<0.001	<0.002	<0.002	<20	<50	<100	<50	<50	<0.02	<0.02	<0.1	<0.1	<0.1	<0.1	<0.1	-	-	-	-	-	-	-	-
PNG LNG	LNGP-GW21	EB1707968006	LNGP Plant Site GW21	17/04/2017	ALSE-Brisbane	EB1707968	Normal	<2	<2	<0.005	<0.001	<0.002	<0.002	<20	<50	<100	<50	<50	<0.02	<0.02	<0.1	<0.1	<0.1	<0.1	<0.1	-	-	-	-	-	-	-	-
PNG LNG	LNGP-GW22	EB1707968007	LNGP Plant Site GW22	17/04/2017	ALSE-Brisbane	EB1707968	Normal	<2	<2	<0.005	<0.001	<0.002	<0.002	<20	<50	<100	<50	<50	<0.02	<0.02	<0.1	<0.1	<0.1	<0.1	<0.1	-	-	-	-	-	-	-	-
PNG LNG	LNGP-MW2	EB1707968001	LNGP Plant Site MW2	17/04/2017	ALSE-Brisbane	EB1707968	Normal	<2	<2	<0.005	<0.001	<0.002	<0.002	<20	<50	<100	<50	<50	<0.02	<0.02	<0.1	<0.1	<0.1	<0.1	<0.1	-	-	-	-	-	-	-	-
PNG LNG	LNGP-MW4	EB1707968002	LNGP Plant Site MW4	17/04/2017	ALSE-Brisbane	EB1707968	Normal	<2	<2	<0.005	<0.001	<0.002	<0.002	<20	<50	<100	<50	<50	<0.02	<0.02	<0.1	<0.1	<0.1	<0.1	<0.1	-	-	-	-	-	-	-	-
PNG LNG	LNGP-GW17	EB1722826002	LNGP Plant Site - GW17	29/09/2017	ALSE-Brisbane	EB1722826	Normal	<2	<2	<0.005	<0.001	<0.002	<0.002	<20	<50	<100	<50	<50	<0.02	<0.02	<0.1	<0.1	<0.1	<0.1	<0.1	-	-	-	-	-	-	-	-
PNG LNG	LNGP-MW2	EB1722826001	LNGP Plant Site - MW2	29/09/2017	ALSE-Brisbane	EB1722826	Normal	<2	<2	<0.005	<0.001	<0.002	<0.002	<20	<50	<100	<50	<50	<0.02	<0.02	<0.1	<0.1	<0.1	<0.1	<0.1	-	-	-	-	-	-	-	-
PNG LNG	LNGL-GW5	EB1722826007	LNGP Landfill - GW5	29/09/2017	ALSE-Brisbane	EB1722826	Normal	<2	<2	<0.005	<0.001	<0.002	<0.002	<20	<50	<100	<50	<50	<0.02	<0.02	<0.1	<0.1	<0.1	<0.1	<0.1	-	-	-	-	-	-	-	-
PNG LNG	LNGL-GW14	EB1722826011	LNGP Landfill - G14	29/09/2017	ALSE-Brisbane	EB1722826	Normal	<2	<2	<0.005	<0.001	<0.002	<0.002	<20	<50	**120**	**50**	**170**	<0.02	<0.02	<0.1	<0.1	**0.14**	<0.1	**0.14**	-	-	-	-	-	-	-	-
PNG LNG	LNGP-GW20	EB1722826004	LNGP Plant Site - GW20	29/09/2017	ALSE-Brisbane	EB1722826	Normal	<2	<2	<0.005	<0.001	<0.002	<0.002	<20	<50	<100	<50	<50	<0.02	<0.02	<0.1	<0.1	<0.1	<0.1	<0.1	-	-	-	-	-	-	-	-
PNG LNG		EB1722826016	QC4	29/09/2017	ALSE-Brisbane	EB1722826	Normal	<2	<2	<0.005	<0.001	<0.002	<0.002	<20	**70**	**130**	<50	**200**	<0.02	<0.02	<0.1	<0.1	**0.12**	<0.1	**0.12**	-	-	-	-	-	-	-	-
PNG LNG	LNGP-GW19	EB1722826003	LNGP Plant Site - GW19	29/09/2017	ALSE-Brisbane	EB1722826	Normal	<2	<2	<0.005	<0.001	<0.002	<0.002	<20	**80**	**130**	<50	**210**	<0.02	<0.02	**0.15**	**0.15**	<0.1	<0.1	**0.15**	-	-	-	-	-	-	-	-
PNG LNG		EB1722826013	QC1	29/09/2017	ALSE-Brisbane	EB1722826	Normal	<2	<2	<0.005	<0.001	<0.002	<0.002	<20	<50	<100	<50	<50	<0.02	<0.02	<0.1	<0.1	<0.1	<0.1	<0.1	-	-	-	-	-	-	-	-
PNG LNG		EB1722826014	QC2	29/09/2017	ALSE-Brisbane	EB1722826	Normal	<2	<2	<0.005	<0.001	<0.002	<0.002	<20	**60**	**100**	<50	**160**	<0.02	<0.02	<0.1	<0.1	**0.1**	<0.1	**0.1**	-	-	-	-	-	-	-	-
PNG LNG		EB1722826015	QC3	29/09/2017	ALSE-Brisbane	EB1722826	Normal	<2	<2	<0.005	<0.001	<0.002	<0.002	<20	**160**	**260**	<50	**420**	<0.02	<0.02	**0.32**	**0.32**	**0.12**	<0.1	**0.44**	-	-	-	-	-	-	-	-
PNG LNG	LNGL-GW11	EB1722826010	LNGP Landfill - GW11	29/09/2017	ALSE-Brisbane	EB1722826	Normal	<2	<2	<0.005	<0.001	<0.002	<0.002	<20	<50	<100	<50	<50	<0.02	<0.02	<0.1	<0.1	<0.1	<0.1	<0.1	-	-	-	-	-	-	-	-
PNG LNG	LNGL-GW12	EB1722826008	LNGP Landfill - GW12	29/09/2017	ALSE-Brisbane	EB1722826	Normal	<2	<2	<0.005	<0.001	<0.002	<0.002	<20	**150**	**250**	<50	**400**	<0.02	<0.02	**0.3**	**0.3**	**0.13**	<0.1	**0.43**	-	-	-	-	-	-	-	-
PNG LNG	LNGL-GW13	EB1722826009	LNGP Landfill - GW13	29/09/2017	ALSE-Brisbane	EB1722826	Normal	<2	<2	<0.005	<0.001	<0.002	<0.002	<20	<50	<100	<50	<50	<0.02	<0.02	<0.1	<0.1	<0.1	<0.1	<0.1	-	-	-	-	-	-	-	-
PNG LNG	LNGL-GW15	EB1722826012	LNGP Landfill - GW15	29/09/2017	ALSE-Brisbane	EB1722826	Normal	<2	<2	<0.005	<0.001	<0.002	<0.002	<20	**60**	**120**	<50	**180**	<0.02	<0.02	<0.1	<0.1	**0.12**	<0.1	**0.12**	-	-	-	-	-	-	-	-
PNG LNG	LNGP-GW21	EB1722826005	LNGP Plant Site - GW21	29/09/2017	ALSE-Brisbane	EB1722826	Normal	<2	<2	<0.005	<0.001	<0.002	<0.002	<20	<50	<100	<50	<50	<0.02	<0.02	<0.1	<0.1	<0.1	<0.1	<0.1	-	-	-	-	-	-	-	-
PNG LNG	LNGP-GW22	EB1722826006	LNGP Plant Site - GW22	29/09/2017	ALSE-Brisbane	EB1722826	Normal	<2	<2	<0.005	<0.001	<0.002	<0.002	<20	<50	<100	<50	<50	<0.02	<0.02	<0.1	<0.1	<0.1	<0.1	<0.1	-	-	-	-	-	-	-	-
PNG LNG	LNGL-GW11	GW-11_Historical_291017	GW-11	29/10/2017			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGL-GW11	GW-11-SGS_Historical_291017	GW-11	29/10/2017			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	>2400	-	-
PNG LNG	LNGL-GW12	GW-12_Historical_291017	GW-12	29/10/2017			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGL-GW12	GW-12-SGS_Historical_291017	GW-12	29/10/2017			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	440	-	-
PNG LNG	LNGL-GW13	GW-13_Historical_291017	GW-13	29/10/2017			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGL-GW13	GW-13-SGS_Historical_291017	GW-13	29/10/2017			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	240	-	-
PNG LNG	LNGL-GW14	GW-14_Historical_291017	GW-14	29/10/2017			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGL-GW14	GW-14-SGS_Historical_291017	GW-14	29/10/2017			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	220	-	-
PNG LNG	LNGL-GW15	GW-15_Historical_291017	GW-15	29/10/2017			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGL-GW15	GW-15-SGS_Historical_291017	GW-15	29/10/2017			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	920	-	-
PNG LNG	LNGL-GW5	GW-5_Historical_291017	GW-5	29/10/2017			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGL-GW5	GW-5-SGS_Historical_291017	GW-5	29/10/2017			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1400	-	-
PNG LNG	LNGP-GW17	GW-17_Historical_291017	GW-17	29/10/2017			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGP-GW17	GW-17-SGS_Historical_291017	GW-17	29/10/2017			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	21	-	-
PNG LNG	LNGP-GW19	GW-19_Historical_291017	GW-19	29/10/2017			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGP-GW19	GW-19-SGS_Historical_291017	GW-19	29/10/2017			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<1	-	-
PNG LNG	LNGP-GW20	GW-20_Historical_291017	GW-20	29/10/2017			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGP-GW20	GW-20-SGS_Historical_291017	GW-20	29/10/2017			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	210	-	-
PNG LNG	LNGP-GW21	GW-21_Historical_291017	GW-21	29/10/2017			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGP-GW21	GW-21-SGS_Historical_291017	GW-21	29/10/2017			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1700	-	-
PNG LNG	LNGP-GW22	GW-22_Historical_291017	GW-22	29/10/2017			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGP-GW22	GW-22-SGS_Historical_291017	GW-22	29/10/2017			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<1	-	-
PNG LNG	LNGP-MW2	MW-2_Historical_291017	MW-2	29/10/2017			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Site_ID	Location_Code	SampleCode	Field_ID	Sampled_Date_Time	Lab_Name	Lab_Report_Number	Sample_Type	BTEX						Total Petroleum Hydrocarbons					Total Recoverable Hydrocarbons							Inorganics					Biological		
								Ethylbenzene	Xylene Total	Naphthalene (VOC)	Total BTEX	Xylene (o)	Xylene (m & p)	C6 - C9	C10 - C14	C15 - C28	C29 - C36	C10 - C36 (Sum of total)	F1 (C6 - C10)	F1 (C6 - C10) less BTEX	F2 (C10 - C16)	F2 C10 - C16 (minus Naphthalene)	F3 (C16 - C34)	F4 (C34 - C40)	C10 - C40 (Sum of total)	Reactive Phosphorus as P (Orthophosphate as P)	Total Phosphorus as P (Organic Phosphate as P)	Total Suspended Solids (TSS)	Biochemical Oxygen Demand (BOD)	Chemical Oxygen Demand (COD)	Faecal Coliforms	E. Coli	Enterococci
								ug/L	ug/L	mg/L	mg/L	mg/L	mg/L	ug/L	ug/L	ug/L	ug/L	ug/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	CFU/100mL	cfu/100 ml	org/100ml
EQL								**2**	**2**	**0.005**	**0.001**	**0.002**	**0.002**	**20**	**50**	**100**	**50**	**50**	**0.02**	**0.02**	**0.1**	**0.1**	**0.1**	**0.1**	**0.1**	**0.01**	**0.01**	**5**		**10**			
NHMRC 2008 Recreational Water								3000	6000																								
PNG Water Quality Criteria for Freshwater Aquatic Ecosystem (guideline only)																												50	25	125	200	1000	500
PNG Water Quality Criteria for Marine Aquatic Ecosystem (guideline only)																												50	25	125	200	1000	500
Environment Permit Criteria (Baseline Range)								2	2	0.0544		0.002	0.002	1600	17,000	13,000	800											3230	22	1020	336	1	2419.6
PNG DWG (1987)																															3	0	
PNG LNG	LNGP-MW2	MW-2-SGS_Historical_291017	MW-2	29/10/2017			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	46	-	-
PNG LNG	LNGL-GW11	GW-11_Historical_280518	GW-11	28/05/2018			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	**70**	-	-	-	-	-
PNG LNG	LNGL-GW11	GW-11-EM_Historical_280518	GW-11	28/05/2018			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	5.2	2	27.5
PNG LNG	LNGL-GW11	GW-11-SGS_Historical_280518	GW-11	28/05/2018			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	73	-	-
PNG LNG	LNGL-GW12	GW-12_Historical_280518	GW-12	28/05/2018			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	**26**	-	-	-	-	-
PNG LNG	LNGL-GW12	GW-12-EM_Historical_280518	GW-12	28/05/2018			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	58.6	<1	>2419.6
PNG LNG	LNGL-GW12	GW-12-SGS_Historical_280518	GW-12	28/05/2018			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2000	-	-
PNG LNG	LNGL-GW13	GW-13_Historical_280518	GW-13	28/05/2018			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	**1250**	-	-	-	-	-
PNG LNG	LNGL-GW13	GW-13-EM_Historical_280518	GW-13	28/05/2018			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	816.4	<1	231
PNG LNG	LNGL-GW13	GW-13-SGS_Historical_280518	GW-13	28/05/2018			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1800	-	-
PNG LNG	LNGL-GW14	GW-14_Historical_280518	GW-14	28/05/2018			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	**20**	-	-	-	-	-
PNG LNG	LNGL-GW14	GW-14-EM_Historical_280518	GW-14	28/05/2018			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	<1	10.1
PNG LNG	LNGL-GW14	GW-14-SGS_Historical_280518	GW-14	28/05/2018			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<1	-	-
PNG LNG	LNGL-GW15	GW-15_Historical_280518	GW-15	28/05/2018			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	**30**	-	-	-	-	-
PNG LNG	LNGL-GW15	GW-15-EM_Historical_280518	GW-15	28/05/2018			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<1	<1	<1
PNG LNG	LNGL-GW15	GW-15-SGS_Historical_280518	GW-15	28/05/2018			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<1	-	-
PNG LNG	LNGL-GW5	GW-5_Historical_280518	GW-5	28/05/2018			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	**82**	-	-	-	-	-
PNG LNG	LNGL-GW5	GW-5-EM_Historical_280518	GW-5	28/05/2018			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<1	3.1	<1
PNG LNG	LNGL-GW5	GW-5-SGS_Historical_280518	GW-5	28/05/2018			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<1	-	-
PNG LNG	LNGP-GW17	GW-17_Historical_280518	GW-17	28/05/2018			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	**635**	-	-	-	-	-
PNG LNG	LNGP-GW17	GW-17-EM_Historical_280518	GW-17	28/05/2018			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	3	<1	1
PNG LNG	LNGP-GW17	GW-17-SGS_Historical_280518	GW-17	28/05/2018			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	280	-	-
PNG LNG	LNGP-GW19	GW-19_Historical_280518	GW-19	28/05/2018			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	**60**	-	-	-	-	-
PNG LNG	LNGP-GW19	GW-19-EM_Historical_280518	GW-19	28/05/2018			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	48	<1	6.3
PNG LNG	LNGP-GW19	GW-19-SGS_Historical_280518	GW-19	28/05/2018			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	360	-	-
PNG LNG	LNGP-GW20	GW-20_Historical_280518	GW-20	28/05/2018			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	**68**	-	-	-	-	-
PNG LNG	LNGP-GW20	GW-20-EM_Historical_280518	GW-20	28/05/2018			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	5.1	<1	>2419.6
PNG LNG	LNGP-GW20	GW-20-SGS_Historical_280518	GW-20	28/05/2018			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	260	-	-
PNG LNG	LNGP-GW21	GW-21_Historical_280518	GW-21	28/05/2018			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGP-GW21	GW-21-EM_Historical_280518	GW-21	28/05/2018			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<1	<1	<1
PNG LNG	LNGP-GW21	GW-21-SGS_Historical_280518	GW-21	28/05/2018			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	30	-	-
PNG LNG	LNGP-GW22	GW-22_Historical_280518	GW-22	28/05/2018			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	**54**	-	-	-	-	-
PNG LNG	LNGP-GW22	GW-22-EM_Historical_280518	GW-22	28/05/2018			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<1	<1	10
PNG LNG	LNGP-GW22	GW-22-SGS_Historical_280518	GW-22	28/05/2018			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<1	-	-
PNG LNG	LNGP-MW2	MW-2_Historical_280518	MW-2	28/05/2018			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	**10**	-	-	-	-	-
PNG LNG	LNGP-MW2	MW-2-EM_Historical_280518	MW-2	28/05/2018			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	16.1	<1	1
PNG LNG	LNGP-MW2	MW-2-SGS_Historical_280518	MW-2	28/05/2018			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	63	-	-
PNG LNG	LNGP-GW20	EB1813230004	LNGP-GW20	28/05/2018	ALSE-Brisbane	EB1813230	Normal	<2	<2	<0.005	<0.001	<0.002	<0.002	<20	<50	<100	<50	<50	<0.02	<0.02	<0.1	<0.1	<0.1	<0.1	<0.1	<0.01	**0.07**	**68**	-	**12**	-	-	-
PNG LNG	LNGP-GW21	EB1813230005	LNGP-GW21	28/05/2018	ALSE-Brisbane	EB1813230	Normal	<2	<2	<0.005	<0.001	<0.002	<0.002	<20	<50	<100	<50	<50	<0.02	<0.02	<0.1	<0.1	<0.1	<0.1	<0.1	**0.04**	**0.2**	**166**	-	**172**	-	-	-
PNG LNG	LNGP-GW22	EB1813230006	LNGP-GW22	28/05/2018	ALSE-Brisbane	EB1813230	Normal	<2	<2	<0.005	<0.001	<0.002	<0.002	<20	<50	<100	<50	<50	<0.02	<0.02	<0.1	<0.1	<0.1	<0.1	<0.1	<0.01	**0.15**	**54**	-	**635**	-	-	-
PNG LNG	LNGL-GW13	EB1813230009	LNGP-GW13	28/05/2018	ALSE-Brisbane	EB1813230	Normal	<2	<2	<0.005	<0.001	<0.002	<0.002	<20	<50	<100	<50	<50	<0.02	<0.02	<0.1	<0.1	<0.1	<0.1	<0.1	<0.01	**0.17**	**1250**	-	<50	-	-	-
PNG LNG	LNGL-GW11	EB1813230010	LNGP-GW11	28/05/2018	ALSE-Brisbane	EB1813230	Normal	<2	<2	<0.005	<0.001	<0.002	<0.002	<20	<50	<100	<50	<50	<0.02	<0.02	<0.1	<0.1	<0.1	<0.1	<0.1	<0.01	**0.04**	**70**	-	<50	-	-	-
PNG LNG	LNGL-GW15	EB1813230012	LNGP-GW15	28/05/2018	ALSE-Brisbane	EB1813230	Normal	<2	<2	<0.005	<0.001	<0.002	<0.002	<20	<50	<100	<50	<50	<0.02	<0.02	<0.1	<0.1	<0.1	<0.1	<0.1	<0.01	**0.02**	**30**	-	<50	-	-	-
PNG LNG		EB1813230013	LNGP-QC1	28/05/2018	ALSE-Brisbane	EB1813230	Normal	<2	<2	<0.005	<0.001	<0.002	<0.002	<20	<50	<100	<50	<50	<0.02	<0.02	<0.1	<0.1	**0.11**	<0.1	**0.11**	**0.01**	**0.05**	**28**	-	**16**	-	-	-
PNG LNG	LNGL-GW12	EB1813230008	LNGP-GW12	28/05/2018	ALSE-Brisbane	EB1813230	Normal	<2	<2	<0.005	<0.001	<0.002	<0.002	<20	<50	<100	**50**	**50**	<0.02	<0.02	<0.1	<0.1	**0.13**	<0.1	**0.13**	<0.01	**0.08**	**26**	-	**19**	-	-	-
PNG LNG		EB1813230014	LNGP-QC2	28/05/2018	ALSE-Brisbane	EB1813230	Normal	<2	<2	<0.005	<0.001	<0.002	<0.002	<20	<50	<100	<50	<50	<0.02	<0.02	<0.1	<0.1	<0.1	<0.1	<0.1	<0.01	**0.06**	**63**	-	<50	-	-	-
PNG LNG	LNGL-GW5	EB1813230007	LNGP-GW5	28/05/2018	ALSE-Brisbane	EB1813230	Normal	<2	<2	<0.005	<0.001	<0.002	<0.002	<20	<50	<100	<50	<50	<0.02	<0.02	<0.1	<0.1	<0.1	<0.1	<0.1	<0.01	<0.05	**82**	-	<50	-	-	-
PNG LNG	LNGL-GW14	EB1813230011	LNGP-GW14	28/05/2018	ALSE-Brisbane	EB1813230	Normal	<2	<2	<0.005	<0.001	<0.002	<0.002	<20	<50	<100	<50	<50	<0.02	<0.02	<0.1	<0.1	<0.1	<0.1	<0.1	<0.01	**0.05**	**20**	-	<50	-	-	-
PNG LNG	LNGP-MW2	EB1813230001	LNGP-MW2	28/05/2018	ALSE-Brisbane	EB1813230	Normal	<2	<2	<0.005	<0.001	<0.002	<0.002	<20	<50	<100	<50	<50	<0.02	<0.02	<0.1	<0.1	<0.1	<0.1	<0.1	<0.01	<0.05	**10**	-	<10	-	-	-
PNG LNG	LNGP-GW17	EB1813230002	LNGP-GW17	28/05/2018	ALSE-Brisbane	EB1813230	Normal	<2	<2	<0.005	<0.001	<0.002	<0.002	<20	<50	<100	<50	<50	<0.02	<0.02	<0.1	<0.1	<0.1	<0.1	<0.1	<0.01	**0.2**	**635**	-	**10**	-	-	-
PNG LNG	LNGP-GW19	EB1813230003	LNGP-GW19	28/05/2018	ALSE-Brisbane	EB1813230	Normal	<2	<2	<0.005	<0.001	<0.002	<0.002	<20	<50	**120**	**60**	**180**	<0.02	<0.02	<0.1	<0.1	**0.16**	<0.1	**0.16**	<0.01	<0.05	**60**	-	**54**	-	-	-
PNG LNG		EB1813230015	LNGP-QC3	28/05/2018	ALSE-Brisbane	EB1813230	Normal	<2	<2	<0.005	<0.001	<0.002	<0.002	<20	<50	<100	<50	<50	<0.02	<0.02	<0.1	<0.1	<0.1	<0.1	<0.1	<0.01	<0.01	<5	-	<10	-	-	-
PNG LNG		EB1813230016	LNGP-QC4	28/05/2018	ALSE-Brisbane	EB1813230	Normal	<2	<2	<0.005	<0.001	<0.002	<0.002	<20	<50	<100	<50	<50	<0.02	<0.02	<0.1	<0.1	<0.1	<0.1	<0.1	<0.01	<0.01	**9**	-	<10	-	-	-
PNG LNG	LNGL-GW11	GW-11_Historical_261118	GW-11	26/11/2018			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGL-GW11	GW-11-ALS_Historical_261118	GW-11	26/11/2018			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGL-GW11	GW-11-EM_Historical_261118	GW-11	26/11/2018			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	>2419.6	>2419.6	>2419.6
PNG LNG	LNGL-GW12	GW-12_Historical_261118	GW-12	26/11/2018			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGL-GW12	GW-12-ALS_Historical_261118	GW-12	26/11/2018			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGL-GW12	GW-12-EM_Historical_261118	GW-12	26/11/2018			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<1	980.4	770.1
PNG LNG	LNGL-GW13	GW-13_Historical_261118	GW-13	26/11/2018			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGL-GW13	GW-13-ALS_Historical_261118	GW-13	26/11/2018			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGL-GW13	GW-13-EM_Historical_261118	GW-13	26/11/2018			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	>2419.6	>2419.6	>2419.6
PNG LNG	LNGL-GW14	GW-14_Historical_261118	GW-14	26/11/2018			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

								BTEX						Total Petroleum Hydrocarbons					Total Recoverable Hydrocarbons								Inorganics					Biological		
								Ethylbenzene	Xylene Total	Naphthalene (VOC)	Total BTEX	Xylene (o)	Xylene (m & p)	C6 - C9	C10 - C14	C15 - C28	C29 - C36	C10 - C36 (Sum of total)	F1 (C6 - C10)	F1 (C6 - C10) less BTEX	F2 (C10 - C16)	F2 C10 - C16 (minus Naphthalene)	F3 (C16 - C34)	F4 (C34 - C40)	C10 - C40 (Sum of total)	Reactive Phosphorus as P (Orthophosphate as P)	Total Phosphorus as P (Organic Phosphate as P)	Total Suspended Solids (TSS)	Biochemical Oxygen Demand (BOD)	Chemical Oxygen Demand (COD)	Faecal Coliforms	E. Coli	Enterococci
								ug/L	ug/L	mg/L	mg/L	mg/L	mg/L	ug/L	ug/L	ug/L	ug/L	ug/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	CFU/100mL	cfu/100 ml	org/100ml
EQL								**2**	**2**	**0.005**	**0.001**	**0.002**	**0.002**	**20**	**50**	**100**	**50**	**50**	**0.02**	**0.02**	**0.1**	**0.1**	**0.1**	**0.1**	**0.1**	**0.01**	**0.01**	**5**		**10**			
NHMRC 2008 Recreational Water								3000	6000																											
PNG Water Quality Criteria for Freshwater Aquatic Ecosystem (guideline only)																												50	25	125	200	1000	500
PNG Water Quality Criteria for Marine Aquatic Ecosystem (guideline only)																												50	25	125	200	1000	500
Environment Permit Criteria (Baseline Range)								2	2	0.0544		0.002	0.002	1600	17,000	13,000	800											3230	22	1020	336	1	2419.6
PNG DWG (1987)																															3	0	
Site_ID	**Location_Code**	**SampleCode**	**Field_ID**	**Sampled_Date_Time**	**Lab_Name**	**Lab_Report_Number**	**Sample_Type**																													
PNG LNG	LNGL-GW14	GW-14-ALS_Historical_261118	GW-14	26/11/2018			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGL-GW14	GW-14-EM_Historical_261118	GW-14	26/11/2018			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<1	<1	<1
PNG LNG	LNGL-GW15	GW-15_Historical_261118	GW-15	26/11/2018			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGL-GW15	GW-15-ALS_Historical_261118	GW-15	26/11/2018			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGL-GW15	GW-15-EM_Historical_261118	GW-15	26/11/2018			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	>2419.6	1	>2419.6
PNG LNG	LNGL-GW5	GW-5_Historical_261118	GW-5	26/11/2018			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGL-GW5	GW-5-ALS_Historical_261118	GW-5	26/11/2018			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGL-GW5	GW-5-EM_Historical_261118	GW-5	26/11/2018			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<1	<1	<1	<1	<1
PNG LNG	LNGP-GW17	GW-17_Historical_261118	GW-17	26/11/2018			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGP-GW17	GW-17-ALS_Historical_261118	GW-17	26/11/2018			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGP-GW17	GW-17-EM_Historical_261118	GW-17	26/11/2018			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	>2419.6	<1	>2419.6	>2419.6	>2419.6
PNG LNG	LNGP-GW19	GW-19_Historical_261118	GW-19	26/11/2018			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGP-GW19	GW-19-ALS_Historical_261118	GW-19	26/11/2018			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGP-GW19	GW-19-EM_Historical_261118	GW-19	26/11/2018			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	>2419.6	290.9	>2419.6	>2419.6	>2419.6
PNG LNG	LNGP-GW20	GW-20_Historical_261118	GW-20	26/11/2018			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGP-GW20	GW-20-ALS_Historical_261118	GW-20	26/11/2018			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGP-GW20	GW-20-EM_Historical_261118	GW-20	26/11/2018			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	>2419.6	<1	>2419.6	>2419.6	>2419.6
PNG LNG	LNGP-GW21	GW-21_Historical_261118	GW-21	26/11/2018			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGP-GW21	GW-21-ALS_Historical_261118	GW-21	26/11/2018			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGP-GW21	GW-21-EM_Historical_261118	GW-21	26/11/2018			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	>2419.6	<1	>2419.6	>2419.6	>2419.6
PNG LNG	LNGP-GW22	GW-22_Historical_261118	GW-22	26/11/2018			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGP-GW22	GW-22-ALS_Historical_261118	GW-22	26/11/2018			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGP-GW22	GW-22-EM_Historical_261118	GW-22	26/11/2018			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<1	<1	20	20	20
PNG LNG	LNGP-MW2	MW-2_Historical_261118	MW-2	26/11/2018			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGP-MW2	MW-2-ALS_Historical_261118	MW-2	26/11/2018			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGP-MW2	MW-2-EM_Historical_261118	MW-2	26/11/2018			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	>2419.6	>2419.6	>2419.6	>2419.6	>2419.6
PNG LNG	LNGP-MW2	EB1829402001	LNGP-MW2	26/11/2018	ALSE-Brisbane	EB1829402	Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PNG LNG		EB1829402013	LNGP-QC1	26/11/2018	ALSE-Brisbane	EB1829402	Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGP-GW20	EB1829402004	LNGP-GW20	26/11/2018	ALSE-Brisbane	EB1829402	Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGP-GW22	EB1829402006	LNGP-GW22	26/11/2018	ALSE-Brisbane	EB1829402	Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGP-GW21	EB1829402005	LNGP-GW21	26/11/2018	ALSE-Brisbane	EB1829402	Normal	<2	<2	<0.005	<0.001	<0.002	<0.002	<20	<50	<100	<50	<50	<0.02	<0.02	<0.1	<0.1	<0.1	<0.1	<0.1	<0.01	**0.1**	-	-	<50	-	-	-	-	-	-
PNG LNG	LNGL-GW5	EB1829402007	LNGP-GW5	26/11/2018	ALSE-Brisbane	EB1829402	Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGL-GW12	EB1829402008	LNGP-GW12	26/11/2018	ALSE-Brisbane	EB1829402	Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGL-GW14	EB1829402011	LNGP-GW14	26/11/2018	ALSE-Brisbane	EB1829402	Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGL-GW13	EB1829402009	LNGP-GW13	26/11/2018	ALSE-Brisbane	EB1829402	Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PNG LNG		EB1829402014	LNGP-QC2	26/11/2018	ALSE-Brisbane	EB1829402	Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGL-GW11	EB1829402010	LNGP-GW11	26/11/2018	ALSE-Brisbane	EB1829402	Normal	<2	<2	<0.005	<0.001	<0.002	<0.002	<20	<50	<100	<50	<50	<0.02	<0.02	<0.1	<0.1	<0.1	<0.1	<0.1	<0.01	**0.28**	-	-	<50	-	-	-	-	-	-
PNG LNG	LNGL-GW15	EB1829402012	LNGP-GW15	26/11/2018	ALSE-Brisbane	EB1829402	Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGP-GW17	EB1829402002	LNGP-GW17	26/11/2018	ALSE-Brisbane	EB1829402	Normal	<2	<2	<0.005	<0.001	<0.002	<0.002	<20	<50	<100	<50	<50	<0.02	<0.02	<0.1	<0.1	<0.1	<0.1	<0.1	<0.01	**2.09**	-	-	**15**	-	-	-	-	-	-
PNG LNG	LNGP-GW19	EB1829402003	LNGP-GW19	26/11/2018	ALSE-Brisbane	EB1829402	Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PNG LNG		EB1829402016	LNGP-QC4	26/11/2018	ALSE-Brisbane	EB1829402	Normal	<2	<2	<0.005	<0.001	<0.002	<0.002	<20	<50	<100	<50	<50	<0.02	<0.02	<0.1	<0.1	<0.1	<0.1	<0.1	<0.01	<0.01	-	-	<10	-	-	-	-	-	-
PNG LNG		EB1829402015	LNGP-QC3	26/11/2018	ALSE-Brisbane	EB1829402	Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGL-GW11	GW-11_Historical_020919	GW-11	2/09/2019			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGL-GW11	GW-11-ALS_Historical_020919	GW-11	2/09/2019			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGL-GW11	GW-11-EM_Historical_020919	GW-11	2/09/2019			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	>2419.6	396.8	>2419.6	>2419.6	>2419.6
PNG LNG	LNGL-GW12	GW-12_Historical_020919	GW-12	2/09/2019			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	435.2	201.4	465	465	465
PNG LNG	LNGL-GW12	GW-12-ALS_Historical_020919	GW-12	2/09/2019			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGL-GW12	GW-12-EM_Historical_020919	GW-12	2/09/2019			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	>2419.6	303.6	>2419.6	>2419.6	>2419.6
PNG LNG	LNGL-GW13	GW-13_Historical_020919	GW-13	2/09/2019			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	>2419.6	23.9	>2419.6	>2419.6	>2419.6
PNG LNG	LNGL-GW13	GW-13-ALS_Historical_020919	GW-13	2/09/2019			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGL-GW13	GW-13-EM_Historical_020919	GW-13	2/09/2019			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	>2419.6	6.2	>2419.6	>2419.6	>2419.6
PNG LNG	LNGL-GW14	GW-14_Historical_020919	GW-14	2/09/2019			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	>2419.6	2	1674	1674	1674
PNG LNG	LNGL-GW14	GW-14-ALS_Historical_020919	GW-14	2/09/2019			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGL-GW14	GW-14-EM_Historical_020919	GW-14	2/09/2019			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	>2419.6	118.8	>2419.6	>2419.6	>2419.6
PNG LNG	LNGL-GW15	GW-15_Historical_020919	GW-15	2/09/2019			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	547.5	33.2	60	60	60
PNG LNG	LNGL-GW15	GW-15-ALS_Historical_020919	GW-15	2/09/2019			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGL-GW15	GW-15-EM_Historical_020919	GW-15	2/09/2019			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	>2419.6	>2419.6	>2419.6	>2419.6	>2419.6
PNG LNG	LNGL-GW5	GW-5_Historical_020919	GW-5	2/09/2019			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	>2419.6	>2419.6	404	404	404
PNG LNG	LNGL-GW5	GW-5-ALS_Historical_020919	GW-5	2/09/2019			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGL-GW5	GW-5-EM_Historical_020919	GW-5	2/09/2019			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	>2419.6	829.7	>2419.6	>2419.6	>2419.6
PNG LNG	LNGL-GW17	GW-17_Historical_020919	GW-17	2/09/2019			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	>2419.6	>2419.6	12,997	12,997	12,997
PNG LNG	LNGP-GW17	GW-17-EM_Historical_020919	GW-17	2/09/2019			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGP-GW19	GW-19_Historical_020919	GW-19	2/09/2019			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	>2419.6	<1	>2419.6	>2419.6	>2419.6
PNG LNG	LNGP-GW19	GW-19-ALS_Historical_020919	GW-19	2/09/2019			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

									BTEX						Total Petroleum Hydrocarbons					Total Recoverable Hydrocarbons							Inorganics					Biological		
									Ethylbenzene	Xylene Total	Naphthalene (VOC)	Total BTEX	Xylene (o)	Xylene (m & p)	C6 - C9	C10 - C14	C15 - C28	C29 - C36	C10 - C36 (Sum of total)	F1 (C6 - C10)	F1 (C6 - C10) less BTEX	F2 (C10 - C16)	F2 C10 - C16 (minus Naphthalene)	F3 (C16 - C34)	F4 (C34 - C40)	C10 - C40 (Sum of total)	Reactive Phosphorus as P (Orthophosphate as P)	Total Phosphorus as P (Organic Phosphate as P)	Total Suspended Solids (TSS)	Biochemical Oxygen Demand (BOD)	Chemical Oxygen Demand (COD)	Faecal Coliforms	E. Coli	Enterococci
									ug/L	ug/L	mg/L	mg/L	mg/L	mg/L	ug/L	ug/L	ug/L	ug/L	ug/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	CFU/100mL	cfu/100 ml	org/100ml
EQL									**2**	**2**	**0.005**	**0.001**	**0.002**	**0.002**	**20**	**50**	**100**	**50**	**50**	**0.02**	**0.02**	**0.1**	**0.1**	**0.1**	**0.1**	**0.1**	**0.01**	**0.01**	**5**		**10**			
NHMRC 2008 Recreational Water									3000	6000																							
PNG Water Quality Criteria for Freshwater Aquatic Ecosystem (guideline only)																													50	25	125	200	1000	500
PNG Water Quality Criteria for Marine Aquatic Ecosystem (guideline only)																													50	25	125	200	1000	500
Environment Permit Criteria (Baseline Range)									2	2	0.0544		0.002	0.002	1600	17,000	13,000	800											3230	22	1020	336	1	2419.6
PNG DWG (1987)																																3	0	
Site_ID	**Location_Code**	**SampleCode**	**Field_ID**	**Sampled_Date_Time**	**Lab_Name**	**Lab_Report_Number**	**Sample_Type**																											
PNG LNG	LNGP-GW19	GW-19-EM_Historical_020919	GW-19	2/09/2019			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	>2419.6	6.3	110
PNG LNG	LNGP-GW20	GW-20_Historical_020919	GW-20	2/09/2019			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGP-GW20	GW-20-EM_Historical_020919	GW-20	2/09/2019			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	>2419.6	<1	85
PNG LNG	LNGP-GW21	GW-21 _Historical_020919	GW-21	2/09/2019			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGP-GW21	GW-21 -ALS_Historical_020919	GW-21	2/09/2019			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	>2419.6	0	>2419.6
PNG LNG	LNGP-GW21	GW-21 -EM_Historical_020919	GW-21	2/09/2019			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	>2419.6	<1	1130
PNG LNG	LNGP-GW22	GW-22_Historical_020919	GW-22	2/09/2019			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGP-GW22	GW-22-ALS_Historical_020919	GW-22	2/09/2019			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	>2419.6	0	>2419.6
PNG LNG	LNGP-GW22	GW-22-EM_Historical_020919	GW-22	2/09/2019			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	97
PNG LNG	LNGP-GW23	GW-23_Historical_020919	GW-23	2/09/2019			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGP-GW23	GW-23-ALS_Historical_020919	GW-23	2/09/2019			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	>2419.6	0	>2419.6
PNG LNG	LNGP-GW23	GW-23-EM_Historical_020919	GW-23	2/09/2019			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	>2419.6	<1	467
PNG LNG	LNGP-GW24	GW-24_Historical_020919	GW-24	2/09/2019			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGP-GW24	GW-24-ALS_Historical_020919	GW-24	2/09/2019			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	>2419.6	0	>2419.6
PNG LNG	LNGP-GW24	GW-24-EM_Historical_020919	GW-24	2/09/2019			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2	<1	<10
PNG LNG	LNGP-MW2	MW-2_Historical_020919	MW-2	2/09/2019			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGP-MW2	MW-2-ALS_Historical_020919	MW-2	2/09/2019			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	>2419.6	0	>2419.6
PNG LNG	LNGP-MW2	MW-2-EM_Historical_020919	MW-2	2/09/2019			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	>2419.6	<1	107.9
PNG LNG		EB1922977016	LNGP-QC2	2/09/2019	ALSE-Brisbane	EB1922977	Normal	<2	<2	<0.005	<0.001	<0.002	<0.002	<20	<50	<100	<50	<50	<0.02	<0.02	<0.1	<0.1	<0.1	<0.1	<0.1	<0.01	**0.02**	-	-	<50	-	-	-
PNG LNG	LNGP-GW20	EB1922977004	LNGP-GW20	2/09/2019	ALSE-Brisbane	EB1922977	Normal	<2	<2	<0.005	<0.001	<0.002	<0.002	<20	<50	<100	<50	<50	<0.02	<0.02	<0.1	<0.1	<0.1	<0.1	<0.1	<0.01	**0.02**	-	-	**34**	-	-	-
PNG LNG		EB1922977015	LNGP-QC1	2/09/2019	ALSE-Brisbane	EB1922977	Normal	<2	<2	<0.005	<0.001	<0.002	<0.002	<20	<50	<100	<50	<50	<0.02	<0.02	<0.1	<0.1	<0.1	<0.1	<0.1	<0.01	**0.02**	-	-	**30**	-	-	-
PNG LNG	LNGP-GW24	EB1922977010	LNGP-GW24	2/09/2019	ALSE-Brisbane	EB1922977	Normal	<2	<2	<0.005	<0.001	<0.002	<0.002	<20	<50	<100	<50	<50	<0.02	<0.02	<0.1	<0.1	<0.1	<0.1	<0.1	<0.01	**0.02**	-	-	<50	-	-	-
PNG LNG	LNGP-GW19	EB1922977003	LNGP-GW19	2/09/2019	ALSE-Brisbane	EB1922977	Normal	<2	<2	<0.005	<0.001	<0.002	<0.002	<20	<50	<100	<50	<50	<0.02	<0.02	<0.1	<0.1	<0.1	<0.1	<0.1	<0.01	**0.01**	-	-	**78**	-	-	-
PNG LNG	LNGP-GW17	EB1922977002	LNGP-GW17	2/09/2019	ALSE-Brisbane	EB1922977	Normal	<2	<2	<0.005	<0.001	<0.002	<0.002	<20	<50	<100	<50	<50	<0.02	<0.02	<0.1	<0.1	<0.1	<0.1	<0.1	<0.01	**0.18**	-	-	**13**	-	-	-
PNG LNG	LNGP-MW2	EB1922977001	LNGP-MW2	2/09/2019	ALSE-Brisbane	EB1922977	Normal	<2	<2	<0.005	<0.001	<0.002	<0.002	<20	<50	<100	<50	<50	<0.02	<0.02	<0.1	<0.1	<0.1	<0.1	<0.1	<0.01	**0.03**	-	-	<10	-	-	-
PNG LNG		EB1922977017	LNGP-QC3	2/09/2019	ALSE-Brisbane	EB1922977	Normal	<2	<2	<0.005	<0.001	<0.002	<0.002	<20	<50	<100	<50	<50	<0.02	<0.02	<0.1	<0.1	<0.1	<0.1	<0.1	<0.01	**0.02**	-	-	<100	-	-	-
PNG LNG	LNGL-GW5	EB1922977007	LNGP-GW5	2/09/2019	ALSE-Brisbane	EB1922977	Normal	<2	<2	<0.005	<0.001	<0.002	<0.002	<20	<50	<100	<50	<50	<0.02	<0.02	<0.1	<0.1	<0.1	<0.1	<0.1	<0.01	**0.02**	-	-	<100	-	-	-
PNG LNG	LNGL-GW12	EB1922977008	LNGP-GW12	2/09/2019	ALSE-Brisbane	EB1922977	Normal	<2	<2	<0.005	<0.001	<0.002	<0.002	<20	**60**	**120**	<50	**180**	<0.02	<0.02	**0.14**	**0.14**	<0.1	<0.1	**0.14**	<0.01	**0.02**	-	-	<50	-	-	-
PNG LNG	LNGL-GW14	EB1922977013	LNGP-GW14	2/09/2019	ALSE-Brisbane	EB1922977	Normal	<2	<2	<0.005	<0.001	<0.002	<0.002	<20	<50	<100	<50	<50	<0.02	<0.02	<0.1	<0.1	<0.1	<0.1	<0.1	<0.01	**0.13**	-	-	**58**	-	-	-
PNG LNG	LNGP-GW23	EB1922977009	LNGP-GW23	2/09/2019	ALSE-Brisbane	EB1922977	Normal	<2	<2	<0.005	<0.001	<0.002	<0.002	<20	<50	**120**	**150**	**270**	<0.02	<0.02	<0.1	<0.1	**0.24**	<0.1	**0.24**	<0.01	**0.07**	-	-	<100	-	-	-
PNG LNG	LNGP-GW22	EB1922977006	LNGP-GW22	2/09/2019	ALSE-Brisbane	EB1922977	Normal	<2	<2	<0.005	<0.001	<0.002	<0.002	<20	<50	<100	<50	<50	<0.02	<0.02	<0.1	<0.1	<0.1	<0.1	<0.1	<0.01	<0.2	-	-	**460**	-	-	-
PNG LNG	LNGP-GW21	EB1922977005	LNGP-GW21	2/09/2019	ALSE-Brisbane	EB1922977	Normal	<2	<2	<0.005	<0.001	<0.002	<0.002	<20	<50	<100	<50	<50	<0.02	<0.02	<0.1	<0.1	<0.1	<0.1	<0.1	<0.01	<0.1	-	-	**256**	-	-	-
PNG LNG	LNGL-GW15	EB1922977014	LNGP-GW15	2/09/2019	ALSE-Brisbane	EB1922977	Normal	<2	<2	<0.005	<0.001	<0.002	<0.002	<20	<50	<100	<50	<50	<0.02	<0.02	<0.1	<0.1	<0.1	<0.1	<0.1	<0.01	<0.01	-	-	<50	-	-	-
PNG LNG	LNGL-GW11	EB1922977012	LNGP-GW11	2/09/2019	ALSE-Brisbane	EB1922977	Normal	<2	<2	<0.005	<0.001	<0.002	<0.002	<20	<50	<100	<50	<50	<0.02	<0.02	<0.1	<0.1	<0.1	<0.1	<0.1	<0.01	**0.04**	-	-	<50	-	-	-
PNG LNG	LNGL-GW13	EB1922977011	LNGP-GW13	2/09/2019	ALSE-Brisbane	EB1922977	Normal	<2	<2	<0.005	<0.001	<0.002	<0.002	<20	<50	<100	<50	<50	<0.02	<0.02	<0.1	<0.1	<0.1	<0.1	<0.1	<0.01	**0.07**	-	-	<50	-	-	-
PNG LNG		EB1922977019	LNGP-QC5	2/09/2019	ALSE-Brisbane	EB1922977	Normal	<2	<2	<0.005	<0.001	<0.002	<0.002	<20	<50	<100	<50	<50	<0.02	<0.02	<0.1	<0.1	<0.1	<0.1	<0.1	<0.01	<0.01	-	-	<10	-	-	-
PNG LNG		EB1922977018	LNGP-QC4	2/09/2019	ALSE-Brisbane	EB1922977	Normal	<2	<2	<0.005	<0.001	<0.002	<0.002	<20	<50	<100	<50	<50	<0.02	<0.02	<0.1	<0.1	<0.1	<0.1	<0.1	<0.01	<0.01	-	-	<10	-	-	-
PNG LNG	LNGL-GW11	GW-11_Historical_021219	GW-11	2/12/2019			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGL-GW11	GW-11-EM_Historical_021219	GW-11	2/12/2019			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	195.6	5.2	884
PNG LNG	LNGL-GW11	PG04429-3	GW-11	2/12/2019	SGS EHS PNG Lab	PG04429	Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	7.2	-	-	-	-
PNG LNG	LNGL-GW12	GW-12_Historical_021219	GW-12	2/12/2019			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGL-GW12	GW-12-EM_Historical_021219	GW-12	2/12/2019			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	>2419.6	<1	>2419.6
PNG LNG	LNGL-GW12	PG04429-4	GW-12	2/12/2019	SGS EHS PNG Lab	PG04429	Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	8	-	-	-	-
PNG LNG	LNGL-GW13	GW-13_Historical_021219	GW-13	2/12/2019			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGL-GW13	GW-13-EM_Historical_021219	GW-13	2/12/2019			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	>2419.6	28.5	1515
PNG LNG	LNGL-GW13	PG04429-5	GW-13	2/12/2019	SGS EHS PNG Lab	PG04429	Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	9.6	-	-	-	-
PNG LNG	LNGL-GW14	GW-14_Historical_021219	GW-14	2/12/2019			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGL-GW14	GW-14-EM_Historical_021219	GW-14	2/12/2019			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	8.5	<1	1036
PNG LNG	LNGL-GW14	PG04429-6	GW-14	2/12/2019	SGS EHS PNG Lab	PG04429	Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	9.6	-	-	-	-
PNG LNG	LNGL-GW15	GW-15_Historical_021219	GW-15	2/12/2019			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGL-GW15	GW-15-EM_Historical_021219	GW-15	2/12/2019			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	>2419.6	<1	420
PNG LNG	LNGL-GW15	PG04429-7	GW-15	2/12/2019	SGS EHS PNG Lab	PG04429	Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	8.8	-	-	-	-
PNG LNG	LNGL-GW5	GW-5_Historical_021219	GW-5	2/12/2019			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGL-GW5	GW-5-EM_Historical_021219	GW-5	2/12/2019			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2	<1	75
PNG LNG	LNGL-GW5	PG04429-2	GW-5	2/12/2019	SGS EHS PNG Lab	PG04429	Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<5	-	-	-	-
PNG LNG	LNGP-GW17	GW-17_Historical_021219	GW-17	2/12/2019			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGP-GW17	GW-17-EM_Historical_021219	GW-17	2/12/2019			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1046.2	<1	>2419.6
PNG LNG	LNGP-GW17	PG04429-8	GW17	2/12/2019	SGS EHS PNG Lab	PG04429	Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	6.4	-	-	-	-
PNG LNG	LNGP-GW19	GW-19_Historical_021219	GW-19	2/12/2019			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGP-GW19	GW-19-EM_Historical_021219	GW-19	2/12/2019			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	>2419.6	328.2	10
PNG LNG	LNGP-GW19	PG04429-9	GW19	2/12/2019	SGS EHS PNG Lab	PG04429	Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	8	-	-	-	-
PNG LNG	LNGP-GW20	GW-20_Historical_021219	GW-20	2/12/2019			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGP-GW20	GW-20-EM_Historical_021219	GW-20	2/12/2019			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	387.3	<1	185

								BTEX						Total Petroleum Hydrocarbons					Total Recoverable Hydrocarbons							Inorganics					Biological		
								Ethylbenzene	Xylene Total	Naphthalene (VOC)	Total BTEX	Xylene (o)	Xylene (m & p)	C6 - C9	C10 - C14	C15 - C28	C29 - C36	C10 - C36 (Sum of total)	F1 (C6 - C10)	F1 (C6 - C10) less BTEX	F2 (C10 - C16)	F2 C10 - C16 (minus Naphthalene)	F3 (C16 - C34)	F4 (C34 - C40)	C10 - C40 (Sum of total)	Reactive Phosphorus as P (Orthophosphate as P)	Total Phosphorus as P (Organic Phosphate as P)	Total Suspended Solids (TSS)	Biochemical Oxygen Demand (BOD)	Chemical Oxygen Demand (COD)	Faecal Coliforms	E. Coli	Enterococci
								ug/L	ug/L	mg/L	mg/L	mg/L	mg/L	ug/L	ug/L	ug/L	ug/L	ug/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	CFU/100mL	cfu/100 ml	org/100ml
EQL								**2**	**2**	**0.005**	**0.001**	**0.002**	**0.002**	**20**	**50**	**100**	**50**	**50**	**0.02**	**0.02**	**0.1**	**0.1**	**0.1**	**0.1**	**0.1**	**0.01**	**0.01**	**5**		**10**			
NHMRC 2008 Recreational Water								3000	6000																							
PNG Water Quality Criteria for Freshwater Aquatic Ecosystem (guideline only)																												50	25	125	200	1000	500
PNG Water Quality Criteria for Marine Aquatic Ecosystem (guideline only)																												50	25	125	200	1000	500
Environment Permit Criteria (Baseline Range)								2	2	0.0544		0.002	0.002	1600	17,000	13,000	800											3230	22	1020	336	1	2419.6
PNG DWG (1987)																															3	0	
Site_ID	**Location_Code**	**SampleCode**	**Field_ID**	**Sampled_Date_Time**	**Lab_Name**	**Lab_Report_Number**	**Sample_Type**																										
PNG LNG	LNGP-GW20	PG04429-10	Gw20	2/12/2019	SGS EHS PNG Lab	PG04429	Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	15	-	-	-	-
PNG LNG	LNGP-GW20	PG04429-16	QC2	2/12/2019	SGS EHS PNG Lab	PG04429	Field_D	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	16	-	-	-	-
PNG LNG	LNGP-GW21	GW-21_Historical_021219	GW-21	2/12/2019			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGP-GW21	GW-21-EM_Historical_021219	GW-21	2/12/2019			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	36.4	<1	126
PNG LNG	LNGP-GW21	PG04429-11	GW21	2/12/2019	SGS EHS PNG Lab	PG04429	Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	18	-	-	-	-
PNG LNG	LNGP-GW22	GW-22_Historical_021219	GW-22	2/12/2019			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	19	-	-	-	-
PNG LNG	LNGP-GW22	GW-22-EM_Historical_021219	GW-22	2/12/2019			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<1	<1	96
PNG LNG	LNGP-GW22	PG04429-12	Gw22	2/12/2019	SGS EHS PNG Lab	PG04429	Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	19	-	-	-	-
PNG LNG	LNGP-GW22	PG04429-15	QC1	2/12/2019	SGS EHS PNG Lab	PG04429	Field_D	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	22	-	-	-	-
PNG LNG	LNGP-GW23	GW-23_Historical_021219	GW-23	2/12/2019			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	10	-	-	-	-
PNG LNG	LNGP-GW23	GW-23-EM_Historical_021219	GW-23	2/12/2019			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	20.1	1	10
PNG LNG	LNGP-GW23	PG04429-13	GW23	2/12/2019	SGS EHS PNG Lab	PG04429	Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	9.6	-	-	-	-
PNG LNG	LNGP-GW24	GW-24_Historical_021219	GW-24	2/12/2019			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGP-GW24	GW-24-EM_Historical_021219	GW-24	2/12/2019			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<1	<1	996
PNG LNG	LNGP-GW24	PG04429-14	GW24	2/12/2019	SGS EHS PNG Lab	PG04429	Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<5	-	-	-	-
PNG LNG	LNGP-MW2	MW-2_Historical_021219	MW-2	2/12/2019			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGP-MW2	MW-2-EM_Historical_021219	MW-2	2/12/2019			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1732.9	<1	<10
PNG LNG	LNGP-MW2	PG04429-1	MV-2	2/12/2019	SGS EHS PNG Lab	PG04429	Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	8.9	-	-	-	-
PNG LNG	QC3	PG04429-17	QC3	2/12/2019	SGS EHS PNG Lab	PG04429	Field_B	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	15	-	-	-	-
PNG LNG	QC4	PG04429-18	QC4	2/12/2019	SGS EHS PNG Lab	PG04429	Field_B	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<5	-	-	-	-
PNG LNG	LNGP-GW19	EB1932832009	LNGP-GW19	2/12/2019	ALSE-Brisbane	EB1932832	Normal	<2	<2	<0.005	<0.001	<0.002	<0.002	<20	<50	<100	<50	<50	<0.02	<0.02	<0.1	<0.1	<0.1	<0.1	<0.1	<0.01	<0.05	-	-	**65**	-	-	-
PNG LNG	LNGP-GW17	EB1932832008	LNGP-GW17	2/12/2019	ALSE-Brisbane	EB1932832	Normal	<2	<2	<0.005	<0.001	<0.002	<0.002	<20	<50	<100	<50	<50	<0.02	<0.02	<0.1	<0.1	<0.1	<0.1	<0.1	<0.01	**0.07**	-	-	<10	-	-	-
PNG LNG	LNGP-MW2	EB1932832001	LNGP-MW2	2/12/2019	ALSE-Brisbane	EB1932832	Normal	<2	<2	<0.005	<0.001	<0.002	<0.002	<20	<50	<100	<50	<50	<0.02	<0.02	<0.1	<0.1	<0.1	<0.1	<0.1	<0.01	<0.05	-	-	**12**	-	-	-
PNG LNG		EB1932832017	LNGP-QC3	2/12/2019	ALSE-Brisbane	EB1932832	Field_B	<2	<2	<0.005	<0.001	<0.002	<0.002	<20	<50	<100	<50	<50	<0.02	<0.02	<0.1	<0.1	<0.1	<0.1	<0.1	<0.01	<0.01	-	-	<10	-	-	-
PNG LNG	LNGL-GW5	EB1932832002	LNGP-GW5	2/12/2019	ALSE-Brisbane	EB1932832	Normal	<2	<2	<0.005	<0.001	<0.002	<0.002	<20	<50	<100	<50	<50	<0.02	<0.02	<0.1	<0.1	<0.1	<0.1	<0.1	<0.01	**0.02**	-	-	<100	-	-	-
PNG LNG	LNGL-GW12	EB1932832004	LNGP-GW12	2/12/2019	ALSE-Brisbane	EB1932832	Normal	<2	<2	<0.005	<0.001	<0.002	<0.002	<20	<50	<100	<50	<50	<0.02	<0.02	<0.1	<0.1	<0.1	<0.1	<0.1	<0.01	**0.01**	-	-	**16**	-	-	-
PNG LNG	LNGL-GW14	EB1932832006	LNGP-GW14	2/12/2019	ALSE-Brisbane	EB1932832	Normal	<2	<2	<0.005	<0.001	<0.002	<0.002	<20	<50	<100	<50	<50	<0.02	<0.02	<0.1	<0.1	<0.1	<0.1	<0.1	<0.01	**0.02**	-	-	<50	-	-	-
PNG LNG	LNGL-GW15	EB1932832007	LNGP-GW15	2/12/2019	ALSE-Brisbane	EB1932832	Normal	<2	<2	<0.005	<0.001	<0.002	<0.002	<20	<50	<100	<50	<50	<0.02	<0.02	<0.1	<0.1	<0.1	<0.1	<0.1	<0.01	<0.01	-	-	<50	-	-	-
PNG LNG	LNGL-GW11	EB1932832003	LNGP-GW11	2/12/2019	ALSE-Brisbane	EB1932832	Normal	<2	<2	<0.005	<0.001	<0.002	<0.002	<20	<50	<100	<50	<50	<0.02	<0.02	<0.1	<0.1	<0.1	<0.1	<0.1	<0.01	**0.02**	-	-	<100	-	-	-
PNG LNG	LNGL-GW13	EB1932832005	LNGP-GW13	2/12/2019	ALSE-Brisbane	EB1932832	Normal	<2	<2	<0.005	<0.001	<0.002	<0.002	<20	<50	<100	<50	<50	<0.02	<0.02	<0.1	<0.1	<0.1	<0.1	<0.1	<0.01	<0.01	-	-	<50	-	-	-
PNG LNG	LNGP-GW22	EB1932832012	LNGP-GW22	2/12/2019	ALSE-Brisbane	EB1932832	Normal	<2	<2	<0.005	<0.001	<0.002	<0.002	<20	<50	<100	<50	<50	<0.02	<0.02	<0.1	<0.1	<0.1	<0.1	<0.1	<0.01	<0.1	-	-	**408**	-	-	-
PNG LNG	LNGP-GW22	EB1932832015	LNGP-QC1	2/12/2019	ALSE-Brisbane	EB1932832	Field_D	<2	<2	<0.005	<0.001	<0.002	<0.002	<20	<50	<100	<50	<50	<0.02	<0.02	<0.1	<0.1	<0.1	<0.1	<0.1	<0.01	<0.1	-	-	**545**	-	-	-
PNG LNG	LNGP-GW24	EB1932832014	LNGP-GW24	2/12/2019	ALSE-Brisbane	EB1932832	Normal	<2	<2	<0.005	<0.001	<0.002	<0.002	<20	<50	<100	<50	<50	<0.02	<0.02	<0.1	<0.1	<0.1	<0.1	<0.1	**0.11**	**0.19**	-	-	**120**	-	-	-
PNG LNG	LNGP-GW21	EB1932832011	LNGP-GW21	2/12/2019	ALSE-Brisbane	EB1932832	Normal	<2	<2	<0.005	<0.001	<0.002	<0.002	<20	<50	<100	<50	<50	<0.02	<0.02	<0.1	<0.1	<0.1	<0.1	<0.1	<0.01	<0.1	-	-	**432**	-	-	-
PNG LNG		EB1932832018	LNGP-QC4	2/12/2019	ALSE-Brisbane	EB1932832	Field_B	<2	<2	<0.005	<0.001	<0.002	<0.002	<20	<50	<100	<50	<50	<0.02	<0.02	<0.1	<0.1	<0.1	<0.1	<0.1	<0.01	<0.01	-	-	<10	-	-	-
PNG LNG	LNGP-GW23	EB1932832013	LNGP-GW23	2/12/2019	ALSE-Brisbane	EB1932832	Normal	<2	<2	<0.005	<0.001	<0.002	<0.002	<20	<50	<100	<50	<50	<0.02	<0.02	<0.1	<0.1	<0.1	<0.1	<0.1	**0.01**	**0.03**	-	-	**61**	-	-	-
PNG LNG	LNGP-GW20	EB1932832010	LNGP-GW20	2/12/2019	ALSE-Brisbane	EB1932832	Normal	<2	<2	<0.005	<0.001	<0.002	<0.002	<20	<50	<100	<50	<50	<0.02	<0.02	<0.1	<0.1	<0.1	<0.1	<0.1	<0.01	<0.01	-	-	<50	-	-	-
PNG LNG	LNGP-GW20	EB1932832016	LNGP-QC2	2/12/2019	ALSE-Brisbane	EB1932832	Field_D	<2	<2	<0.005	<0.001	<0.002	<0.002	<20	<50	<100	<50	<50	<0.02	<0.02	<0.1	<0.1	<0.1	<0.1	<0.1	<0.01	<0.01	-	-	<50	-	-	-
Statistical Summary																																	
Number of Results								195	150	195	150	195	195	211	211	211	211	150	150	150	150	150	150	150	150	57	57	28	51	88	198	62	63
Number of Detects								13	0	14	0	13	13	14	32	34	12	20	0	0	12	12	17	0	22	4	35	27	38	54	181	30	56
Minimum Concentration								<2	<2	<0.001	<0.001	<0.002	<0.002	<20	<50	<100	<50	<50	<0.02	<0.02	<0.1	<0.1	<0.1	<0.1	<0.1	<0.01	<0.01	<5	<2	<10	0	0	<1
Minimum Detect								ND	ND	0.0544	ND	ND	ND	50	60	100	50	50	ND	ND	0.1	0.1	0.1	ND	0.1	0.01	0.01	9	2	10	1	1	1
Maximum Concentration								<2	<2	0.0544	<0.001	<2	<2	1600	17000	13000	800	450	<0.02	<0.02	0.32	0.32	0.32	<0.1	0.46	0.11	2.09	1250	22	1020	2419.6	2419.6	12997
Maximum Detect								ND	ND	0.0544	ND	ND	ND	1600	17000	13000	800	450	ND	ND	0.32	0.32	0.32	ND	0.46	0.11	2.09	1250	22	1020	2419.6	2419.6	12997
Average Concentration								1	1	0.0027	0.0005	0.094	0.094	24	210	209	39	55	0.01	0.01	0.062	0.062	0.061	0.05	0.075	0.0076	0.089	175	7.8	98	658	292	1342
Median Concentration								1	1	0.0025	0.0005	0.001	0.001	10	25	50	25	25	0.01	0.01	0.05	0.05	0.05	0.05	0.05	0.005	0.025	57	7.2	25	18	0.5	884
Standard Deviation								0	0	0.0039	0	0.29	0.29	114	1374	1069	60	87	0	0	0.045	0.045	0.039	0	0.078	0.015	0.28	342	6.9	177	1002	724	1852
Number of Guideline Exceedances								0	0	0	0	17	17	0	0	0	0	0	0	0	0	0	0	0	0	0	0	16	0	14	110	0	33
Number of Guideline Exceedances(Detects Only)								0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	16	0	14	110	0	33

									Polycyclic Aromatic Hydrocarbons																					
									Benzo(a)pyrene TEQ calc (Zero)	Benzo(b+j)fluoranthene	Acenaphthene	Acenaphthylene	Anthracene	Benz(a)anthracene	Benzo(a) pyrene	Benzo(g,h,i)perylene	Benzo(k)fluoranthene	Chrysene	Dibenz(a,h)anthracene	Fluoranthene	Fluorene	Indeno(1,2,3-c,d)pyrene	Naphthalene	Phenanthrene	Pyrene	PAHs (Sum of total)	3/4-Methylphenol (m/p-cresol)	2,4,5-Trichlorophenol	2,4,6-Trichlorophenol	2,4-Dichlorophenol	2,4-Dimethylphenol
									mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
EQL									**0.0005**	**0.001**	**0.001**	**0.001**	**0.001**	**0.001**	**0.0005**	**0.001**	**0.001**	**0.001**	**0.001**	**0.001**	**0.001**	**0.001**	**0.001**	**0.001**	**0.001**	**0.0005**	**0.002**	**0.001**	**0.001**	**0.001**	**0.001**
NHMRC 2008 Recreational Water																														
PNG Water Quality Criteria for Freshwater Aquatic Ecosystem (guideline only)																														
PNG Water Quality Criteria for Marine Aquatic Ecosystem (guideline only)																														
Environment Permit Criteria (Baseline Range)																											0.002	0.001	0.001		0.001
PNG DWG (1987)																														
Site_ID	**Location_Code**	**SampleCode**	**Field_ID**	**Sampled_Date_Time**	**Lab_Name**	**Lab_Report_Number**	**Sample_Type**																							
PNG LNG	LNGP-MW2	MW-2_Historical_160310	MW-2	16/03/2010			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.002	<0.001	<0.001	<0.001	<0.001
PNG LNG	LNGP-MW-1	MW-1_Historical_160310	MW-1	16/03/2010			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.002	<0.001	<0.001	<0.001	<0.001
PNG LNG	LNGP-MW-3	MW-3_Historical_160310	MW-3	16/03/2010			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.002	<0.001	<0.001	<0.001	<0.001
PNG LNG	LNGP-MW-3B	MW-3B_Historical_160310	MW-3B	16/03/2010			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.002	<0.001	<0.001	<0.001	<0.001
PNG LNG	LNGP-MW-4	MW-4_Historical_160310	MW-4	16/03/2010			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.002	<0.001	<0.001	<0.001	<0.001
PNG LNG	LNGP-MW-4	MW-4_Historical_121013	MW-4	12/10/2013			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGP-MW-4	MW-4_Historical_100814	MW-4	10/08/2014			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.002	<0.001	<0.001	<0.001	<0.001
PNG LNG	LNGP-MW-4	MW-4_Historical_080315	MW-4	8/03/2015			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.002	<0.001	<0.001	<0.001	<0.001
PNG LNG	LNGP-MW-4	MW-4_Historical_160815	MW-4	16/08/2015			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.002	<0.001	<0.001	<0.001	<0.001
PNG LNG	LNGP-MW-4	MW-4_Historical_130316	MW-4	13/03/2016			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.002	<0.001	<0.001	<0.001	<0.001
PNG LNG	LNGP-MW-4	MW-4_Historical_170417	MW-4	17/04/2017			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.002	<0.001	<0.001	<0.001	<0.001
PNG LNG	LNGP-MW-4A	MW-4A_Historical_160310	MW-4A	16/03/2010			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.002	<0.001	<0.001	<0.001	<0.001
PNG LNG	LNGP-MW-5	MW-5_Historical_160310	MW-5	16/03/2010			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.002	<0.001	<0.001	<0.001	<0.001
PNG LNG	LNGP-MW-5A	MW-5A_Historical_160310	MW-5A	16/03/2010			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.002	<0.001	<0.001	<0.001	<0.001
PNG LNG	LNGP-MW-6_NTH	MW-6_NTH_Historical_160310	MW-6_NTH	16/03/2010			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.002	<0.001	<0.001	<0.001	<0.001
PNG LNG	LNGP-MW-6_STH (MW6A)	MW-6_STH (MW6A)_Historical_16031	MW-6_STH (MW6A)	16/03/2010			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.002	<0.001	<0.001	<0.001	<0.001
PNG LNG	LNGP-MW-7	MW-7_Historical_160310	MW-7	16/03/2010			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.002	<0.001	<0.001	<0.001	<0.001
PNG LNG	LNGP-MW-8	MW-8_Historical_160310	MW-8	16/03/2010			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.002	<0.001	<0.001	<0.001	<0.001
PNG LNG	LNGP-GW-16	GW-16_Historical_131012	GW-16	13/10/2012			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGP-GW-16	GW-16_Historical_121013	GW-16	12/10/2013			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGL-MW-9	MW-9_Historical_160310	MW-9	16/03/2010			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.002	<0.001	<0.001	<0.001	<0.001
PNG LNG	LNGL-GW-6	GW-6_Historical_150611	GW-6	15/06/2011			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGL-GW-6	GW-6_Historical_080811	GW-6	8/08/2011			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGL-GW-7	GW-7_Historical_150611	GW-7	15/06/2011			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGL-GW-7	GW-7_Historical_080811	GW-7	8/08/2011			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGL-GW-8	GW-8_Historical_150611	GW-8	15/06/2011			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGL-GW-8	GW-8_Historical_080811	GW-8	8/08/2011			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGL-GW-9	GW-9_Historical_150611	GW-9	15/06/2011			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGL-GW-9	GW-9_Historical_080811	GW-9	8/08/2011			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGL-GW-10	GW-10_Historical_150611	GW-10	15/06/2011			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGL-GW-10	GW-10_Historical_080811	GW-10	8/08/2011			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGL-GW5	GW-5_Historical_150611	GW-5	15/06/2011			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGL-GW5	GW-5-SGS_Historical_150611	GW-5	15/06/2011			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGL-GW5	GW-5_Historical_080811	GW-5	8/08/2011			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGL-GW5	GW-5-SGS_Historical_080811	GW-5	8/08/2011			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGL-GW11	GW-11_Historical_131012	GW-11	13/10/2012			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGL-GW11	GW-11-SGS_Historical_131012	GW-11	13/10/2012			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGL-GW12	GW-12_Historical_131012	GW-12	13/10/2012			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGL-GW12	GW-12-SGS_Historical_131012	GW-12	13/10/2012			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGL-GW13	GW-13_Historical_131012	GW-13	13/10/2012			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGL-GW13	GW-13-SGS_Historical_131012	GW-13	13/10/2012			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGL-GW14	GW-14_Historical_131012	GW-14	13/10/2012			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGL-GW14	GW-14-SGS_Historical_131012	GW-14	13/10/2012			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGL-GW15	GW-15_Historical_131012	GW-15	13/10/2012			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGL-GW15	GW-15-SGS_Historical_131012	GW-15	13/10/2012			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGP-GW17	GW-17_Historical_131012	GW-17	13/10/2012			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGP-GW17	GW-17-SGS_Historical_131012	GW-17	13/10/2012			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGP-GW19	GW-19_Historical_131012	GW-19	13/10/2012			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGP-GW19	GW-19-SGS_Historical_131012	GW-19	13/10/2012			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGP-GW20	GW-20_Historical_131012	GW-20	13/10/2012			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGP-GW20	GW-20-SGS_Historical_131012	GW-20	13/10/2012			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGP-GW21	GW-21_Historical_131012	GW-21	13/10/2012			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGP-GW21	GW-21-SGS_Historical_131012	GW-21	13/10/2012			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGP-GW22	GW-22_Historical_131012	GW-22	13/10/2012			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGP-GW22	GW-22-SGS_Historical_131012	GW-22	13/10/2012			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGP-GW17	GW-17_Historical_121013	GW-17	12/10/2013			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGP-GW17	GW-17-SGS_Historical_121013	GW-17	12/10/2013			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGP-GW19	GW-19_Historical_121013	GW-19	12/10/2013			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGP-GW19	GW-19-SGS_Historical_121013	GW-19	12/10/2013			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGP-GW20	GW-20_Historical_121013	GW-20	12/10/2013			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGP-GW20	GW-20-SGS_Historical_121013	GW-20	12/10/2013			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGP-GW21	GW-21_Historical_121013	GW-21	12/10/2013			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGP-GW21	GW-21-SGS_Historical_121013	GW-21	12/10/2013			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

								Polycyclic Aromatic Hydrocarbons																						
								Benzo(a)pyrene TEQ calc (Zero)	Benzo(b+j)fluoranthene	Acenaphthene	Acenaphthylene	Anthracene	Benz(a)anthracene	Benzo(a) pyrene	Benzo(g,h,i)perylene	Benzo(k)fluoranthene	Chrysene	Dibenz(a,h)anthracene	Fluoranthene	Fluorene	Indeno(1,2,3-c,d)pyrene	Naphthalene	Phenanthrene	Pyrene	PAHs (Sum of total)	3/4-Methylphenol (m/p-cresol)	2,4,5-Trichlorophenol	2,4,6-Trichlorophenol	2,4-Dichlorophenol	2,4-Dimethylphenol
								mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
EQL								**0.0005**	**0.001**	**0.001**	**0.001**	**0.001**	**0.001**	**0.0005**	**0.001**	**0.001**	**0.001**	**0.001**	**0.001**	**0.001**	**0.001**	**0.001**	**0.001**	**0.001**	**0.0005**	**0.002**	**0.001**	**0.001**	**0.001**	**0.001**
NHMRC 2008 Recreational Water																														
PNG Water Quality Criteria for Freshwater Aquatic Ecosystem (guideline only)																														
PNG Water Quality Criteria for Marine Aquatic Ecosystem (guideline only)																														
Environment Permit Criteria (Baseline Range)																										0.002	0.001	0.001		0.001
PNG DWG (1987)																														
Site_ID	**Location_Code**	**SampleCode**	**Field_ID**	**Sampled_Date_Time**	**Lab_Name**	**Lab_Report_Number**	**Sample_Type**																							
PNG LNG	LNGP-GW22	GW-22_Historical_121013	GW-22	12/10/2013			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGP-GW22	GW-22-SGS_Historical_121013	GW-22	12/10/2013			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGL-GW11	GW-11_Historical_100814	GW-11	10/08/2014			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.002	<0.001	<0.001	<0.001	<0.001
PNG LNG	LNGL-GW11	GW-11-SGS_Historical_100814	GW-11	10/08/2014			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGL-GW12	GW-12_Historical_100814	GW-12	10/08/2014			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.002	<0.001	<0.001	<0.001	<0.001
PNG LNG	LNGL-GW12	GW-12-SGS_Historical_100814	GW-12	10/08/2014			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGL-GW13	GW-13_Historical_100814	GW-13	10/08/2014			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.002	<0.001	<0.001	<0.001	<0.001
PNG LNG	LNGL-GW13	GW-13-SGS_Historical_100814	GW-13	10/08/2014			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGL-GW14	GW-14_Historical_100814	GW-14	10/08/2014			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.002	<0.001	<0.001	<0.001	<0.001
PNG LNG	LNGL-GW14	GW-14-SGS_Historical_100814	GW-14	10/08/2014			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGL-GW15	GW-15_Historical_100814	GW-15	10/08/2014			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.002	<0.001	<0.001	<0.001	<0.001
PNG LNG	LNGL-GW15	GW-15-SGS_Historical_100814	GW-15	10/08/2014			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGL-GW5	GW-5_Historical_100814	GW-5	10/08/2014			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.002	<0.001	<0.001	<0.001	<0.001
PNG LNG	LNGL-GW5	GW-5-SGS_Historical_100814	GW-5	10/08/2014			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGP-GW17	GW-17_Historical_100814	GW-17	10/08/2014			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.002	<0.001	<0.001	<0.001	<0.001
PNG LNG	LNGP-GW17	GW-17-SGS_Historical_100814	GW-17	10/08/2014			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGP-GW19	GW-19_Historical_100814	GW-19	10/08/2014			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.002	<0.001	<0.001	<0.001	<0.001
PNG LNG	LNGP-GW19	GW-19-SGS_Historical_100814	GW-19	10/08/2014			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGP-GW20	GW-20_Historical_100814	GW-20	10/08/2014			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.002	<0.001	<0.001	<0.001	<0.001
PNG LNG	LNGP-GW21	GW-21_Historical_100814	GW-21	10/08/2014			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.002	<0.001	<0.001	<0.001	<0.001
PNG LNG	LNGP-GW21	GW-21-SGS_Historical_100814	GW-21	10/08/2014			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGP-GW22	GW-22_Historical_100814	GW-22	10/08/2014			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.002	<0.001	<0.001	<0.001	<0.001
PNG LNG	LNGP-MW2	MW-2_Historical_100814	MW-2	10/08/2014			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.002	<0.001	<0.001	<0.001	<0.001
PNG LNG	LNGP-MW2	MW-2-SGS_Historical_100814	MW-2	10/08/2014			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGL-GW11	GW-11_Historical_080315	GW-11	8/03/2015			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGL-GW11	GW-11-SGS_Historical_080315	GW-11	8/03/2015			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGL-GW12	GW-12_Historical_080315	GW-12	8/03/2015			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGL-GW12	GW-12-SGS_Historical_080315	GW-12	8/03/2015			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGL-GW13	GW-13_Historical_080315	GW-13	8/03/2015			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGL-GW13	GW-13-SGS_Historical_080315	GW-13	8/03/2015			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGL-GW14	GW-14_Historical_080315	GW-14	8/03/2015			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGL-GW14	GW-14-SGS_Historical_080315	GW-14	8/03/2015			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGL-GW15	GW-15_Historical_080315	GW-15	8/03/2015			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGL-GW15	GW-15-SGS_Historical_080315	GW-15	8/03/2015			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGL-GW5	GW-5_Historical_080315	GW-5	8/03/2015			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGL-GW5	GW-5-SGS_Historical_080315	GW-5	8/03/2015			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGP-GW17	GW-17_Historical_080315	GW-17	8/03/2015			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGP-GW17	GW-17-SGS_Historical_080315	GW-17	8/03/2015			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGP-GW19	GW-19_Historical_080315	GW-19	8/03/2015			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGP-GW19	GW-19-SGS_Historical_080315	GW-19	8/03/2015			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGP-GW21	GW-21_Historical_080315	GW-21	8/03/2015			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGP-GW21	GW-21-SGS_Historical_080315	GW-21	8/03/2015			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGP-MW2	MW-2_Historical_080315	MW-2	8/03/2015			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGP-MW2	MW-2-SGS_Historical_080315	MW-2	8/03/2015			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PNG LNG		EB1514750012	QC1	8/03/2015	ALSE-Brisbane	EB1514750	Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.002	<0.001	<0.001	<0.001	<0.001
PNG LNG		EB1514750013	QC2	8/03/2015	ALSE-Brisbane	EB1514750	Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.002	<0.001	<0.001	<0.001	<0.001
PNG LNG		EB1514750014	QC3	8/03/2015	ALSE-Brisbane	EB1514750	Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.002	<0.001	<0.001	<0.001	<0.001
PNG LNG		EB1514750015	QC4	8/03/2015	ALSE-Brisbane	EB1514750	Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.002	<0.001	<0.001	<0.001	<0.001
PNG LNG	LNGL-GW11	EB1514750009	LNGP Landfill GW11	8/03/2015	ALSE-Brisbane	EB1514750	Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.002	<0.001	<0.001	<0.001	<0.001
PNG LNG	LNGL-GW12	EB1514750007	LNGP Landfill GW12	8/03/2015	ALSE-Brisbane	EB1514750	Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.002	<0.001	<0.001	<0.001	<0.001
PNG LNG	LNGL-GW13	EB1514750008	LNGP Landfill GW13	8/03/2015	ALSE-Brisbane	EB1514750	Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.002	<0.001	<0.001	<0.001	<0.001
PNG LNG	LNGL-GW14	EB1514750010	LNGP Landfill GW14	8/03/2015	ALSE-Brisbane	EB1514750	Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.002	<0.001	<0.001	<0.001	<0.001
PNG LNG	LNGL-GW15	EB1514750011	LNGP Landfill GW15	8/03/2015	ALSE-Brisbane	EB1514750	Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.002	<0.001	<0.001	<0.001	<0.001
PNG LNG	LNGL-GW5	EB1514750006	LNGP Landfill GW5	8/03/2015	ALSE-Brisbane	EB1514750	Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.002	<0.001	<0.001	<0.001	<0.001
PNG LNG	LNGP-GW17	EB1514750003	LNGP Plant Site GW17	8/03/2015	ALSE-Brisbane	EB1514750	Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.002	<0.001	<0.001	<0.001	<0.001
PNG LNG	LNGP-GW19	EB1514750004	LNGP Plant Site GW19	8/03/2015	ALSE-Brisbane	EB1514750	Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.002	<0.001	<0.001	<0.001	<0.001
PNG LNG	LNGP-GW21	EB1514750005	LNGP Plant Site GW21	8/03/2015	ALSE-Brisbane	EB1514750	Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.002	<0.001	<0.001	<0.001	<0.001
PNG LNG	LNGP-MW2	EB1514750001	LNGP Plant Site MW2	8/03/2015	ALSE-Brisbane	EB1514750	Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.002	<0.001	<0.001	<0.001	<0.001
PNG LNG	LNGP-MW4	EB1514750002	LNGP Plant Site MW4	8/03/2015	ALSE-Brisbane	EB1514750	Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.002	<0.001	<0.001	<0.001	<0.001
PNG LNG	LNGP-GW20	GW-20_Historical_200415	GW-20	20/04/2015			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.002	<0.001	<0.001	<0.001	<0.001
PNG LNG	LNGP-GW20	GW-20-SGS_Historical_200415	GW-20	20/04/2015			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGP-GW22	GW-22_Historical_260415	GW-22	26/04/2015			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.002	<0.001	<0.001	<0.001	<0.001
PNG LNG	LNGP-GW22	GW-22-SGS_Historical_260415	GW-22	26/04/2015			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

																		Polycyclic Aromatic Hydrocarbons												
																		Benzo(a)pyrene TEQ calc (Zero)	Benzo(b+j)fluoranthene	Acenaphthene	Acenaphthylene	Anthracene	Benz(a)anthracene	Benzo(a) pyrene	Benzo(g,h,i)perylene	Benzo(k)fluoranthene	Chrysene	Dibenz(a,h)anthracene	Fluoranthene	Fluorene	Indeno(1,2,3-c,d)pyrene	Naphthalene	Phenanthrene	Pyrene	PAHs (Sum of total)	3/4-Methylphenol (m/p-cresol)	2,4,5-Trichlorophenol	2,4,6-Trichlorophenol	2,4-Dichlorophenol	2,4-Dimethylphenol
																		mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
EQL																		**0.0005**	**0.001**	**0.001**	**0.001**	**0.001**	**0.001**	**0.0005**	**0.001**	**0.001**	**0.001**	**0.001**	**0.001**	**0.001**	**0.001**	**0.001**	**0.001**	**0.0005**	**0.002**	**0.001**	**0.001**	**0.001**	**0.001**
NHMRC 2008 Recreational Water																																						
PNG Water Quality Criteria for Freshwater Aquatic Ecosystem (guideline only)																																						
PNG Water Quality Criteria for Marine Aquatic Ecosystem (guideline only)																																						
Environment Permit Criteria (Baseline Range)																																			0.002	0.001	0.001		0.001
PNG DWG (1987)																																						
Site_ID	**Location_Code**	**SampleCode**	**Field_ID**	**Sampled_Date_Time**	**Lab_Name**	**Lab_Report_Number**	**Sample_Type**																															
PNG LNG		EB1526355015	QC2	15/08/2015	ALSE-Brisbane	EB1526355	Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.002	<0.001	<0.001	<0.001	<0.001
PNG LNG	LNGL-GW12	EB1526355009	LNGP Landfill GW12	15/08/2015	ALSE-Brisbane	EB1526355	Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.002	<0.001	<0.001	<0.001	<0.001
PNG LNG	LNGL-GW14	EB1526355012	LNGP Landfill GW14	15/08/2015	ALSE-Brisbane	EB1526355	Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.002	<0.001	<0.001	<0.001	<0.001
PNG LNG	LNGP-GW17	EB1526355003	LNGP Plant Site GW17	15/08/2015	ALSE-Brisbane	EB1526355	Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.002	<0.001	<0.001	<0.001	<0.001
PNG LNG	LNGP-GW19	EB1526355004	LNGP Plant Site GW19	15/08/2015	ALSE-Brisbane	EB1526355	Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.002	<0.001	<0.001	<0.001	<0.001
PNG LNG	LNGP-GW20	EB1526355005	LNGP Plant Site GW20	15/08/2015	ALSE-Brisbane	EB1526355	Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.002	<0.001	<0.001	<0.001	<0.001
PNG LNG	LNGP-GW21	EB1526355006	LNGP Plant Site GW21	15/08/2015	ALSE-Brisbane	EB1526355	Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.002	<0.001	<0.001	<0.001	<0.001
PNG LNG	LNGP-GW22	EB1526355007	LNGP Plant Site GW22	15/08/2015	ALSE-Brisbane	EB1526355	Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.002	<0.001	<0.001	<0.001	<0.001
PNG LNG	LNGP-MW4	EB1526355002	LNGP Plant Site MW4	15/08/2015	ALSE-Brisbane	EB1526355	Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.002	<0.001	<0.001	<0.001	<0.001
PNG LNG	LNGL-GW11	GW-11_Historical_160815	GW-11	16/08/2015			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGL-GW11	GW-11-SGS_Historical_160815	GW-11	16/08/2015			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGL-GW12	GW-12_Historical_160815	GW-12	16/08/2015			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGL-GW13	GW-13_Historical_160815	GW-13	16/08/2015			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGL-GW13	GW-13-SGS_Historical_160815	GW-13	16/08/2015			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGL-GW14	GW-14_Historical_160815	GW-14	16/08/2015			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGL-GW14	GW-14-SGS_Historical_160815	GW-14	16/08/2015			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGL-GW15	GW-15_Historical_160815	GW-15	16/08/2015			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGL-GW15	GW-15-SGS_Historical_160815	GW-15	16/08/2015			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGL-GW5	GW-5_Historical_160815	GW-5	16/08/2015			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGL-GW5	GW-5-SGS_Historical_160815	GW-5	16/08/2015			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGP-GW17	GW-17_Historical_160815	GW-17	16/08/2015			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGP-GW17	GW-17-SGS_Historical_160815	GW-17	16/08/2015			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGP-GW19	GW-19_Historical_160815	GW-19	16/08/2015			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGP-GW19	GW-19-SGS_Historical_160815	GW-19	16/08/2015			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGP-GW20	GW-20_Historical_160815	GW-20	16/08/2015			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGP-GW20	GW-20-SGS_Historical_160815	GW-20	16/08/2015			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGP-GW21	GW-21_Historical_160815	GW-21	16/08/2015			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGP-GW21	GW-21-SGS_Historical_160815	GW-21	16/08/2015			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGP-GW22	GW-22_Historical_160815	GW-22	16/08/2015			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGP-GW22	GW-22-SGS_Historical_160815	GW-22	16/08/2015			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGP-MW2	MW-2_Historical_160815	MW-2	16/08/2015			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGP-MW2	MW-2-SGS_Historical_160815	MW-2	16/08/2015			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PNG LNG		EB1526355014	QC1	16/08/2015	ALSE-Brisbane	EB1526355	Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.002	<0.001	<0.001	<0.001	<0.001
PNG LNG		EB1526355016	QC3	16/08/2015	ALSE-Brisbane	EB1526355	Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.002	<0.001	<0.001	<0.001	<0.001
PNG LNG		EB1526355017	QC4	16/08/2015	ALSE-Brisbane	EB1526355	Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.002	<0.001	<0.001	<0.001	<0.001
PNG LNG	LNGL-GW11	EB1526355011	LNGP Landfill GW11	16/08/2015	ALSE-Brisbane	EB1526355	Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.002	<0.001	<0.001	<0.001	<0.001
PNG LNG	LNGL-GW13	EB1526355010	LNGP Landfill GW13	16/08/2015	ALSE-Brisbane	EB1526355	Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.002	<0.001	<0.001	<0.001	<0.001
PNG LNG	LNGL-GW15	EB1526355013	LNGP Landfill GW15	16/08/2015	ALSE-Brisbane	EB1526355	Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.002	<0.001	<0.001	<0.001	<0.001
PNG LNG	LNGL-GW5	EB1526355008	LNGP Landfill GW5	16/08/2015	ALSE-Brisbane	EB1526355	Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.002	<0.001	<0.001	<0.001	<0.001
PNG LNG	LNGP-MW2	EB1526355001	LNGP Plant Site MW2	16/08/2015	ALSE-Brisbane	EB1526355	Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.002	<0.001	<0.001	<0.001	<0.001
PNG LNG	LNGL-GW11	GW-11_Historical_130316	GW-11	13/03/2016			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGL-GW11	GW-11-SGS_Historical_130316	GW-11	13/03/2016			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGL-GW12	GW-12_Historical_130316	GW-12	13/03/2016			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGL-GW12	GW-12-SGS_Historical_130316	GW-12	13/03/2016			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGL-GW13	GW-13_Historical_130316	GW-13	13/03/2016			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGL-GW13	GW-13-SGS_Historical_130316	GW-13	13/03/2016			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGL-GW14	GW-14_Historical_130316	GW-14	13/03/2016			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGL-GW14	GW-14-SGS_Historical_130316	GW-14	13/03/2016			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGL-GW15	GW-15_Historical_130316	GW-15	13/03/2016			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGL-GW15	GW-15-SGS_Historical_130316	GW-15	13/03/2016			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGL-GW5	GW-5_Historical_130316	GW-5	13/03/2016			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGL-GW5	GW-5-SGS_Historical_130316	GW-5	13/03/2016			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGP-GW17	GW-17_Historical_130316	GW-17	13/03/2016			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGP-GW17	GW-17-SGS_Historical_130316	GW-17	13/03/2016			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGP-GW19	GW-19_Historical_130316	GW-19	13/03/2016			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGP-GW19	GW-19-SGS_Historical_130316	GW-19	13/03/2016			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGP-GW20	GW-20_Historical_130316	GW-20	13/03/2016			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGP-GW20	GW-20-SGS_Historical_130316	GW-20	13/03/2016			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGP-GW21	GW-21_Historical_130316	GW-21	13/03/2016			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGP-GW21	GW-21-SGS_Historical_130316	GW-21	13/03/2016			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGP-GW22	GW-22_Historical_130316	GW-22	13/03/2016			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGP-GW22	GW-22-SGS_Historical_130316	GW-22	13/03/2016			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGP-MW2	MW-2_Historical_130316	MW-2	13/03/2016			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

														Polycyclic Aromatic Hydrocarbons																
														Benzo(a)pyrene TEQ calc (Zero)	Benzo(b+j)fluoranthene	Acenaphthene	Acenaphthylene	Anthracene	Benz(a)anthracene	Benzo(a) pyrene	Benzo(g,h,i)perylene	Benzo(k)fluoranthene	Chrysene	Dibenz(a,h)anthracene	Fluoranthene	Fluorene	Indeno(1,2,3-c,d)pyrene	Naphthalene	Phenanthrene	Pyrene	PAHs (Sum of total)	3/4-Methylphenol (m/p-cresol)	2,4,5-Trichlorophenol	2,4,6-Trichlorophenol	2,4-Dichlorophenol	2,4-Dimethylphenol
														mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
EQL														**0.0005**	**0.001**	**0.001**	**0.001**	**0.001**	**0.001**	**0.0005**	**0.001**	**0.001**	**0.001**	**0.001**	**0.001**	**0.001**	**0.001**	**0.001**	**0.001**	**0.0005**	**0.002**	**0.001**	**0.001**	**0.001**	**0.001**
NHMRC 2008 Recreational Water																																			
PNG Water Quality Criteria for Freshwater Aquatic Ecosystem (guideline only)																																			
PNG Water Quality Criteria for Marine Aquatic Ecosystem (guideline only)																																			
Environment Permit Criteria (Baseline Range)																															0.002	0.001	0.001		0.001
PNG DWG (1987)																																			
Site_ID	**Location_Code**	**SampleCode**	**Field_ID**	**Sampled_Date_Time**	**Lab_Name**	**Lab_Report_Number**	**Sample_Type**																													
PNG LNG	LNGP-MW2	MW-2-SGS_Historical_130316	MW-2	13/03/2016			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PNG LNG		EB1607514014	QC1	13/03/2016	ALSE-Brisbane	EB1607514	Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.002	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
PNG LNG		EB1607514015	QC2	13/03/2016	ALSE-Brisbane	EB1607514	Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.002	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
PNG LNG		EB1607514016	QC3	13/03/2016	ALSE-Brisbane	EB1607514	Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.002	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
PNG LNG		EB1607514017	QC4	13/03/2016	ALSE-Brisbane	EB1607514	Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.002	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
PNG LNG	LNGL-GW11	EB1607514011	LNGP Landfill GW11	13/03/2016	ALSE-Brisbane	EB1607514	Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.002	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
PNG LNG	LNGL-GW12	EB1607514009	LNGP Landfill GW12	13/03/2016	ALSE-Brisbane	EB1607514	Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.002	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
PNG LNG	LNGL-GW13	EB1607514010	LNGP Landfill GW13	13/03/2016	ALSE-Brisbane	EB1607514	Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.002	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
PNG LNG	LNGL-GW14	EB1607514012	LNGP Landfill GW14	13/03/2016	ALSE-Brisbane	EB1607514	Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.002	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
PNG LNG	LNGL-GW15	EB1607514013	LNGP Landfill GW15	13/03/2016	ALSE-Brisbane	EB1607514	Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.002	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
PNG LNG	LNGL-GW5	EB1607514008	LNGP Landfill GW5	13/03/2016	ALSE-Brisbane	EB1607514	Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.002	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
PNG LNG	LNGP-GW17	EB1607514003	LNGP Plant Site GW17	13/03/2016	ALSE-Brisbane	EB1607514	Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.002	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
PNG LNG	LNGP-GW19	EB1607514004	LNGP Plant Site GW19	13/03/2016	ALSE-Brisbane	EB1607514	Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.002	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
PNG LNG	LNGP-GW20	EB1607514005	LNGP Plant Site GW20	13/03/2016	ALSE-Brisbane	EB1607514	Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.002	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
PNG LNG	LNGP-GW21	EB1607514006	LNGP Plant Site GW21	13/03/2016	ALSE-Brisbane	EB1607514	Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.002	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
PNG LNG	LNGP-GW22	EB1607514007	LNGP Plant Site GW22	13/03/2016	ALSE-Brisbane	EB1607514	Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.002	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
PNG LNG	LNGP-MW2	EB1607514001	LNGP Plant Site MW2	13/03/2016	ALSE-Brisbane	EB1607514	Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.002	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
PNG LNG	LNGP-MW4	EB1607514002	LNGP Plant Site MW4	13/03/2016	ALSE-Brisbane	EB1607514	Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.002	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
PNG LNG	LNGL-GW11	GW-11_Historical_280816	GW-11	28/08/2016			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGL-GW11	GW-11-SGS_Historical_280816	GW-11	28/08/2016			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGL-GW12	GW-12_Historical_280816	GW-12	28/08/2016			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGL-GW13	GW-13_Historical_280816	GW-13	28/08/2016			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGL-GW13	GW-13-SGS_Historical_280816	GW-13	28/08/2016			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGL-GW14	GW-14_Historical_280816	GW-14	28/08/2016			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGL-GW14	GW-14-SGS_Historical_280816	GW-14	28/08/2016			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGL-GW5	GW-5_Historical_280816	GW-5	28/08/2016			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGL-GW5	GW-5-SGS_Historical_280816	GW-5	28/08/2016			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGP-GW20	GW-20_Historical_280816	GW-20	28/08/2016			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGP-GW20	GW-20-SGS_Historical_280816	GW-20	28/08/2016			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGP-GW21	GW-21_Historical_280816	GW-21	28/08/2016			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGP-GW21	GW-21-SGS_Historical_280816	GW-21	28/08/2016			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGP-GW22	GW-22_Historical_280816	GW-22	28/08/2016			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGP-GW22	GW-22-SGS_Historical_280816	GW-22	28/08/2016			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGP-MW2	MW-2_Historical_280816	MW-2	28/08/2016			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGP-MW2	MW-2-SGS_Historical_280816	MW-2	28/08/2016			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PNG LNG		EB1621459010	QC1	28/08/2016	ALSE-Brisbane	EB1621459	Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.002	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
PNG LNG		EB1621459011	QC2	28/08/2016	ALSE-Brisbane	EB1621459	Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.002	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
PNG LNG		EB1621459012	QC3	28/08/2016	ALSE-Brisbane	EB1621459	Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.002	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
PNG LNG	LNGL-GW11	EB1621459003	LNGP Landfill GW11	28/08/2016	ALSE-Brisbane	EB1621459	Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.002	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
PNG LNG	LNGL-GW12	EB1621459004	LNGP Landfill GW12	28/08/2016	ALSE-Brisbane	EB1621459	Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.002	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
PNG LNG	LNGL-GW13	EB1621459005	LNGP Landfill GW13	28/08/2016	ALSE-Brisbane	EB1621459	Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.002	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
PNG LNG	LNGL-GW14	EB1621459006	LNGP Landfill GW14	28/08/2016	ALSE-Brisbane	EB1621459	Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.002	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
PNG LNG	LNGL-GW5	EB1621459002	LNGP Landfill GW5	28/08/2016	ALSE-Brisbane	EB1621459	Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.002	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
PNG LNG	LNGP-GW20	EB1621459007	LNGP Landfill GW20	28/08/2016	ALSE-Brisbane	EB1621459	Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.002	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
PNG LNG	LNGP-GW21	EB1621459008	LNGP Landfill GW21	28/08/2016	ALSE-Brisbane	EB1621459	Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.002	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
PNG LNG	LNGP-GW22	EB1621459009	LNGP Landfill GW22	28/08/2016	ALSE-Brisbane	EB1621459	Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.002	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
PNG LNG	LNGP-MW2	EB1621459001	LNGP MW2	28/08/2016	ALSE-Brisbane	EB1621459	Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.002	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
PNG LNG	LNGL-GW11	GW-11_Historical_170417	GW-11	17/04/2017			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGL-GW11	GW-11-SGS_Historical_170417	GW-11	17/04/2017			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGL-GW12	GW-12_Historical_170417	GW-12	17/04/2017			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGL-GW12	GW-12-SGS_Historical_170417	GW-12	17/04/2017			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGL-GW13	GW-13_Historical_170417	GW-13	17/04/2017			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGL-GW13	GW-13-SGS_Historical_170417	GW-13	17/04/2017			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGL-GW14	GW-14_Historical_170417	GW-14	17/04/2017			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGL-GW14	GW-14-SGS_Historical_170417	GW-14	17/04/2017			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGL-GW15	GW-15_Historical_170417	GW-15	17/04/2017			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGL-GW15	GW-15-SGS_Historical_170417	GW-15	17/04/2017			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGL-GW5	GW-5_Historical_170417	GW-5	17/04/2017			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGL-GW5	GW-5-SGS_Historical_170417	GW-5	17/04/2017			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGP-GW17	GW-17_Historical_170417	GW-17	17/04/2017			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGP-GW17	GW-17-SGS_Historical_170417	GW-17	17/04/2017			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGP-GW19	GW-19_Historical_170417	GW-19	17/04/2017			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGP-GW19	GW-19-SGS_Historical_170417	GW-19	17/04/2017			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

									Polycyclic Aromatic Hydrocarbons																				
									Benzo(a)pyrene TEQ calc (Zero)	Benzo(b+j)fluoranthene	Acenaphthene	Acenaphthylene	Anthracene	Benz(a)anthracene	Benzo(a) pyrene	Benzo(g,h,i)perylene	Benzo(k)fluoranthene	Chrysene	Dibenz(a,h)anthracene	Fluoranthene	Fluorene	Indeno(1,2,3-c,d)pyrene	Naphthalene	Phenanthrene	Pyrene	PAHs (Sum of total)	3/4-Methylphenol (m/p-cresol)	2,4,5-Trichlorophenol	2,4,6-Trichlorophenol	2,4-Dichlorophenol	2,4-Dimethylphenol
									mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
EQL									**0.0005**	**0.001**	**0.001**	**0.001**	**0.001**	**0.001**	**0.0005**	**0.001**	**0.001**	**0.001**	**0.001**	**0.001**	**0.001**	**0.001**	**0.001**	**0.001**	**0.001**	**0.0005**	**0.002**	**0.001**	**0.001**	**0.001**	**0.001**
NHMRC 2008 Recreational Water																															
PNG Water Quality Criteria for Freshwater Aquatic Ecosystem (guideline only)																															
PNG Water Quality Criteria for Marine Aquatic Ecosystem (guideline only)																															
Environment Permit Criteria (Baseline Range)																											0.002	0.001	0.001		0.001
PNG DWG (1987)																															
Site_ID	**Location_Code**	**SampleCode**	**Field_ID**	**Sampled_Date_Time**	**Lab_Name**	**Lab_Report_Number**	**Sample_Type**																								
PNG LNG	LNGP-GW20	GW-20_Historical_170417	GW-20	17/04/2017			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGP-GW20	GW-20-SGS_Historical_170417	GW-20	17/04/2017			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGP-GW21	GW-21_Historical_170417	GW-21	17/04/2017			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGP-GW21	GW-21-SGS_Historical_170417	GW-21	17/04/2017			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGP-GW22	GW-22_Historical_170417	GW-22	17/04/2017			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGP-GW22	GW-22-SGS_Historical_170417	GW-22	17/04/2017			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGP-MW2	MW-2_Historical_170417	MW-2	17/04/2017			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGP-MW2	MW-2-SGS_Historical_170417	MW-2	17/04/2017			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PNG LNG		EB1707968014	QC1	17/04/2017	ALSE-Brisbane	EB1707968	Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.002	<0.001	<0.001	<0.001	<0.001
PNG LNG		EB1707968015	QC2	17/04/2017	ALSE-Brisbane	EB1707968	Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.002	<0.001	<0.001	<0.001	<0.001
PNG LNG		EB1707968016	QC3	17/04/2017	ALSE-Brisbane	EB1707968	Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.002	<0.001	<0.001	<0.001	<0.001
PNG LNG	LNGL-GW11	EB1707968011	LNGP Landfill GW11	17/04/2017	ALSE-Brisbane	EB1707968	Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.002	<0.001	<0.001	<0.001	<0.001
PNG LNG	LNGL-GW12	EB1707968009	LNGP Landfill GW12	17/04/2017	ALSE-Brisbane	EB1707968	Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.002	<0.001	<0.001	<0.001	<0.001
PNG LNG	LNGL-GW13	EB1707968010	LNGP Landfill GW13	17/04/2017	ALSE-Brisbane	EB1707968	Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.002	<0.001	<0.001	<0.001	<0.001
PNG LNG	LNGL-GW14	EB1707968012	LNGP Landfill GW14	17/04/2017	ALSE-Brisbane	EB1707968	Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.002	<0.001	<0.001	<0.001	<0.001
PNG LNG	LNGL-GW15	EB1707968013	LNGP Landfill GW15	17/04/2017	ALSE-Brisbane	EB1707968	Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.002	<0.001	<0.001	<0.001	<0.001
PNG LNG	LNGL-GW5	EB1707968008	LNGP Landfill GW5	17/04/2017	ALSE-Brisbane	EB1707968	Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.002	<0.001	<0.001	<0.001	<0.001
PNG LNG	LNGP-GW17	EB1707968003	LNGP Plant Site GW17	17/04/2017	ALSE-Brisbane	EB1707968	Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.002	<0.001	<0.001	<0.001	<0.001
PNG LNG	LNGP-GW19	EB1707968004	LNGP Plant Site GW19	17/04/2017	ALSE-Brisbane	EB1707968	Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.002	<0.001	<0.001	<0.001	<0.001
PNG LNG	LNGP-GW20	EB1707968005	LNGP Plant Site GW20	17/04/2017	ALSE-Brisbane	EB1707968	Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.002	<0.001	<0.001	<0.001	<0.001
PNG LNG	LNGP-GW21	EB1707968006	LNGP Plant Site GW21	17/04/2017	ALSE-Brisbane	EB1707968	Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.002	<0.001	<0.001	<0.001	<0.001
PNG LNG	LNGP-GW22	EB1707968007	LNGP Plant Site GW22	17/04/2017	ALSE-Brisbane	EB1707968	Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.002	<0.001	<0.001	<0.001	<0.001
PNG LNG	LNGP-MW2	EB1707968001	LNGP Plant Site MW2	17/04/2017	ALSE-Brisbane	EB1707968	Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.002	<0.001	<0.001	<0.001	<0.001
PNG LNG	LNGP-MW4	EB1707968002	LNGP Plant Site MW4	17/04/2017	ALSE-Brisbane	EB1707968	Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.002	<0.001	<0.001	<0.001	<0.001
PNG LNG	LNGP-GW17	EB1722826002	LNGP Plant Site - GW17	29/09/2017	ALSE-Brisbane	EB1722826	Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.002	<0.001	<0.001	<0.001	<0.001
PNG LNG	LNGP-MW2	EB1722826001	LNGP Plant Site - MW2	29/09/2017	ALSE-Brisbane	EB1722826	Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.002	<0.001	<0.001	<0.001	<0.001
PNG LNG	LNGL-GW5	EB1722826007	LNGP Landfill - GW5	29/09/2017	ALSE-Brisbane	EB1722826	Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.002	<0.001	<0.001	<0.001	<0.001
PNG LNG	LNGL-GW14	EB1722826011	LNGP Landfill - G14	29/09/2017	ALSE-Brisbane	EB1722826	Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.002	<0.001	<0.001	<0.001	<0.001
PNG LNG	LNGP-GW20	EB1722826004	LNGP Plant Site - GW20	29/09/2017	ALSE-Brisbane	EB1722826	Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.002	<0.001	<0.001	<0.001	<0.001
PNG LNG		EB1722826016	QC4	29/09/2017	ALSE-Brisbane	EB1722826	Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.002	<0.001	<0.001	<0.001	<0.001
PNG LNG	LNGP-GW19	EB1722826003	LNGP Plant Site - GW19	29/09/2017	ALSE-Brisbane	EB1722826	Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.002	<0.001	<0.001	<0.001	<0.001
PNG LNG		EB1722826013	QC1	29/09/2017	ALSE-Brisbane	EB1722826	Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.002	<0.001	<0.001	<0.001	<0.001
PNG LNG		EB1722826014	QC2	29/09/2017	ALSE-Brisbane	EB1722826	Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.002	<0.001	<0.001	<0.001	<0.001
PNG LNG		EB1722826015	QC3	29/09/2017	ALSE-Brisbane	EB1722826	Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.002	<0.001	<0.001	<0.001	<0.001
PNG LNG	LNGL-GW11	EB1722826010	LNGP Landfill - GW11	29/09/2017	ALSE-Brisbane	EB1722826	Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.002	<0.001	<0.001	<0.001	<0.001
PNG LNG	LNGL-GW12	EB1722826008	LNGP Landfill - GW12	29/09/2017	ALSE-Brisbane	EB1722826	Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.002	<0.001	<0.001	<0.001	<0.001
PNG LNG	LNGL-GW13	EB1722826009	LNGP Landfill - GW13	29/09/2017	ALSE-Brisbane	EB1722826	Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.002	<0.001	<0.001	<0.001	<0.001
PNG LNG	LNGL-GW15	EB1722826012	LNGP Landfill - GW15	29/09/2017	ALSE-Brisbane	EB1722826	Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.002	<0.001	<0.001	<0.001	<0.001
PNG LNG	LNGP-GW21	EB1722826005	LNGP Plant Site - GW21	29/09/2017	ALSE-Brisbane	EB1722826	Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.002	<0.001	<0.001	<0.001	<0.001
PNG LNG	LNGP-GW22	EB1722826006	LNGP Plant Site - GW22	29/09/2017	ALSE-Brisbane	EB1722826	Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.002	<0.001	<0.001	<0.001	<0.001
PNG LNG	LNGL-GW11	GW-11_Historical_291017	GW-11	29/10/2017			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGL-GW11	GW-11-SGS_Historical_291017	GW-11	29/10/2017			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGL-GW12	GW-12_Historical_291017	GW-12	29/10/2017			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGL-GW12	GW-12-SGS_Historical_291017	GW-12	29/10/2017			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGL-GW13	GW-13_Historical_291017	GW-13	29/10/2017			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGL-GW13	GW-13-SGS_Historical_291017	GW-13	29/10/2017			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGL-GW14	GW-14_Historical_291017	GW-14	29/10/2017			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGL-GW14	GW-14-SGS_Historical_291017	GW-14	29/10/2017			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGL-GW15	GW-15_Historical_291017	GW-15	29/10/2017			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGL-GW15	GW-15-SGS_Historical_291017	GW-15	29/10/2017			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGL-GW5	GW-5_Historical_291017	GW-5	29/10/2017			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGL-GW5	GW-5-SGS_Historical_291017	GW-5	29/10/2017			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGP-GW17	GW-17_Historical_291017	GW-17	29/10/2017			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGP-GW17	GW-17-SGS_Historical_291017	GW-17	29/10/2017			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGP-GW19	GW-19_Historical_291017	GW-19	29/10/2017			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGP-GW19	GW-19-SGS_Historical_291017	GW-19	29/10/2017			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGP-GW20	GW-20_Historical_291017	GW-20	29/10/2017			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGP-GW20	GW-20-SGS_Historical_291017	GW-20	29/10/2017			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGP-GW21	GW-21_Historical_291017	GW-21	29/10/2017			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGP-GW21	GW-21-SGS_Historical_291017	GW-21	29/10/2017			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGP-GW22	GW-22_Historical_291017	GW-22	29/10/2017			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGP-GW22	GW-22-SGS_Historical_291017	GW-22	29/10/2017			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGP-MW2	MW-2_Historical_291017	MW-2	29/10/2017			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

								Polycyclic Aromatic Hydrocarbons																						
								Benzo(a)pyrene TEQ calc (Zero)	Benzo(b+j)fluoranthene	Acenaphthene	Acenaphthylene	Anthracene	Benz(a)anthracene	Benzo(a) pyrene	Benzo(g,h,i)perylene	Benzo(k)fluoranthene	Chrysene	Dibenz(a,h)anthracene	Fluoranthene	Fluorene	Indeno(1,2,3-c,d)pyrene	Naphthalene	Phenanthrene	Pyrene	PAHs (Sum of total)	3/4-Methylphenol (m/p-cresol)	2,4,5-Trichlorophenol	2,4,6-Trichlorophenol	2,4-Dichlorophenol	2,4-Dimethylphenol
								mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
EQL								0.0005	0.001	0.001	0.001	0.001	0.001	0.0005	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.0005	0.002	0.001	0.001	0.001	0.001
NHMRC 2008 Recreational Water																														
PNG Water Quality Criteria for Freshwater Aquatic Ecosystem (guideline only)																														
PNG Water Quality Criteria for Marine Aquatic Ecosystem (guideline only)																														
Environment Permit Criteria (Baseline Range)																										0.002	0.001	0.001		0.001
PNG DWG (1987)																														
Site_ID	Location_Code	SampleCode	Field_ID	Sampled_Date_Time	Lab_Name	Lab_Report_Number	Sample_Type																							
PNG LNG	LNGP-MW2	MW-2-SGS_Historical_291017	MW-2	29/10/2017			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGL-GW11	GW-11_Historical_280518	GW-11	28/05/2018			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGL-GW11	GW-11-EM_Historical_280518	GW-11	28/05/2018			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGL-GW11	GW-11-SGS_Historical_280518	GW-11	28/05/2018			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGL-GW12	GW-12_Historical_280518	GW-12	28/05/2018			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGL-GW12	GW-12-EM_Historical_280518	GW-12	28/05/2018			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGL-GW12	GW-12-SGS_Historical_280518	GW-12	28/05/2018			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGL-GW13	GW-13_Historical_280518	GW-13	28/05/2018			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGL-GW13	GW-13-EM_Historical_280518	GW-13	28/05/2018			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGL-GW13	GW-13-SGS_Historical_280518	GW-13	28/05/2018			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGL-GW14	GW-14_Historical_280518	GW-14	28/05/2018			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGL-GW14	GW-14-EM_Historical_280518	GW-14	28/05/2018			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGL-GW14	GW-14-SGS_Historical_280518	GW-14	28/05/2018			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGL-GW15	GW-15_Historical_280518	GW-15	28/05/2018			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGL-GW15	GW-15-EM_Historical_280518	GW-15	28/05/2018			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGL-GW15	GW-15-SGS_Historical_280518	GW-15	28/05/2018			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGL-GW5	GW-5_Historical_280518	GW-5	28/05/2018			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGL-GW5	GW-5-EM_Historical_280518	GW-5	28/05/2018			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGL-GW5	GW-5-SGS_Historical_280518	GW-5	28/05/2018			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGP-GW17	GW-17_Historical_280518	GW-17	28/05/2018			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGP-GW17	GW-17-EM_Historical_280518	GW-17	28/05/2018			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGP-GW17	GW-17-SGS_Historical_280518	GW-17	28/05/2018			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGP-GW19	GW-19_Historical_280518	GW-19	28/05/2018			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGP-GW19	GW-19-EM_Historical_280518	GW-19	28/05/2018			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGP-GW19	GW-19-SGS_Historical_280518	GW-19	28/05/2018			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGP-GW20	GW-20_Historical_280518	GW-20	28/05/2018			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGP-GW20	GW-20-EM_Historical_280518	GW-20	28/05/2018			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGP-GW20	GW-20-SGS_Historical_280518	GW-20	28/05/2018			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGP-GW21	GW-21_Historical_280518	GW-21	28/05/2018			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGP-GW21	GW-21-EM_Historical_280518	GW-21	28/05/2018			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGP-GW21	GW-21-SGS_Historical_280518	GW-21	28/05/2018			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGP-GW22	GW-22_Historical_280518	GW-22	28/05/2018			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGP-GW22	GW-22-EM_Historical_280518	GW-22	28/05/2018			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGP-GW22	GW-22-SGS_Historical_280518	GW-22	28/05/2018			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGP-MW2	MW-2_Historical_280518	MW-2	28/05/2018			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGP-MW2	MW-2-EM_Historical_280518	MW-2	28/05/2018			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGP-MW2	MW-2-SGS_Historical_280518	MW-2	28/05/2018			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGP-GW20	EB1813230004	LNGP-GW20	28/05/2018	ALSE-Brisbane	EB1813230	Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.002	<0.001	<0.001	<0.001	<0.001
PNG LNG	LNGP-GW21	EB1813230005	LNGP-GW21	28/05/2018	ALSE-Brisbane	EB1813230	Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.002	<0.001	<0.001	<0.001	<0.001
PNG LNG	LNGP-GW22	EB1813230006	LNGP-GW22	28/05/2018	ALSE-Brisbane	EB1813230	Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.002	<0.001	<0.001	<0.001	<0.001
PNG LNG	LNGL-GW13	EB1813230009	LNGP-GW13	28/05/2018	ALSE-Brisbane	EB1813230	Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.002	<0.001	<0.001	<0.001	<0.001
PNG LNG	LNGL-GW11	EB1813230010	LNGP-GW11	28/05/2018	ALSE-Brisbane	EB1813230	Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.002	<0.001	<0.001	<0.001	<0.001
PNG LNG	LNGL-GW15	EB1813230012	LNGP-GW15	28/05/2018	ALSE-Brisbane	EB1813230	Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.002	<0.001	<0.001	<0.001	<0.001
PNG LNG		EB1813230013	LNGP-QC1	28/05/2018	ALSE-Brisbane	EB1813230	Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.002	<0.001	<0.001	<0.001	<0.001
PNG LNG	LNGL-GW12	EB1813230008	LNGP-GW12	28/05/2018	ALSE-Brisbane	EB1813230	Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.002	<0.001	<0.001	<0.001	<0.001
PNG LNG		EB1813230014	LNGP-QC2	28/05/2018	ALSE-Brisbane	EB1813230	Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.002	<0.001	<0.001	<0.001	<0.001
PNG LNG	LNGL-GW5	EB1813230007	LNGP-GW5	28/05/2018	ALSE-Brisbane	EB1813230	Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.002	<0.001	<0.001	<0.001	<0.001
PNG LNG	LNGL-GW14	EB1813230011	LNGP-GW14	28/05/2018	ALSE-Brisbane	EB1813230	Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.002	<0.001	<0.001	<0.001	<0.001
PNG LNG	LNGP-MW2	EB1813230001	LNGP-MW2	28/05/2018	ALSE-Brisbane	EB1813230	Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.002	<0.001	<0.001	<0.001	<0.001
PNG LNG	LNGP-GW17	EB1813230002	LNGP-GW17	28/05/2018	ALSE-Brisbane	EB1813230	Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.002	<0.001	<0.001	<0.001	<0.001
PNG LNG	LNGP-GW19	EB1813230003	LNGP-GW19	28/05/2018	ALSE-Brisbane	EB1813230	Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.002	<0.001	<0.001	<0.001	<0.001
PNG LNG		EB1813230015	LNGP-QC3	28/05/2018	ALSE-Brisbane	EB1813230	Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.002	<0.001	<0.001	<0.001	<0.001
PNG LNG		EB1813230016	LNGP-QC4	28/05/2018	ALSE-Brisbane	EB1813230	Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.002	<0.001	<0.001	<0.001	<0.001
PNG LNG	LNGL-GW11	GW-11_Historical_261118	GW-11	26/11/2018			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGL-GW11	GW-11-ALS_Historical_261118	GW-11	26/11/2018			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGL-GW11	GW-11-EM_Historical_261118	GW-11	26/11/2018			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGL-GW12	GW-12_Historical_261118	GW-12	26/11/2018			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGL-GW12	GW-12-ALS_Historical_261118	GW-12	26/11/2018			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGL-GW12	GW-12-EM_Historical_261118	GW-12	26/11/2018			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGL-GW13	GW-13_Historical_261118	GW-13	26/11/2018			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGL-GW13	GW-13-ALS_Historical_261118	GW-13	26/11/2018			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGL-GW13	GW-13-EM_Historical_261118	GW-13	26/11/2018			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGL-GW14	GW-14_Historical_261118	GW-14	26/11/2018			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

													Polycyclic Aromatic Hydrocarbons																		
													Benzo(a)pyrene TEQ calc (Zero)	Benzo(b+j)fluoranthene	Acenaphthene	Acenaphthylene	Anthracene	Benz(a)anthracene	Benzo(a) pyrene	Benzo(g,h,i)perylene	Benzo(k)fluoranthene	Chrysene	Dibenz(a,h)anthracene	Fluoranthene	Fluorene	Indeno(1,2,3-c,d)pyrene	Naphthalene	Phenanthrene	Pyrene	PAHs (Sum of total)	3/4-Methylphenol (m/p-cresol)	2,4,5-Trichlorophenol	2,4,6-Trichlorophenol	2,4-Dichlorophenol	2,4-Dimethylphenol
													mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
EQL													**0.0005**	**0.001**	**0.001**	**0.001**	**0.001**	**0.001**	**0.0005**	**0.001**	**0.001**	**0.001**	**0.001**	**0.001**	**0.001**	**0.001**	**0.001**	**0.001**	**0.001**	**0.0005**	**0.002**	**0.001**	**0.001**	**0.001**	**0.001**
NHMRC 2008 Recreational Water																																			
PNG Water Quality Criteria for Freshwater Aquatic Ecosystem (guideline only)																																			
PNG Water Quality Criteria for Marine Aquatic Ecosystem (guideline only)																																			
Environment Permit Criteria (Baseline Range)																															0.002	0.001	0.001		0.001
PNG DWG (1987)																																			
Site_ID	**Location_Code**	**SampleCode**	**Field_ID**	**Sampled_Date_Time**	**Lab_Name**	**Lab_Report_Number**	**Sample_Type**																												
PNG LNG	LNGL-GW14	GW-14-ALS_Historical_261118	GW-14	26/11/2018			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGL-GW14	GW-14-EM_Historical_261118	GW-14	26/11/2018			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGL-GW15	GW-15_Historical_261118	GW-15	26/11/2018			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGL-GW15	GW-15-ALS_Historical_261118	GW-15	26/11/2018			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGL-GW15	GW-15-EM_Historical_261118	GW-15	26/11/2018			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGL-GW5	GW-5_Historical_261118	GW-5	26/11/2018			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGL-GW5	GW-5-ALS_Historical_261118	GW-5	26/11/2018			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGL-GW5	GW-5-EM_Historical_261118	GW-5	26/11/2018			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGP-GW17	GW-17_Historical_261118	GW-17	26/11/2018			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGP-GW17	GW-17-ALS_Historical_261118	GW-17	26/11/2018			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGP-GW17	GW-17-EM_Historical_261118	GW-17	26/11/2018			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGP-GW19	GW-19_Historical_261118	GW-19	26/11/2018			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGP-GW19	GW-19-ALS_Historical_261118	GW-19	26/11/2018			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGP-GW19	GW-19-EM_Historical_261118	GW-19	26/11/2018			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGP-GW20	GW-20_Historical_261118	GW-20	26/11/2018			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGP-GW20	GW-20-ALS_Historical_261118	GW-20	26/11/2018			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGP-GW20	GW-20-EM_Historical_261118	GW-20	26/11/2018			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGP-GW21	GW-21_Historical_261118	GW-21	26/11/2018			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGP-GW21	GW-21-ALS_Historical_261118	GW-21	26/11/2018			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGP-GW21	GW-21-EM_Historical_261118	GW-21	26/11/2018			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGP-GW22	GW-22_Historical_261118	GW-22	26/11/2018			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGP-GW22	GW-22-ALS_Historical_261118	GW-22	26/11/2018			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGP-GW22	GW-22-EM_Historical_261118	GW-22	26/11/2018			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGP-MW2	MW-2_Historical_261118	MW-2	26/11/2018			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGP-MW2	MW-2-ALS_Historical_261118	MW-2	26/11/2018			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGP-MW2	MW-2-EM_Historical_261118	MW-2	26/11/2018			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGP-MW2	EB1829402001	LNGP-MW2	26/11/2018	ALSE-Brisbane	EB1829402	Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PNG LNG		EB1829402013	LNGP-QC1	26/11/2018	ALSE-Brisbane	EB1829402	Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGP-GW20	EB1829402004	LNGP-GW20	26/11/2018	ALSE-Brisbane	EB1829402	Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGP-GW22	EB1829402006	LNGP-GW22	26/11/2018	ALSE-Brisbane	EB1829402	Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGP-GW21	EB1829402005	LNGP-GW21	26/11/2018	ALSE-Brisbane	EB1829402	Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.002	<0.001	<0.001	<0.001	<0.001
PNG LNG	LNGL-GW5	EB1829402007	LNGP-GW5	26/11/2018	ALSE-Brisbane	EB1829402	Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGL-GW12	EB1829402008	LNGP-GW12	26/11/2018	ALSE-Brisbane	EB1829402	Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGL-GW14	EB1829402011	LNGP-GW14	26/11/2018	ALSE-Brisbane	EB1829402	Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGL-GW13	EB1829402009	LNGP-GW13	26/11/2018	ALSE-Brisbane	EB1829402	Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PNG LNG		EB1829402014	LNGP-QC2	26/11/2018	ALSE-Brisbane	EB1829402	Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGL-GW11	EB1829402010	LNGP-GW11	26/11/2018	ALSE-Brisbane	EB1829402	Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.002	<0.001	<0.001	<0.001	<0.001
PNG LNG	LNGL-GW15	EB1829402012	LNGP-GW15	26/11/2018	ALSE-Brisbane	EB1829402	Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGP-GW17	EB1829402002	LNGP-GW17	26/11/2018	ALSE-Brisbane	EB1829402	Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.002	<0.001	<0.001	<0.001	<0.001
PNG LNG	LNGP-GW19	EB1829402003	LNGP-GW19	26/11/2018	ALSE-Brisbane	EB1829402	Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PNG LNG		EB1829402016	LNGP-QC4	26/11/2018	ALSE-Brisbane	EB1829402	Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.002	<0.001	<0.001	<0.001	<0.001
PNG LNG		EB1829402015	LNGP-QC3	26/11/2018	ALSE-Brisbane	EB1829402	Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGL-GW11	GW-11_Historical_020919	GW-11	2/09/2019			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGL-GW11	GW-11-ALS_Historical_020919	GW-11	2/09/2019			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGL-GW11	GW-11-EM_Historical_020919	GW-11	2/09/2019			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGL-GW12	GW-12_Historical_020919	GW-12	2/09/2019			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGL-GW12	GW-12-ALS_Historical_020919	GW-12	2/09/2019			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGL-GW12	GW-12-EM_Historical_020919	GW-12	2/09/2019			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGL-GW13	GW-13_Historical_020919	GW-13	2/09/2019			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGL-GW13	GW-13-ALS_Historical_020919	GW-13	2/09/2019			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGL-GW13	GW-13-EM_Historical_020919	GW-13	2/09/2019			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGL-GW14	GW-14_Historical_020919	GW-14	2/09/2019			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGL-GW14	GW-14-ALS_Historical_020919	GW-14	2/09/2019			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGL-GW14	GW-14-EM_Historical_020919	GW-14	2/09/2019			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGL-GW15	GW-15_Historical_020919	GW-15	2/09/2019			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGL-GW15	GW-15-ALS_Historical_020919	GW-15	2/09/2019			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGL-GW15	GW-15-EM_Historical_020919	GW-15	2/09/2019			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGL-GW5	GW-5_Historical_020919	GW-5	2/09/2019			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGL-GW5	GW-5-ALS_Historical_020919	GW-5	2/09/2019			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGL-GW5	GW-5-EM_Historical_020919	GW-5	2/09/2019			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGP-GW17	GW-17_Historical_020919	GW-17	2/09/2019			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGP-GW17	GW-17-EM_Historical_020919	GW-17	2/09/2019			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGP-GW19	GW-19_Historical_020919	GW-19	2/09/2019			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

																						Polycyclic Aromatic Hydrocarbons										
																						Benzo(a)pyrene TEQ calc (Zero)	Benzo(b+j)fluoranthene	Acenaphthene	Acenaphthylene	Anthracene	Benz(a)anthracene	Benzo(a) pyrene	Benzo(g,h,i)perylene	Benzo(k)fluoranthene	Chrysene	Dibenz(a,h)anthracene	Fluoranthene	Fluorene	Indeno(1,2,3-c,d)pyrene	Naphthalene	Phenanthrene	Pyrene	PAHs (Sum of total)	3/4-Methylphenol (m/p-cresol)	2,4,5-Trichlorophenol	2,4,6-Trichlorophenol	2,4-Dichlorophenol	2,4-Dimethylphenol
										mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
EQL										**0.0005**	**0.001**	**0.001**	**0.001**	**0.001**	**0.001**	**0.0005**	**0.001**	**0.001**	**0.001**	**0.001**	**0.001**	**0.001**	**0.001**	**0.001**	**0.001**	**0.001**	**0.001**	**0.0005**	**0.002**	**0.001**	**0.001**	**0.001**	**0.001**
NHMRC 2008 Recreational Water																																
PNG Water Quality Criteria for Freshwater Aquatic Ecosystem (guideline only)																																
PNG Water Quality Criteria for Marine Aquatic Ecosystem (guideline only)																																
Environment Permit Criteria (Baseline Range)																													0.002	0.001	0.001		0.001
PNG DWG (1987)																																
Site_ID	**Location_Code**	**SampleCode**	**Field_ID**	**Sampled_Date_Time**	**Lab_Name**	**Lab_Report_Number**	**Sample_Type**																									
PNG LNG	LNGP-GW19	GW-19-EM_Historical_020919	GW-19	2/09/2019			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGP-GW20	GW-20_Historical_020919	GW-20	2/09/2019			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGP-GW20	GW-20-EM_Historical_020919	GW-20	2/09/2019			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGP-GW21	GW-21 _Historical_020919	GW-21	2/09/2019			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGP-GW21	GW-21 -ALS_Historical_020919	GW-21	2/09/2019			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGP-GW21	GW-21 -EM_Historical_020919	GW-21	2/09/2019			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGP-GW22	GW-22_Historical_020919	GW-22	2/09/2019			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGP-GW22	GW-22-ALS_Historical_020919	GW-22	2/09/2019			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGP-GW22	GW-22-EM_Historical_020919	GW-22	2/09/2019			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGP-GW23	GW-23_Historical_020919	GW-23	2/09/2019			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGP-GW23	GW-23-ALS_Historical_020919	GW-23	2/09/2019			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGP-GW23	GW-23-EM_Historical_020919	GW-23	2/09/2019			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGP-GW24	GW-24_Historical_020919	GW-24	2/09/2019			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGP-GW24	GW-24-ALS_Historical_020919	GW-24	2/09/2019			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGP-GW24	GW-24-EM_Historical_020919	GW-24	2/09/2019			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGP-MW2	MW-2_Historical_020919	MW-2	2/09/2019			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGP-MW2	MW-2-ALS_Historical_020919	MW-2	2/09/2019			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGP-MW2	MW-2-EM_Historical_020919	MW-2	2/09/2019			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PNG LNG		EB1922977016	LNGP-QC2	2/09/2019	ALSE-Brisbane	EB1922977	Normal	<0.0005	<0.001	<0.001	<0.001	<0.001	<0.001	<0.0005	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.0005	<0.002	<0.001	<0.001	<0.001	<0.001
PNG LNG	LNGP-GW20	EB1922977004	LNGP-GW20	2/09/2019	ALSE-Brisbane	EB1922977	Normal	<0.0005	<0.001	<0.001	<0.001	<0.001	<0.001	<0.0005	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.0005	<0.002	<0.001	<0.001	<0.001	<0.001
PNG LNG		EB1922977015	LNGP-QC1	2/09/2019	ALSE-Brisbane	EB1922977	Normal	<0.0005	<0.001	<0.001	<0.001	<0.001	<0.001	<0.0005	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.0005	<0.002	<0.001	<0.001	<0.001	<0.001
PNG LNG	LNGP-GW24	EB1922977010	LNGP-GW24	2/09/2019	ALSE-Brisbane	EB1922977	Normal	<0.0005	<0.001	<0.001	<0.001	<0.001	<0.001	<0.0005	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.0005	<0.002	<0.001	<0.001	<0.001	<0.001
PNG LNG	LNGP-GW19	EB1922977003	LNGP-GW19	2/09/2019	ALSE-Brisbane	EB1922977	Normal	<0.0005	<0.001	<0.001	<0.001	<0.001	<0.001	<0.0005	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.0005	<0.002	<0.001	<0.001	<0.001	<0.001
PNG LNG	LNGP-GW17	EB1922977002	LNGP-GW17	2/09/2019	ALSE-Brisbane	EB1922977	Normal	<0.0005	<0.001	<0.001	<0.001	<0.001	<0.001	<0.0005	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.0005	<0.002	<0.001	<0.001	<0.001	<0.001
PNG LNG	LNGP-MW2	EB1922977001	LNGP-MW2	2/09/2019	ALSE-Brisbane	EB1922977	Normal	<0.0005	<0.001	<0.001	<0.001	<0.001	<0.001	<0.0005	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.0005	<0.002	<0.001	<0.001	<0.001	<0.001
PNG LNG		EB1922977017	LNGP-QC3	2/09/2019	ALSE-Brisbane	EB1922977	Normal	<0.0005	<0.001	<0.001	<0.001	<0.001	<0.001	<0.0005	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.0005	<0.002	<0.001	<0.001	<0.001	<0.001
PNG LNG	LNGL-GW5	EB1922977007	LNGP-GW5	2/09/2019	ALSE-Brisbane	EB1922977	Normal	<0.0005	<0.001	<0.001	<0.001	<0.001	<0.001	<0.0005	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.0005	<0.002	<0.001	<0.001	<0.001	<0.001
PNG LNG	LNGL-GW12	EB1922977008	LNGP-GW12	2/09/2019	ALSE-Brisbane	EB1922977	Normal	<0.0005	<0.001	<0.001	<0.001	<0.001	<0.001	<0.0005	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.0005	<0.002	<0.001	<0.001	<0.001	<0.001
PNG LNG	LNGL-GW14	EB1922977013	LNGP-GW14	2/09/2019	ALSE-Brisbane	EB1922977	Normal	<0.0005	<0.001	<0.001	<0.001	<0.001	<0.001	<0.0005	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.0005	<0.002	<0.001	<0.001	<0.001	<0.001
PNG LNG	LNGP-GW23	EB1922977009	LNGP-GW23	2/09/2019	ALSE-Brisbane	EB1922977	Normal	<0.0005	<0.001	<0.001	<0.001	<0.001	<0.001	<0.0005	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.0005	<0.002	<0.001	<0.001	<0.001	<0.001
PNG LNG	LNGP-GW22	EB1922977006	LNGP-GW22	2/09/2019	ALSE-Brisbane	EB1922977	Normal	<0.0005	<0.001	<0.001	<0.001	<0.001	<0.001	<0.0005	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.0005	<0.002	<0.001	<0.001	<0.001	<0.001
PNG LNG	LNGP-GW21	EB1922977005	LNGP-GW21	2/09/2019	ALSE-Brisbane	EB1922977	Normal	<0.0005	<0.001	<0.001	<0.001	<0.001	<0.001	<0.0005	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.0005	<0.002	<0.001	<0.001	<0.001	<0.001
PNG LNG	LNGL-GW15	EB1922977014	LNGP-GW15	2/09/2019	ALSE-Brisbane	EB1922977	Normal	<0.0005	<0.001	<0.001	<0.001	<0.001	<0.001	<0.0005	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.0005	<0.002	<0.001	<0.001	<0.001	<0.001
PNG LNG	LNGL-GW11	EB1922977012	LNGP-GW11	2/09/2019	ALSE-Brisbane	EB1922977	Normal	<0.0005	<0.001	<0.001	<0.001	<0.001	<0.001	<0.0005	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.0005	<0.002	<0.001	<0.001	<0.001	<0.001
PNG LNG	LNGL-GW13	EB1922977011	LNGP-GW13	2/09/2019	ALSE-Brisbane	EB1922977	Normal	<0.0005	<0.001	<0.001	<0.001	<0.001	<0.001	<0.0005	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.0005	<0.002	<0.001	<0.001	<0.001	<0.001
PNG LNG		EB1922977019	LNGP-QC5	2/09/2019	ALSE-Brisbane	EB1922977	Normal	<0.0005	<0.001	<0.001	<0.001	<0.001	<0.001	<0.0005	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.0005	<0.002	<0.001	<0.001	<0.001	<0.001
PNG LNG		EB1922977018	LNGP-QC4	2/09/2019	ALSE-Brisbane	EB1922977	Normal	<0.0005	<0.001	<0.001	<0.001	<0.001	<0.001	<0.0005	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.0005	<0.002	<0.001	<0.001	<0.001	<0.001
PNG LNG	LNGL-GW11	GW-11_Historical_021219	GW-11	2/12/2019			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGL-GW11	GW-11-EM_Historical_021219	GW-11	2/12/2019			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGL-GW11	PG04429-3	GW-11	2/12/2019	SGS EHS PNG Lab	PG04429	Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGL-GW12	GW-12_Historical_021219	GW-12	2/12/2019			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGL-GW12	GW-12-EM_Historical_021219	GW-12	2/12/2019			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGL-GW12	PG04429-4	GW-12	2/12/2019	SGS EHS PNG Lab	PG04429	Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGL-GW13	GW-13_Historical_021219	GW-13	2/12/2019			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGL-GW13	GW-13-EM_Historical_021219	GW-13	2/12/2019			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGL-GW13	PG04429-5	GW-13	2/12/2019	SGS EHS PNG Lab	PG04429	Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGL-GW14	GW-14_Historical_021219	GW-14	2/12/2019			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGL-GW14	GW-14-EM_Historical_021219	GW-14	2/12/2019			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGL-GW14	PG04429-6	GW-14	2/12/2019	SGS EHS PNG Lab	PG04429	Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGL-GW15	GW-15_Historical_021219	GW-15	2/12/2019			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGL-GW15	GW-15-EM_Historical_021219	GW-15	2/12/2019			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGL-GW15	PG04429-7	GW-15	2/12/2019	SGS EHS PNG Lab	PG04429	Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGL-GW5	GW-5_Historical_021219	GW-5	2/12/2019			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGL-GW5	GW-5-EM_Historical_021219	GW-5	2/12/2019			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGL-GW5	PG04429-2	GW-5	2/12/2019	SGS EHS PNG Lab	PG04429	Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGP-GW17	GW-17_Historical_021219	GW-17	2/12/2019			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGP-GW17	GW-17-EM_Historical_021219	GW-17	2/12/2019			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGP-GW17	PG04429-8	GW17	2/12/2019	SGS EHS PNG Lab	PG04429	Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGP-GW19	GW-19_Historical_021219	GW-19	2/12/2019			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGP-GW19	GW-19-EM_Historical_021219	GW-19	2/12/2019			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGP-GW19	PG04429-9	GW19	2/12/2019	SGS EHS PNG Lab	PG04429	Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGP-GW20	GW-20_Historical_021219	GW-20	2/12/2019			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGP-GW20	GW-20-EM_Historical_021219	GW-20	2/12/2019			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

																					Polycyclic Aromatic Hydrocarbons										
																					Benzo(a)pyrene TEQ calc (Zero)	Benzo(b+j)fluoranthene	Acenaphthene	Acenaphthylene	Anthracene	Benz(a)anthracene	Benzo(a) pyrene	Benzo(g,h,i)perylene	Benzo(k)fluoranthene	Chrysene	Dibenz(a,h)anthracene	Fluoranthene	Fluorene	Indeno(1,2,3-c,d)pyrene	Naphthalene	Phenanthrene	Pyrene	PAHs (Sum of total)	3/4-Methylphenol (m/p-cresol)	2,4,5-Trichlorophenol	2,4,6-Trichlorophenol	2,4-Dichlorophenol	2,4-Dimethylphenol
									mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
EQL									**0.0005**	**0.001**	**0.001**	**0.001**	**0.001**	**0.001**	**0.0005**	**0.001**	**0.001**	**0.001**	**0.001**	**0.001**	**0.001**	**0.001**	**0.001**	**0.001**	**0.001**	**0.001**	**0.0005**	**0.002**	**0.001**	**0.001**	**0.001**	**0.001**
NHMRC 2008 Recreational Water																															
PNG Water Quality Criteria for Freshwater Aquatic Ecosystem (guideline only)																															
PNG Water Quality Criteria for Marine Aquatic Ecosystem (guideline only)																															
Environment Permit Criteria (Baseline Range)																												0.002	0.001	0.001		0.001
PNG DWG (1987)																															
Site_ID	**Location_Code**	**SampleCode**	**Field_ID**	**Sampled_Date_Time**	**Lab_Name**	**Lab_Report_Number**	**Sample_Type**																									
PNG LNG	LNGP-GW20	PG04429-10	Gw20	2/12/2019	SGS EHS PNG Lab	PG04429	Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGP-GW20	PG04429-16	QC2	2/12/2019	SGS EHS PNG Lab	PG04429	Field_D	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGP-GW21	GW-21_Historical_021219	GW-21	2/12/2019			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGP-GW21	GW-21-EM_Historical_021219	GW-21	2/12/2019			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGP-GW21	PG04429-11	GW21	2/12/2019	SGS EHS PNG Lab	PG04429	Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGP-GW22	GW-22_Historical_021219	GW-22	2/12/2019			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGP-GW22	GW-22-EM_Historical_021219	GW-22	2/12/2019			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGP-GW22	PG04429-12	Gw22	2/12/2019	SGS EHS PNG Lab	PG04429	Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGP-GW22	PG04429-15	QC1	2/12/2019	SGS EHS PNG Lab	PG04429	Field_D	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGP-GW23	GW-23_Historical_021219	GW-23	2/12/2019			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGP-GW23	GW-23-EM_Historical_021219	GW-23	2/12/2019			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGP-GW23	PG04429-13	GW23	2/12/2019	SGS EHS PNG Lab	PG04429	Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGP-GW24	GW-24_Historical_021219	GW-24	2/12/2019			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGP-GW24	GW-24-EM_Historical_021219	GW-24	2/12/2019			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGP-GW24	PG04429-14	GW24	2/12/2019	SGS EHS PNG Lab	PG04429	Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGP-MW2	MW-2_Historical_021219	MW-2	2/12/2019			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGP-MW2	MW-2-EM_Historical_021219	MW-2	2/12/2019			Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGP-MW2	PG04429-1	MV-2	2/12/2019	SGS EHS PNG Lab	PG04429	Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PNG LNG	QC3	PG04429-17	QC3	2/12/2019	SGS EHS PNG Lab	PG04429	Field_B	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PNG LNG	QC4	PG04429-18	QC4	2/12/2019	SGS EHS PNG Lab	PG04429	Field_B	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGP-GW19	EB1932832009	LNGP-GW19	2/12/2019	ALSE-Brisbane	EB1932832	Normal	<0.0005	<0.001	<0.001	<0.001	<0.001	<0.001	<0.0005	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.0005	<0.002	<0.001	<0.001	<0.001	<0.001
PNG LNG	LNGP-GW17	EB1932832008	LNGP-GW17	2/12/2019	ALSE-Brisbane	EB1932832	Normal	<0.0005	<0.001	<0.001	<0.001	<0.001	<0.001	<0.0005	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.0005	<0.002	<0.001	<0.001	<0.001	<0.001
PNG LNG	LNGP-MW2	EB1932832001	LNGP-MW2	2/12/2019	ALSE-Brisbane	EB1932832	Normal	<0.0005	<0.001	<0.001	<0.001	<0.001	<0.001	<0.0005	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.0005	<0.002	<0.001	<0.001	<0.001	<0.001
PNG LNG		EB1932832017	LNGP-QC3	2/12/2019	ALSE-Brisbane	EB1932832	Field_B	<0.0005	<0.001	<0.001	<0.001	<0.001	<0.001	<0.0005	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.0005	<0.002	<0.001	<0.001	<0.001	<0.001
PNG LNG	LNGL-GW5	EB1932832002	LNGP-GW5	2/12/2019	ALSE-Brisbane	EB1932832	Normal	<0.0005	<0.001	<0.001	<0.001	<0.001	<0.001	<0.0005	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.0005	<0.002	<0.001	<0.001	<0.001	<0.001
PNG LNG	LNGL-GW12	EB1932832004	LNGP-GW12	2/12/2019	ALSE-Brisbane	EB1932832	Normal	<0.0005	<0.001	<0.001	<0.001	<0.001	<0.001	<0.0005	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.0005	<0.002	<0.001	<0.001	<0.001	<0.001
PNG LNG	LNGL-GW14	EB1932832006	LNGP-GW14	2/12/2019	ALSE-Brisbane	EB1932832	Normal	<0.0005	<0.001	<0.001	<0.001	<0.001	<0.001	<0.0005	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.0005	<0.002	<0.001	<0.001	<0.001	<0.001
PNG LNG	LNGL-GW15	EB1932832007	LNGP-GW15	2/12/2019	ALSE-Brisbane	EB1932832	Normal	<0.0005	<0.001	<0.001	<0.001	<0.001	<0.001	<0.0005	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.0005	<0.002	<0.001	<0.001	<0.001	<0.001
PNG LNG	LNGL-GW11	EB1932832003	LNGP-GW11	2/12/2019	ALSE-Brisbane	EB1932832	Normal	<0.0005	<0.001	<0.001	<0.001	<0.001	<0.001	<0.0005	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.0005	<0.002	<0.001	<0.001	<0.001	<0.001
PNG LNG	LNGL-GW13	EB1932832005	LNGP-GW13	2/12/2019	ALSE-Brisbane	EB1932832	Normal	<0.0005	<0.001	<0.001	<0.001	<0.001	<0.001	<0.0005	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.0005	<0.002	<0.001	<0.001	<0.001	<0.001
PNG LNG	LNGP-GW22	EB1932832012	LNGP-GW22	2/12/2019	ALSE-Brisbane	EB1932832	Normal	<0.0005	<0.001	<0.001	<0.001	<0.001	<0.001	<0.0005	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.0005	<0.002	<0.001	<0.001	<0.001	<0.001
PNG LNG	LNGP-GW22	EB1932832015	LNGP-QC1	2/12/2019	ALSE-Brisbane	EB1932832	Field_D	<0.0005	<0.001	<0.001	<0.001	<0.001	<0.001	<0.0005	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.0005	<0.002	<0.001	<0.001	<0.001	<0.001
PNG LNG	LNGP-GW24	EB1932832014	LNGP-GW24	2/12/2019	ALSE-Brisbane	EB1932832	Normal	<0.0005	<0.001	<0.001	<0.001	<0.001	<0.001	<0.0005	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.0005	<0.002	<0.001	<0.001	<0.001	<0.001
PNG LNG	LNGP-GW21	EB1932832011	LNGP-GW21	2/12/2019	ALSE-Brisbane	EB1932832	Normal	<0.0005	<0.001	<0.001	<0.001	<0.001	<0.001	<0.0005	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.0005	<0.002	<0.001	<0.001	<0.001	<0.001
PNG LNG		EB1932832018	LNGP-QC4	2/12/2019	ALSE-Brisbane	EB1932832	Field_B	<0.0005	<0.001	<0.001	<0.001	<0.001	<0.001	<0.0005	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.0005	<0.002	<0.001	<0.001	<0.001	<0.001
PNG LNG	LNGP-GW23	EB1932832013	LNGP-GW23	2/12/2019	ALSE-Brisbane	EB1932832	Normal	<0.0005	<0.001	<0.001	<0.001	<0.001	<0.001	<0.0005	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.0005	<0.002	<0.001	<0.001	<0.001	<0.001
PNG LNG	LNGP-GW20	EB1932832010	LNGP-GW20	2/12/2019	ALSE-Brisbane	EB1932832	Normal	<0.0005	<0.001	<0.001	<0.001	<0.001	<0.001	<0.0005	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.0005	<0.002	<0.001	<0.001	<0.001	<0.001
PNG LNG	LNGP-GW20	EB1932832016	LNGP-QC2	2/12/2019	ALSE-Brisbane	EB1932832	Field_D	<0.0005	<0.001	<0.001	<0.001	<0.001	<0.001	<0.0005	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.0005	<0.002	<0.001	<0.001	<0.001	<0.001
Statistical Summary																																
Number of Results								37	37	37	37	37	37	37	37	37	37	37	37	37	37	37	37	37	37	195	195	195	195	195
Number of Detects								0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	13	13	13	13	13
Minimum Concentration								<0.0005	<0.001	<0.001	<0.001	<0.001	<0.001	<0.0005	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.0005	<0.002	<0.001	<0.001	<0.001	<0.001
Minimum Detect								ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Maximum Concentration								<0.0005	<0.001	<0.001	<0.001	<0.001	<0.001	<0.0005	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.0005	<0.002	<0.001	<0.001	<0.001	<0.001
Maximum Detect								ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Average Concentration								0.00025	0.0005	0.0005	0.0005	0.0005	0.0005	0.00025	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.00025	0.001	0.0005	0.0005	0.0005	0.0005
Median Concentration								0.00025	0.0005	0.0005	0.0005	0.0005	0.0005	0.00025	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.00025	0.001	0.0005	0.0005	0.0005	0.0005
Standard Deviation								0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Number of Guideline Exceedances								0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Number of Guideline Exceedances(Detects Only)								0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

									Phenols							Other		
									2,6-Dichlorophenol	2-Chlorophenol	2-Methylphenol	2-Nitrophenol	4-chloro-3-methylphenol	Pentachlorophenol	Phenol	Diethanolamine	Ethanolamine	Methyldiethanolamine
									mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
EQL									**0.001**	**0.001**	**0.001**	**0.001**	**0.001**	**0.002**	**0.001**	**0.001**	**0.001**	**0.001**
NHMRC 2008 Recreational Water																		
PNG Water Quality Criteria for Freshwater Aquatic Ecosystem (guideline only)															0.002			
PNG Water Quality Criteria for Marine Aquatic Ecosystem (guideline only)															0.002	0.36	0.38	1.5
Environment Permit Criteria (Baseline Range)									0.001	0.001	0.001	0.001	0.001	0.002	0.175			
PNG DWG (1987)																		
Site_ID	**Location_Code**	**SampleCode**	**Field_ID**	**Sampled_Date_Time**	**Lab_Name**	**Lab_Report_Number**	**Sample_Type**											
PNG LNG	LNGP-MW2	MW-2_Historical_160310	MW-2	16/03/2010			Normal		<0.001	<0.001	<0.001	<0.001	<0.001	<0.002	<0.001	-	-	-
PNG LNG	LNGP-MW-1	MW-1_Historical_160310	MW-1	16/03/2010			Normal		<0.001	<0.001	<0.001	<0.001	<0.001	<0.002	<0.001	-	-	-
PNG LNG	LNGP-MW-3	MW-3_Historical_160310	MW-3	16/03/2010			Normal		<0.001	<0.001	<0.001	<0.001	<0.001	<0.002	<0.001	-	-	-
PNG LNG	LNGP-MW-3B	MW-3B_Historical_160310	MW-3B	16/03/2010			Normal		<0.001	<0.001	<0.001	<0.001	<0.001	<0.002	<0.001	-	-	-
PNG LNG	LNGP-MW-4	MW-4_Historical_160310	MW-4	16/03/2010			Normal		<0.001	<0.001	<0.001	<0.001	<0.001	<0.002	<0.001	-	-	-
PNG LNG	LNGP-MW-4	MW-4_Historical_121013	MW-4	12/10/2013			Normal		-	-	-	-	-	-	**0.091**	-	-	-
PNG LNG	LNGP-MW-4	MW-4_Historical_100814	MW-4	10/08/2014			Normal		<0.001	<0.001	<0.001	<0.001	<0.001	<0.002	<0.001	-	-	-
PNG LNG	LNGP-MW-4	MW-4_Historical_080315	MW-4	8/03/2015			Normal		<0.001	<0.001	<0.001	<0.001	<0.001	<0.002	<0.001	-	-	-
PNG LNG	LNGP-MW-4	MW-4_Historical_160815	MW-4	16/08/2015			Normal		<0.001	<0.001	<0.001	<0.001	<0.001	<0.002	<0.001	-	-	-
PNG LNG	LNGP-MW-4	MW-4_Historical_130316	MW-4	13/03/2016			Normal		<0.001	<0.001	<0.001	<0.001	<0.001	<0.002	<0.001	-	-	-
PNG LNG	LNGP-MW-4	MW-4_Historical_170417	MW-4	17/04/2017			Normal		<0.001	<0.001	<0.001	<0.001	<0.001	<0.002	<0.001	-	-	-
PNG LNG	LNGP-MW-4A	MW-4A_Historical_160310	MW-4A	16/03/2010			Normal		<0.001	<0.001	<0.001	<0.001	<0.001	<0.002	<0.001	-	-	-
PNG LNG	LNGP-MW-5	MW-5_Historical_160310	MW-5	16/03/2010			Normal		<0.001	<0.001	<0.001	<0.001	<0.001	<0.002	<0.001	-	-	-
PNG LNG	LNGP-MW-5A	MW-5A_Historical_160310	MW-5A	16/03/2010			Normal		<0.001	<0.001	<0.001	<0.001	<0.001	<0.002	<0.001	-	-	-
PNG LNG	LNGP-MW-6_NTH	MW-6_NTH_Historical_160310	MW-6_NTH	16/03/2010			Normal		<0.001	<0.001	<0.001	<0.001	<0.001	<0.002	<0.001	-	-	-
PNG LNG	LNGP-MW-6_STH (MW6A)	MW-6_STH (MW6A)_Historical_16031	MW-6_STH (MW6A)	16/03/2010			Normal		<0.001	<0.001	<0.001	<0.001	<0.001	<0.002	<0.001	-	-	-
PNG LNG	LNGP-MW-7	MW-7_Historical_160310	MW-7	16/03/2010			Normal		<0.001	<0.001	<0.001	<0.001	<0.001	<0.002	<0.001	-	-	-
PNG LNG	LNGP-MW-8	MW-8_Historical_160310	MW-8	16/03/2010			Normal		<0.001	<0.001	<0.001	<0.001	<0.001	<0.002	<0.001	-	-	-
PNG LNG	LNGP-GW-16	GW-16_Historical_131012	GW-16	13/10/2012			Normal		-	-	-	-	-	-	**0.042**	-	-	-
PNG LNG	LNGP-GW-16	GW-16_Historical_121013	GW-16	12/10/2013			Normal		-	-	-	-	-	-	**0.051**	-	-	-
PNG LNG	LNGL-MW-9	MW-9_Historical_160310	MW-9	16/03/2010			Normal		<0.001	<0.001	<0.001	<0.001	<0.001	<0.002	<0.001	-	-	-
PNG LNG	LNGL-GW-6	GW-6_Historical_150611	GW-6	15/06/2011			Normal		-	-	-	-	-	-	**0.06**	-	-	-
PNG LNG	LNGL-GW-6	GW-6_Historical_080811	GW-6	8/08/2011			Normal		-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGL-GW-7	GW-7_Historical_150611	GW-7	15/06/2011			Normal		-	-	-	-	-	-	**0.01**	-	-	-
PNG LNG	LNGL-GW-7	GW-7_Historical_080811	GW-7	8/08/2011			Normal		-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGL-GW-8	GW-8_Historical_150611	GW-8	15/06/2011			Normal		-	-	-	-	-	<0.002	**0.01**	-	-	-
PNG LNG	LNGL-GW-8	GW-8_Historical_080811	GW-8	8/08/2011			Normal		-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGL-GW-9	GW-9_Historical_150611	GW-9	15/06/2011			Normal		-	-	-	-	-	-	**0.175**	-	-	-
PNG LNG	LNGL-GW-9	GW-9_Historical_080811	GW-9	8/08/2011			Normal		-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGL-GW-10	GW-10_Historical_150611	GW-10	15/06/2011			Normal		-	-	-	-	-	-	**0.02**	-	-	-
PNG LNG	LNGL-GW-10	GW-10_Historical_080811	GW-10	8/08/2011			Normal		-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGL-GW5	GW-5_Historical_150611	GW-5	15/06/2011			Normal		-	-	-	-	-	-	**0.04**	-	-	-
PNG LNG	LNGL-GW5	GW-5-SGS_Historical_150611	GW-5	15/06/2011			Normal		-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGL-GW5	GW-5_Historical_080811	GW-5	8/08/2011			Normal		-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGL-GW5	GW-5-SGS_Historical_080811	GW-5	8/08/2011			Normal		-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGL-GW11	GW-11_Historical_131012	GW-11	13/10/2012			Normal		-	-	-	-	-	-	<0.002	-	-	-
PNG LNG	LNGL-GW11	GW-11-SGS_Historical_131012	GW-11	13/10/2012			Normal		-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGL-GW12	GW-12_Historical_131012	GW-12	13/10/2012			Normal		-	-	-	-	-	-	<0.002	-	-	-
PNG LNG	LNGL-GW12	GW-12-SGS_Historical_131012	GW-12	13/10/2012			Normal		-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGL-GW13	GW-13_Historical_131012	GW-13	13/10/2012			Normal		-	-	-	-	-	-	<0.002	-	-	-
PNG LNG	LNGL-GW13	GW-13-SGS_Historical_131012	GW-13	13/10/2012			Normal		-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGL-GW14	GW-14_Historical_131012	GW-14	13/10/2012			Normal		-	-	-	-	-	-	<0.002	-	-	-
PNG LNG	LNGL-GW14	GW-14-SGS_Historical_131012	GW-14	13/10/2012			Normal		-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGL-GW15	GW-15_Historical_131012	GW-15	13/10/2012			Normal		-	-	-	-	-	-	<0.002	-	-	-
PNG LNG	LNGL-GW15	GW-15-SGS_Historical_131012	GW-15	13/10/2012			Normal		-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGP-GW17	GW-17_Historical_131012	GW-17	13/10/2012			Normal		-	-	-	-	-	-	**0.04**	-	-	-
PNG LNG	LNGP-GW17	GW-17-SGS_Historical_131012	GW-17	13/10/2012			Normal		-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGP-GW19	GW-19_Historical_131012	GW-19	13/10/2012			Normal		-	-	-	-	-	-	**0.072**	-	-	-
PNG LNG	LNGP-GW19	GW-19-SGS_Historical_131012	GW-19	13/10/2012			Normal		-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGP-GW20	GW-20_Historical_131012	GW-20	13/10/2012			Normal		-	-	-	-	-	-	**0.058**	-	-	-
PNG LNG	LNGP-GW20	GW-20-SGS_Historical_131012	GW-20	13/10/2012			Normal		-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGP-GW21	GW-21_Historical_131012	GW-21	13/10/2012			Normal		-	-	-	-	-	-	**0.039**	-	-	-
PNG LNG	LNGP-GW21	GW-21-SGS_Historical_131012	GW-21	13/10/2012			Normal		-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGP-GW22	GW-22_Historical_131012	GW-22	13/10/2012			Normal		-	-	-	-	-	-	<0.002	-	-	-
PNG LNG	LNGP-GW22	GW-22-SGS_Historical_131012	GW-22	13/10/2012			Normal		-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGP-GW17	GW-17_Historical_121013	GW-17	12/10/2013			Normal		-	-	-	-	-	-	**0.048**	-	-	-
PNG LNG	LNGP-GW17	GW-17-SGS_Historical_121013	GW-17	12/10/2013			Normal		-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGP-GW19	GW-19_Historical_121013	GW-19	12/10/2013			Normal		-	-	-	-	-	-	**0.062**	-	-	-
PNG LNG	LNGP-GW19	GW-19-SGS_Historical_121013	GW-19	12/10/2013			Normal		-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGP-GW20	GW-20_Historical_121013	GW-20	12/10/2013			Normal		-	-	-	-	-	-	**0.049**	-	-	-
PNG LNG	LNGP-GW20	GW-20-SGS_Historical_121013	GW-20	12/10/2013			Normal		-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGP-GW21	GW-21_Historical_121013	GW-21	12/10/2013			Normal		-	-	-	-	-	-	**0.009**	-	-	-
PNG LNG	LNGP-GW21	GW-21-SGS_Historical_121013	GW-21	12/10/2013			Normal		-	-	-	-	-	-	-	-	-	-

									Phenols							Other		
									2,6-Dichlorophenol	2-Chlorophenol	2-Methylphenol	2-Nitrophenol	4-chloro-3-methylphenol	Pentachlorophenol	Phenol	Diethanolamine	Ethanolamine	Methyldiethanolamine
									mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
EQL									**0.001**	**0.001**	**0.001**	**0.001**	**0.001**	**0.002**	**0.001**	**0.001**	**0.001**	**0.001**
NHMRC 2008 Recreational Water																		
PNG Water Quality Criteria for Freshwater Aquatic Ecosystem (guideline only)															0.002			
PNG Water Quality Criteria for Marine Aquatic Ecosystem (guideline only)															0.002	0.36	0.38	1.5
Environment Permit Criteria (Baseline Range)									0.001	0.001	0.001	0.001	0.001	0.002	0.175			
PNG DWG (1987)																		
Site_ID	**Location_Code**	**SampleCode**	**Field_ID**	**Sampled_Date_Time**	**Lab_Name**	**Lab_Report_Number**	**Sample_Type**											
PNG LNG	LNGP-GW22	GW-22_Historical_121013	GW-22	12/10/2013			Normal	-	-	-	-	-	-	**0.003**	-	-	-
PNG LNG	LNGP-GW22	GW-22-SGS_Historical_121013	GW-22	12/10/2013			Normal	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGL-GW11	GW-11_Historical_100814	GW-11	10/08/2014			Normal	<0.001	<0.001	<0.001	<0.001	<0.001	<0.002	<0.001	-	-	-
PNG LNG	LNGL-GW11	GW-11-SGS_Historical_100814	GW-11	10/08/2014			Normal	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGL-GW12	GW-12_Historical_100814	GW-12	10/08/2014			Normal	<0.001	<0.001	<0.001	<0.001	<0.001	<0.002	<0.001	-	-	-
PNG LNG	LNGL-GW12	GW-12-SGS_Historical_100814	GW-12	10/08/2014			Normal	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGL-GW13	GW-13_Historical_100814	GW-13	10/08/2014			Normal	<0.001	<0.001	<0.001	<0.001	<0.001	<0.002	<0.001	-	-	-
PNG LNG	LNGL-GW13	GW-13-SGS_Historical_100814	GW-13	10/08/2014			Normal	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGL-GW14	GW-14_Historical_100814	GW-14	10/08/2014			Normal	<0.001	<0.001	<0.001	<0.001	<0.001	<0.002	<0.001	-	-	-
PNG LNG	LNGL-GW14	GW-14-SGS_Historical_100814	GW-14	10/08/2014			Normal	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGL-GW15	GW-15_Historical_100814	GW-15	10/08/2014			Normal	<0.001	<0.001	<0.001	<0.001	<0.001	<0.002	<0.001	-	-	-
PNG LNG	LNGL-GW15	GW-15-SGS_Historical_100814	GW-15	10/08/2014			Normal	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGL-GW5	GW-5_Historical_100814	GW-5	10/08/2014			Normal	<0.001	<0.001	<0.001	<0.001	<0.001	<0.002	<0.001	-	-	-
PNG LNG	LNGL-GW5	GW-5-SGS_Historical_100814	GW-5	10/08/2014			Normal	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGP-GW17	GW-17_Historical_100814	GW-17	10/08/2014			Normal	<0.001	<0.001	<0.001	<0.001	<0.001	<0.002	<0.001	-	-	-
PNG LNG	LNGP-GW17	GW-17-SGS_Historical_100814	GW-17	10/08/2014			Normal	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGP-GW19	GW-19_Historical_100814	GW-19	10/08/2014			Normal	<0.001	<0.001	<0.001	<0.001	<0.001	<0.002	<0.001	-	-	-
PNG LNG	LNGP-GW19	GW-19-SGS_Historical_100814	GW-19	10/08/2014			Normal	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGP-GW20	GW-20_Historical_100814	GW-20	10/08/2014			Normal	<0.001	<0.001	<0.001	<0.001	<0.001	<0.002	<0.001	-	-	-
PNG LNG	LNGP-GW21	GW-21_Historical_100814	GW-21	10/08/2014			Normal	<0.001	<0.001	<0.001	<0.001	<0.001	<0.002	<0.001	-	-	-
PNG LNG	LNGP-GW21	GW-21-SGS_Historical_100814	GW-21	10/08/2014			Normal	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGP-GW22	GW-22_Historical_100814	GW-22	10/08/2014			Normal	<0.001	<0.001	<0.001	<0.001	<0.001	<0.002	<0.001	-	-	-
PNG LNG	LNGP-MW2	MW-2_Historical_100814	MW-2	10/08/2014			Normal	<0.001	<0.001	<0.001	<0.001	<0.001	<0.002	<0.001	-	-	-
PNG LNG	LNGP-MW2	MW-2-SGS_Historical_100814	MW-2	10/08/2014			Normal	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGL-GW11	GW-11_Historical_080315	GW-11	8/03/2015			Normal	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGL-GW11	GW-11-SGS_Historical_080315	GW-11	8/03/2015			Normal	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGL-GW12	GW-12_Historical_080315	GW-12	8/03/2015			Normal	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGL-GW12	GW-12-SGS_Historical_080315	GW-12	8/03/2015			Normal	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGL-GW13	GW-13_Historical_080315	GW-13	8/03/2015			Normal	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGL-GW13	GW-13-SGS_Historical_080315	GW-13	8/03/2015			Normal	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGL-GW14	GW-14_Historical_080315	GW-14	8/03/2015			Normal	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGL-GW14	GW-14-SGS_Historical_080315	GW-14	8/03/2015			Normal	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGL-GW15	GW-15_Historical_080315	GW-15	8/03/2015			Normal	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGL-GW15	GW-15-SGS_Historical_080315	GW-15	8/03/2015			Normal	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGL-GW5	GW-5_Historical_080315	GW-5	8/03/2015			Normal	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGL-GW5	GW-5-SGS_Historical_080315	GW-5	8/03/2015			Normal	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGP-GW17	GW-17_Historical_080315	GW-17	8/03/2015			Normal	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGP-GW17	GW-17-SGS_Historical_080315	GW-17	8/03/2015			Normal	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGP-GW19	GW-19_Historical_080315	GW-19	8/03/2015			Normal	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGP-GW19	GW-19-SGS_Historical_080315	GW-19	8/03/2015			Normal	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGP-GW21	GW-21_Historical_080315	GW-21	8/03/2015			Normal	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGP-GW21	GW-21-SGS_Historical_080315	GW-21	8/03/2015			Normal	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGP-MW2	MW-2_Historical_080315	MW-2	8/03/2015			Normal	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGP-MW2	MW-2-SGS_Historical_080315	MW-2	8/03/2015			Normal	-	-	-	-	-	-	-	-	-	-
PNG LNG		EB1514750012	QC1	8/03/2015	ALSE-Brisbane	EB1514750	Normal	<0.001	<0.001	<0.001	<0.001	<0.001	<0.002	<0.001	-	-	-
PNG LNG		EB1514750013	QC2	8/03/2015	ALSE-Brisbane	EB1514750	Normal	<0.001	<0.001	<0.001	<0.001	<0.001	<0.002	<0.001	-	-	-
PNG LNG		EB1514750014	QC3	8/03/2015	ALSE-Brisbane	EB1514750	Normal	<0.001	<0.001	<0.001	<0.001	<0.001	<0.002	<0.001	-	-	-
PNG LNG		EB1514750015	QC4	8/03/2015	ALSE-Brisbane	EB1514750	Normal	<0.001	<0.001	<0.001	<0.001	<0.001	<0.002	<0.001	-	-	-
PNG LNG	LNGL-GW11	EB1514750009	LNGP Landfill GW11	8/03/2015	ALSE-Brisbane	EB1514750	Normal	<0.001	<0.001	<0.001	<0.001	<0.001	<0.002	<0.001	-	-	-
PNG LNG	LNGL-GW12	EB1514750007	LNGP Landfill GW12	8/03/2015	ALSE-Brisbane	EB1514750	Normal	<0.001	<0.001	<0.001	<0.001	<0.001	<0.002	<0.001	-	-	-
PNG LNG	LNGL-GW13	EB1514750008	LNGP Landfill GW13	8/03/2015	ALSE-Brisbane	EB1514750	Normal	<0.001	<0.001	<0.001	<0.001	<0.001	<0.002	<0.001	-	-	-
PNG LNG	LNGL-GW14	EB1514750010	LNGP Landfill GW14	8/03/2015	ALSE-Brisbane	EB1514750	Normal	<0.001	<0.001	<0.001	<0.001	<0.001	<0.002	<0.001	-	-	-
PNG LNG	LNGL-GW15	EB1514750011	LNGP Landfill GW15	8/03/2015	ALSE-Brisbane	EB1514750	Normal	<0.001	<0.001	<0.001	<0.001	<0.001	<0.002	<0.001	-	-	-
PNG LNG	LNGL-GW5	EB1514750006	LNGP Landfill GW5	8/03/2015	ALSE-Brisbane	EB1514750	Normal	<0.001	<0.001	<0.001	<0.001	<0.001	<0.002	<0.001	-	-	-
PNG LNG	LNGP-GW17	EB1514750003	LNGP Plant Site GW17	8/03/2015	ALSE-Brisbane	EB1514750	Normal	<0.001	<0.001	<0.001	<0.001	<0.001	<0.002	<0.001	-	-	-
PNG LNG	LNGP-GW19	EB1514750004	LNGP Plant Site GW19	8/03/2015	ALSE-Brisbane	EB1514750	Normal	<0.001	<0.001	<0.001	<0.001	<0.001	<0.002	<0.001	-	-	-
PNG LNG	LNGP-GW21	EB1514750005	LNGP Plant Site GW21	8/03/2015	ALSE-Brisbane	EB1514750	Normal	<0.001	<0.001	<0.001	<0.001	<0.001	<0.002	<0.001	-	-	-
PNG LNG	LNGP-MW2	EB1514750001	LNGP Plant Site MW2	8/03/2015	ALSE-Brisbane	EB1514750	Normal	<0.001	<0.001	<0.001	<0.001	<0.001	<0.002	<0.001	-	-	-
PNG LNG	LNGP-MW4	EB1514750002	LNGP Plant Site MW4	8/03/2015	ALSE-Brisbane	EB1514750	Normal	<0.001	<0.001	<0.001	<0.001	<0.001	<0.002	<0.001	-	-	-
PNG LNG	LNGP-GW20	GW-20_Historical_200415	GW-20	20/04/2015			Normal	<0.001	<0.001	<0.001	<0.001	<0.001	<0.002	<0.001	-	-	-
PNG LNG	LNGP-GW20	GW-20-SGS_Historical_200415	GW-20	20/04/2015			Normal	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGP-GW22	GW-22_Historical_260415	GW-22	26/04/2015			Normal	<0.001	<0.001	<0.001	<0.001	<0.001	<0.002	<0.001	-	-	-
PNG LNG	LNGP-GW22	GW-22-SGS_Historical_260415	GW-22	26/04/2015			Normal	-	-	-	-	-	-	-	-	-	-

									Phenols							Other		
									2,6-Dichlorophenol	2-Chlorophenol	2-Methylphenol	2-Nitrophenol	4-chloro-3-methylphenol	Pentachlorophenol	Phenol	Diethanolamine	Ethanolamine	Methyldiethanolamine
									mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
EQL									**0.001**	**0.001**	**0.001**	**0.001**	**0.001**	**0.002**	**0.001**	**0.001**	**0.001**	**0.001**
NHMRC 2008 Recreational Water																		
PNG Water Quality Criteria for Freshwater Aquatic Ecosystem (guideline only)															0.002			
PNG Water Quality Criteria for Marine Aquatic Ecosystem (guideline only)															0.002	0.36	0.38	1.5
Environment Permit Criteria (Baseline Range)									0.001	0.001	0.001	0.001	0.001	0.002	0.175			
PNG DWG (1987)																		
Site_ID	**Location_Code**	**SampleCode**	**Field_ID**	**Sampled_Date_Time**	**Lab_Name**	**Lab_Report_Number**	**Sample_Type**											
PNG LNG		EB1526355015	QC2	15/08/2015	ALSE-Brisbane	EB1526355	Normal		<0.001	<0.001	<0.001	<0.001	<0.001	<0.002	<0.001	-	-	-
PNG LNG	LNGL-GW12	EB1526355009	LNGP Landfill GW12	15/08/2015	ALSE-Brisbane	EB1526355	Normal		<0.001	<0.001	<0.001	<0.001	<0.001	<0.002	<0.001	-	-	-
PNG LNG	LNGL-GW14	EB1526355012	LNGP Landfill GW14	15/08/2015	ALSE-Brisbane	EB1526355	Normal		<0.001	<0.001	<0.001	<0.001	<0.001	<0.002	<0.001	-	-	-
PNG LNG	LNGP-GW17	EB1526355003	LNGP Plant Site GW17	15/08/2015	ALSE-Brisbane	EB1526355	Normal		<0.001	<0.001	<0.001	<0.001	<0.001	<0.002	<0.001	-	-	-
PNG LNG	LNGP-GW19	EB1526355004	LNGP Plant Site GW19	15/08/2015	ALSE-Brisbane	EB1526355	Normal		<0.001	<0.001	<0.001	<0.001	<0.001	<0.002	<0.001	-	-	-
PNG LNG	LNGP-GW20	EB1526355005	LNGP Plant Site GW20	15/08/2015	ALSE-Brisbane	EB1526355	Normal		<0.001	<0.001	<0.001	<0.001	<0.001	<0.002	<0.001	-	-	-
PNG LNG	LNGP-GW21	EB1526355006	LNGP Plant Site GW21	15/08/2015	ALSE-Brisbane	EB1526355	Normal		<0.001	<0.001	<0.001	<0.001	<0.001	<0.002	<0.001	-	-	-
PNG LNG	LNGP-GW22	EB1526355007	LNGP Plant Site GW22	15/08/2015	ALSE-Brisbane	EB1526355	Normal		<0.001	<0.001	<0.001	<0.001	<0.001	<0.002	<0.001	-	-	-
PNG LNG	LNGP-MW4	EB1526355002	LNGP Plant Site MW4	15/08/2015	ALSE-Brisbane	EB1526355	Normal		<0.001	<0.001	<0.001	<0.001	<0.001	<0.002	<0.001	-	-	-
PNG LNG	LNGL-GW11	GW-11_Historical_160815	GW-11	16/08/2015			Normal		-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGL-GW11	GW-11-SGS_Historical_160815	GW-11	16/08/2015			Normal		-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGL-GW12	GW-12_Historical_160815	GW-12	16/08/2015			Normal		-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGL-GW13	GW-13_Historical_160815	GW-13	16/08/2015			Normal		-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGL-GW13	GW-13-SGS_Historical_160815	GW-13	16/08/2015			Normal		-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGL-GW14	GW-14_Historical_160815	GW-14	16/08/2015			Normal		-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGL-GW14	GW-14-SGS_Historical_160815	GW-14	16/08/2015			Normal		-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGL-GW15	GW-15_Historical_160815	GW-15	16/08/2015			Normal		-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGL-GW15	GW-15-SGS_Historical_160815	GW-15	16/08/2015			Normal		-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGL-GW5	GW-5_Historical_160815	GW-5	16/08/2015			Normal		-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGL-GW5	GW-5-SGS_Historical_160815	GW-5	16/08/2015			Normal		-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGP-GW17	GW-17_Historical_160815	GW-17	16/08/2015			Normal		-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGP-GW17	GW-17-SGS_Historical_160815	GW-17	16/08/2015			Normal		-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGP-GW19	GW-19_Historical_160815	GW-19	16/08/2015			Normal		-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGP-GW19	GW-19-SGS_Historical_160815	GW-19	16/08/2015			Normal		-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGP-GW20	GW-20_Historical_160815	GW-20	16/08/2015			Normal		-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGP-GW20	GW-20-SGS_Historical_160815	GW-20	16/08/2015			Normal		-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGP-GW21	GW-21_Historical_160815	GW-21	16/08/2015			Normal		-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGP-GW21	GW-21-SGS_Historical_160815	GW-21	16/08/2015			Normal		-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGP-GW22	GW-22_Historical_160815	GW-22	16/08/2015			Normal		-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGP-GW22	GW-22-SGS_Historical_160815	GW-22	16/08/2015			Normal		-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGP-MW2	MW-2_Historical_160815	MW-2	16/08/2015			Normal		-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGP-MW2	MW-2-SGS_Historical_160815	MW-2	16/08/2015			Normal		-	-	-	-	-	-	-	-	-	-
PNG LNG		EB1526355014	QC1	16/08/2015	ALSE-Brisbane	EB1526355	Normal		<0.001	<0.001	<0.001	<0.001	<0.001	<0.002	<0.001	-	-	-
PNG LNG		EB1526355016	QC3	16/08/2015	ALSE-Brisbane	EB1526355	Normal		<0.001	<0.001	<0.001	<0.001	<0.001	<0.002	<0.001	-	-	-
PNG LNG		EB1526355017	QC4	16/08/2015	ALSE-Brisbane	EB1526355	Normal		<0.001	<0.001	<0.001	<0.001	<0.001	<0.002	<0.001	-	-	-
PNG LNG	LNGL-GW11	EB1526355011	LNGP Landfill GW11	16/08/2015	ALSE-Brisbane	EB1526355	Normal		<0.001	<0.001	<0.001	<0.001	<0.001	<0.002	<0.001	-	-	-
PNG LNG	LNGL-GW13	EB1526355010	LNGP Landfill GW13	16/08/2015	ALSE-Brisbane	EB1526355	Normal		<0.001	<0.001	<0.001	<0.001	<0.001	<0.002	<0.001	-	-	-
PNG LNG	LNGL-GW15	EB1526355013	LNGP Landfill GW15	16/08/2015	ALSE-Brisbane	EB1526355	Normal		<0.001	<0.001	<0.001	<0.001	<0.001	<0.002	<0.001	-	-	-
PNG LNG	LNGL-GW5	EB1526355008	LNGP Landfill GW5	16/08/2015	ALSE-Brisbane	EB1526355	Normal		<0.001	<0.001	<0.001	<0.001	<0.001	<0.002	<0.001	-	-	-
PNG LNG	LNGP-MW2	EB1526355001	LNGP Plant Site MW2	16/08/2015	ALSE-Brisbane	EB1526355	Normal		<0.001	<0.001	<0.001	<0.001	<0.001	<0.002	<0.001	-	-	-
PNG LNG	LNGL-GW11	GW-11_Historical_130316	GW-11	13/03/2016			Normal		-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGL-GW11	GW-11-SGS_Historical_130316	GW-11	13/03/2016			Normal		-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGL-GW12	GW-12_Historical_130316	GW-12	13/03/2016			Normal		-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGL-GW12	GW-12-SGS_Historical_130316	GW-12	13/03/2016			Normal		-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGL-GW13	GW-13_Historical_130316	GW-13	13/03/2016			Normal		-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGL-GW13	GW-13-SGS_Historical_130316	GW-13	13/03/2016			Normal		-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGL-GW14	GW-14_Historical_130316	GW-14	13/03/2016			Normal		-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGL-GW14	GW-14-SGS_Historical_130316	GW-14	13/03/2016			Normal		-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGL-GW15	GW-15_Historical_130316	GW-15	13/03/2016			Normal		-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGL-GW15	GW-15-SGS_Historical_130316	GW-15	13/03/2016			Normal		-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGL-GW5	GW-5_Historical_130316	GW-5	13/03/2016			Normal		-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGL-GW5	GW-5-SGS_Historical_130316	GW-5	13/03/2016			Normal		-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGP-GW17	GW-17_Historical_130316	GW-17	13/03/2016			Normal		-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGP-GW17	GW-17-SGS_Historical_130316	GW-17	13/03/2016			Normal		-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGP-GW19	GW-19_Historical_130316	GW-19	13/03/2016			Normal		-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGP-GW19	GW-19-SGS_Historical_130316	GW-19	13/03/2016			Normal		-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGP-GW20	GW-20_Historical_130316	GW-20	13/03/2016			Normal		-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGP-GW20	GW-20-SGS_Historical_130316	GW-20	13/03/2016			Normal		-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGP-GW21	GW-21_Historical_130316	GW-21	13/03/2016			Normal		-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGP-GW21	GW-21-SGS_Historical_130316	GW-21	13/03/2016			Normal		-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGP-GW22	GW-22_Historical_130316	GW-22	13/03/2016			Normal		-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGP-GW22	GW-22-SGS_Historical_130316	GW-22	13/03/2016			Normal		-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGP-MW2	MW-2_Historical_130316	MW-2	13/03/2016			Normal		-	-	-	-	-	-	-	-	-	-

								Phenols							Other		
								2,6-Dichlorophenol	2-Chlorophenol	2-Methylphenol	2-Nitrophenol	4-chloro-3-methylphenol	Pentachlorophenol	Phenol	Diethanolamine	Ethanolamine	Methyldiethanolamine
								mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
EQL								**0.001**	**0.001**	**0.001**	**0.001**	**0.001**	**0.002**	**0.001**	**0.001**	**0.001**	**0.001**
NHMRC 2008 Recreational Water																	
PNG Water Quality Criteria for Freshwater Aquatic Ecosystem (guideline only)														0.002			
PNG Water Quality Criteria for Marine Aquatic Ecosystem (guideline only)														0.002	0.36	0.38	1.5
Environment Permit Criteria (Baseline Range)								0.001	0.001	0.001	0.001	0.001	0.002	0.175			
PNG DWG (1987)																	
Site_ID	**Location_Code**	**SampleCode**	**Field_ID**	**Sampled_Date_Time**	**Lab_Name**	**Lab_Report_Number**	**Sample_Type**										
PNG LNG	LNGP-MW2	MW-2-SGS_Historical_130316	MW-2	13/03/2016			Normal	-	-	-	-	-	-	-	-	-	-
PNG LNG		EB1607514014	QC1	13/03/2016	ALSE-Brisbane	EB1607514	Normal	<0.001	<0.001	<0.001	<0.001	<0.001	<0.002	<0.001	-	-	-
PNG LNG		EB1607514015	QC2	13/03/2016	ALSE-Brisbane	EB1607514	Normal	<0.001	<0.001	<0.001	<0.001	<0.001	<0.002	<0.001	-	-	-
PNG LNG		EB1607514016	QC3	13/03/2016	ALSE-Brisbane	EB1607514	Normal	<0.001	<0.001	<0.001	<0.001	<0.001	<0.002	<0.001	-	-	-
PNG LNG		EB1607514017	QC4	13/03/2016	ALSE-Brisbane	EB1607514	Normal	<0.001	<0.001	<0.001	<0.001	<0.001	<0.002	<0.001	-	-	-
PNG LNG	LNGL-GW11	EB1607514011	LNGP Landfill GW11	13/03/2016	ALSE-Brisbane	EB1607514	Normal	<0.001	<0.001	<0.001	<0.001	<0.001	<0.002	<0.001	-	-	-
PNG LNG	LNGL-GW12	EB1607514009	LNGP Landfill GW12	13/03/2016	ALSE-Brisbane	EB1607514	Normal	<0.001	<0.001	<0.001	<0.001	<0.001	<0.002	<0.001	-	-	-
PNG LNG	LNGL-GW13	EB1607514010	LNGP Landfill GW13	13/03/2016	ALSE-Brisbane	EB1607514	Normal	<0.001	<0.001	<0.001	<0.001	<0.001	<0.002	<0.001	-	-	-
PNG LNG	LNGL-GW14	EB1607514012	LNGP Landfill GW14	13/03/2016	ALSE-Brisbane	EB1607514	Normal	<0.001	<0.001	<0.001	<0.001	<0.001	<0.002	<0.001	-	-	-
PNG LNG	LNGL-GW15	EB1607514013	LNGP Landfill GW15	13/03/2016	ALSE-Brisbane	EB1607514	Normal	<0.001	<0.001	<0.001	<0.001	<0.001	<0.002	<0.001	-	-	-
PNG LNG	LNGL-GW5	EB1607514008	LNGP Landfill GW5	13/03/2016	ALSE-Brisbane	EB1607514	Normal	<0.001	<0.001	<0.001	<0.001	<0.001	<0.002	<0.001	-	-	-
PNG LNG	LNGP-GW17	EB1607514003	LNGP Plant Site GW17	13/03/2016	ALSE-Brisbane	EB1607514	Normal	<0.001	<0.001	<0.001	<0.001	<0.001	<0.002	<0.001	-	-	-
PNG LNG	LNGP-GW19	EB1607514004	LNGP Plant Site GW19	13/03/2016	ALSE-Brisbane	EB1607514	Normal	<0.001	<0.001	<0.001	<0.001	<0.001	<0.002	<0.001	-	-	-
PNG LNG	LNGP-GW20	EB1607514005	LNGP Plant Site GW20	13/03/2016	ALSE-Brisbane	EB1607514	Normal	<0.001	<0.001	<0.001	<0.001	<0.001	<0.002	<0.001	-	-	-
PNG LNG	LNGP-GW21	EB1607514006	LNGP Plant Site GW21	13/03/2016	ALSE-Brisbane	EB1607514	Normal	<0.001	<0.001	<0.001	<0.001	<0.001	<0.002	<0.001	-	-	-
PNG LNG	LNGP-GW22	EB1607514007	LNGP Plant Site GW22	13/03/2016	ALSE-Brisbane	EB1607514	Normal	<0.001	<0.001	<0.001	<0.001	<0.001	<0.002	<0.001	-	-	-
PNG LNG	LNGP-MW2	EB1607514001	LNGP Plant Site MW2	13/03/2016	ALSE-Brisbane	EB1607514	Normal	<0.001	<0.001	<0.001	<0.001	<0.001	<0.002	<0.001	-	-	-
PNG LNG	LNGP-MW4	EB1607514002	LNGP Plant Site MW4	13/03/2016	ALSE-Brisbane	EB1607514	Normal	<0.001	<0.001	<0.001	<0.001	<0.001	<0.002	<0.001	-	-	-
PNG LNG	LNGL-GW11	GW-11_Historical_280816	GW-11	28/08/2016			Normal	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGL-GW11	GW-11-SGS_Historical_280816	GW-11	28/08/2016			Normal	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGL-GW12	GW-12_Historical_280816	GW-12	28/08/2016			Normal	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGL-GW13	GW-13_Historical_280816	GW-13	28/08/2016			Normal	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGL-GW13	GW-13-SGS_Historical_280816	GW-13	28/08/2016			Normal	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGL-GW14	GW-14_Historical_280816	GW-14	28/08/2016			Normal	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGL-GW14	GW-14-SGS_Historical_280816	GW-14	28/08/2016			Normal	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGL-GW5	GW-5_Historical_280816	GW-5	28/08/2016			Normal	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGL-GW5	GW-5-SGS_Historical_280816	GW-5	28/08/2016			Normal	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGP-GW20	GW-20_Historical_280816	GW-20	28/08/2016			Normal	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGP-GW20	GW-20-SGS_Historical_280816	GW-20	28/08/2016			Normal	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGP-GW21	GW-21_Historical_280816	GW-21	28/08/2016			Normal	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGP-GW21	GW-21-SGS_Historical_280816	GW-21	28/08/2016			Normal	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGP-GW22	GW-22_Historical_280816	GW-22	28/08/2016			Normal	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGP-GW22	GW-22-SGS_Historical_280816	GW-22	28/08/2016			Normal	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGP-MW2	MW-2_Historical_280816	MW-2	28/08/2016			Normal	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGP-MW2	MW-2-SGS_Historical_280816	MW-2	28/08/2016			Normal	-	-	-	-	-	-	-	-	-	-
PNG LNG		EB1621459010	QC1	28/08/2016	ALSE-Brisbane	EB1621459	Normal	<0.001	<0.001	<0.001	<0.001	<0.001	<0.002	<0.001	-	-	-
PNG LNG		EB1621459011	QC2	28/08/2016	ALSE-Brisbane	EB1621459	Normal	<0.001	<0.001	<0.001	<0.001	<0.001	<0.002	<0.001	-	-	-
PNG LNG		EB1621459012	QC3	28/08/2016	ALSE-Brisbane	EB1621459	Normal	<0.001	<0.001	<0.001	<0.001	<0.001	<0.002	<0.001	-	-	-
PNG LNG	LNGL-GW11	EB1621459003	LNGP Landfill GW11	28/08/2016	ALSE-Brisbane	EB1621459	Normal	<0.001	<0.001	<0.001	<0.001	<0.001	<0.002	<0.001	-	-	-
PNG LNG	LNGL-GW12	EB1621459004	LNGP Landfill GW12	28/08/2016	ALSE-Brisbane	EB1621459	Normal	<0.001	<0.001	<0.001	<0.001	<0.001	<0.002	<0.001	-	-	-
PNG LNG	LNGL-GW13	EB1621459005	LNGP Landfill GW13	28/08/2016	ALSE-Brisbane	EB1621459	Normal	<0.001	<0.001	<0.001	<0.001	<0.001	<0.002	<0.001	-	-	-
PNG LNG	LNGL-GW14	EB1621459006	LNGP Landfill GW14	28/08/2016	ALSE-Brisbane	EB1621459	Normal	<0.001	<0.001	<0.001	<0.001	<0.001	<0.002	<0.001	-	-	-
PNG LNG	LNGL-GW5	EB1621459002	LNGP Landfill GW5	28/08/2016	ALSE-Brisbane	EB1621459	Normal	<0.001	<0.001	<0.001	<0.001	<0.001	<0.002	<0.001	-	-	-
PNG LNG	LNGP-GW20	EB1621459007	LNGP Landfill GW20	28/08/2016	ALSE-Brisbane	EB1621459	Normal	<0.001	<0.001	<0.001	<0.001	<0.001	<0.002	<0.001	-	-	-
PNG LNG	LNGP-GW21	EB1621459008	LNGP Landfill GW21	28/08/2016	ALSE-Brisbane	EB1621459	Normal	<0.001	<0.001	<0.001	<0.001	<0.001	<0.002	<0.001	-	-	-
PNG LNG	LNGP-GW22	EB1621459009	LNGP Landfill GW22	28/08/2016	ALSE-Brisbane	EB1621459	Normal	<0.001	<0.001	<0.001	<0.001	<0.001	<0.002	<0.001	-	-	-
PNG LNG	LNGP-MW2	EB1621459001	LNGP MW2	28/08/2016	ALSE-Brisbane	EB1621459	Normal	<0.001	<0.001	<0.001	<0.001	<0.001	<0.002	<0.001	-	-	-
PNG LNG	LNGL-GW11	GW-11_Historical_170417	GW-11	17/04/2017			Normal	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGL-GW11	GW-11-SGS_Historical_170417	GW-11	17/04/2017			Normal	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGL-GW12	GW-12_Historical_170417	GW-12	17/04/2017			Normal	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGL-GW12	GW-12-SGS_Historical_170417	GW-12	17/04/2017			Normal	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGL-GW13	GW-13_Historical_170417	GW-13	17/04/2017			Normal	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGL-GW13	GW-13-SGS_Historical_170417	GW-13	17/04/2017			Normal	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGL-GW14	GW-14_Historical_170417	GW-14	17/04/2017			Normal	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGL-GW14	GW-14-SGS_Historical_170417	GW-14	17/04/2017			Normal	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGL-GW15	GW-15_Historical_170417	GW-15	17/04/2017			Normal	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGL-GW15	GW-15-SGS_Historical_170417	GW-15	17/04/2017			Normal	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGL-GW5	GW-5_Historical_170417	GW-5	17/04/2017			Normal	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGL-GW5	GW-5-SGS_Historical_170417	GW-5	17/04/2017			Normal	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGP-GW17	GW-17_Historical_170417	GW-17	17/04/2017			Normal	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGP-GW17	GW-17-SGS_Historical_170417	GW-17	17/04/2017			Normal	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGP-GW19	GW-19_Historical_170417	GW-19	17/04/2017			Normal	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGP-GW19	GW-19-SGS_Historical_170417	GW-19	17/04/2017			Normal	-	-	-	-	-	-	-	-	-	-

									Phenols							Other		
									2,6-Dichlorophenol	2-Chlorophenol	2-Methylphenol	2-Nitrophenol	4-chloro-3-methylphenol	Pentachlorophenol	Phenol	Diethanolamine	Ethanolamine	Methyldiethanolamine
									mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
EQL									**0.001**	**0.001**	**0.001**	**0.001**	**0.001**	**0.002**	**0.001**	**0.001**	**0.001**	**0.001**
NHMRC 2008 Recreational Water																		
PNG Water Quality Criteria for Freshwater Aquatic Ecosystem (guideline only)															0.002			
PNG Water Quality Criteria for Marine Aquatic Ecosystem (guideline only)															0.002	0.36	0.38	1.5
Environment Permit Criteria (Baseline Range)									0.001	0.001	0.001	0.001	0.001	0.002	0.175			
PNG DWG (1987)																		
Site_ID	**Location_Code**	**SampleCode**	**Field_ID**	**Sampled_Date_Time**	**Lab_Name**	**Lab_Report_Number**	**Sample_Type**											
PNG LNG	LNGP-GW20	GW-20_Historical_170417	GW-20	17/04/2017			Normal	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGP-GW20	GW-20-SGS_Historical_170417	GW-20	17/04/2017			Normal	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGP-GW21	GW-21_Historical_170417	GW-21	17/04/2017			Normal	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGP-GW21	GW-21-SGS_Historical_170417	GW-21	17/04/2017			Normal	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGP-GW22	GW-22_Historical_170417	GW-22	17/04/2017			Normal	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGP-GW22	GW-22-SGS_Historical_170417	GW-22	17/04/2017			Normal	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGP-MW2	MW-2_Historical_170417	MW-2	17/04/2017			Normal	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGP-MW2	MW-2-SGS_Historical_170417	MW-2	17/04/2017			Normal	-	-	-	-	-	-	-	-	-	-
PNG LNG		EB1707968014	QC1	17/04/2017	ALSE-Brisbane	EB1707968	Normal	<0.001	<0.001	<0.001	<0.001	<0.001	<0.002	<0.001	-	-	-
PNG LNG		EB1707968015	QC2	17/04/2017	ALSE-Brisbane	EB1707968	Normal	<0.001	<0.001	<0.001	<0.001	<0.001	<0.002	<0.001	-	-	-
PNG LNG		EB1707968016	QC3	17/04/2017	ALSE-Brisbane	EB1707968	Normal	<0.001	<0.001	<0.001	<0.001	<0.001	<0.002	<0.001	-	-	-
PNG LNG	LNGL-GW11	EB1707968011	LNGP Landfill GW11	17/04/2017	ALSE-Brisbane	EB1707968	Normal	<0.001	<0.001	<0.001	<0.001	<0.001	<0.002	<0.001	-	-	-
PNG LNG	LNGL-GW12	EB1707968009	LNGP Landfill GW12	17/04/2017	ALSE-Brisbane	EB1707968	Normal	<0.001	<0.001	<0.001	<0.001	<0.001	<0.002	<0.001	-	-	-
PNG LNG	LNGL-GW13	EB1707968010	LNGP Landfill GW13	17/04/2017	ALSE-Brisbane	EB1707968	Normal	<0.001	<0.001	<0.001	<0.001	<0.001	<0.002	<0.001	-	-	-
PNG LNG	LNGL-GW14	EB1707968012	LNGP Landfill GW14	17/04/2017	ALSE-Brisbane	EB1707968	Normal	<0.001	<0.001	<0.001	<0.001	<0.001	<0.002	<0.001	-	-	-
PNG LNG	LNGL-GW15	EB1707968013	LNGP Landfill GW15	17/04/2017	ALSE-Brisbane	EB1707968	Normal	<0.001	<0.001	<0.001	<0.001	<0.001	<0.002	<0.001	-	-	-
PNG LNG	LNGL-GW5	EB1707968008	LNGP Landfill GW5	17/04/2017	ALSE-Brisbane	EB1707968	Normal	<0.001	<0.001	<0.001	<0.001	<0.001	<0.002	<0.001	-	-	-
PNG LNG	LNGP-GW17	EB1707968003	LNGP Plant Site GW17	17/04/2017	ALSE-Brisbane	EB1707968	Normal	<0.001	<0.001	<0.001	<0.001	<0.001	<0.002	<0.001	-	-	-
PNG LNG	LNGP-GW19	EB1707968004	LNGP Plant Site GW19	17/04/2017	ALSE-Brisbane	EB1707968	Normal	<0.001	<0.001	<0.001	<0.001	<0.001	<0.002	<0.001	-	-	-
PNG LNG	LNGP-GW20	EB1707968005	LNGP Plant Site GW20	17/04/2017	ALSE-Brisbane	EB1707968	Normal	<0.001	<0.001	<0.001	<0.001	<0.001	<0.002	<0.001	-	-	-
PNG LNG	LNGP-GW21	EB1707968006	LNGP Plant Site GW21	17/04/2017	ALSE-Brisbane	EB1707968	Normal	<0.001	<0.001	<0.001	<0.001	<0.001	<0.002	<0.001	-	-	-
PNG LNG	LNGP-GW22	EB1707968007	LNGP Plant Site GW22	17/04/2017	ALSE-Brisbane	EB1707968	Normal	<0.001	<0.001	<0.001	<0.001	<0.001	<0.002	<0.001	-	-	-
PNG LNG	LNGP-MW2	EB1707968001	LNGP Plant Site MW2	17/04/2017	ALSE-Brisbane	EB1707968	Normal	<0.001	<0.001	<0.001	<0.001	<0.001	<0.002	<0.001	-	-	-
PNG LNG	LNGP-MW4	EB1707968002	LNGP Plant Site MW4	17/04/2017	ALSE-Brisbane	EB1707968	Normal	<0.001	<0.001	<0.001	<0.001	<0.001	<0.002	<0.001	-	-	-
PNG LNG	LNGP-GW17	EB1722826002	LNGP Plant Site - GW17	29/09/2017	ALSE-Brisbane	EB1722826	Normal	<0.001	<0.001	<0.001	<0.001	<0.001	<0.002	<0.001	-	-	-
PNG LNG	LNGP-MW2	EB1722826001	LNGP Plant Site - MW2	29/09/2017	ALSE-Brisbane	EB1722826	Normal	<0.001	<0.001	<0.001	<0.001	<0.001	<0.002	<0.001	-	-	-
PNG LNG	LNGL-GW5	EB1722826007	LNGP Landfill - GW5	29/09/2017	ALSE-Brisbane	EB1722826	Normal	<0.001	<0.001	<0.001	<0.001	<0.001	<0.002	<0.001	-	-	-
PNG LNG	LNGL-GW14	EB1722826011	LNGP Landfill - G14	29/09/2017	ALSE-Brisbane	EB1722826	Normal	<0.001	<0.001	<0.001	<0.001	<0.001	<0.002	<0.001	-	-	-
PNG LNG	LNGP-GW20	EB1722826004	LNGP Plant Site - GW20	29/09/2017	ALSE-Brisbane	EB1722826	Normal	<0.001	<0.001	<0.001	<0.001	<0.001	<0.002	<0.001	-	-	-
PNG LNG		EB1722826016	QC4	29/09/2017	ALSE-Brisbane	EB1722826	Normal	<0.001	<0.001	<0.001	<0.001	<0.001	<0.002	<0.001	-	-	-
PNG LNG	LNGP-GW19	EB1722826003	LNGP Plant Site - GW19	29/09/2017	ALSE-Brisbane	EB1722826	Normal	<0.001	<0.001	<0.001	<0.001	<0.001	<0.002	<0.001	-	-	-
PNG LNG		EB1722826013	QC1	29/09/2017	ALSE-Brisbane	EB1722826	Normal	<0.001	<0.001	<0.001	<0.001	<0.001	<0.002	<0.001	-	-	-
PNG LNG		EB1722826014	QC2	29/09/2017	ALSE-Brisbane	EB1722826	Normal	<0.001	<0.001	<0.001	<0.001	<0.001	<0.002	<0.001	-	-	-
PNG LNG		EB1722826015	QC3	29/09/2017	ALSE-Brisbane	EB1722826	Normal	<0.001	<0.001	<0.001	<0.001	<0.001	<0.002	<0.001	-	-	-
PNG LNG	LNGL-GW11	EB1722826010	LNGP Landfill - GW11	29/09/2017	ALSE-Brisbane	EB1722826	Normal	<0.001	<0.001	<0.001	<0.001	<0.001	<0.002	<0.001	-	-	-
PNG LNG	LNGL-GW12	EB1722826008	LNGP Landfill - GW12	29/09/2017	ALSE-Brisbane	EB1722826	Normal	<0.001	<0.001	<0.001	<0.001	<0.001	<0.002	<0.001	-	-	-
PNG LNG	LNGL-GW13	EB1722826009	LNGP Landfill - GW13	29/09/2017	ALSE-Brisbane	EB1722826	Normal	<0.001	<0.001	<0.001	<0.001	<0.001	<0.002	<0.001	-	-	-
PNG LNG	LNGL-GW15	EB1722826012	LNGP Landfill - GW15	29/09/2017	ALSE-Brisbane	EB1722826	Normal	<0.001	<0.001	<0.001	<0.001	<0.001	<0.002	<0.001	-	-	-
PNG LNG	LNGP-GW21	EB1722826005	LNGP Plant Site - GW21	29/09/2017	ALSE-Brisbane	EB1722826	Normal	<0.001	<0.001	<0.001	<0.001	<0.001	<0.002	<0.001	-	-	-
PNG LNG	LNGP-GW22	EB1722826006	LNGP Plant Site - GW22	29/09/2017	ALSE-Brisbane	EB1722826	Normal	<0.001	<0.001	<0.001	<0.001	<0.001	<0.002	<0.001	-	-	-
PNG LNG	LNGL-GW11	GW-11_Historical_291017	GW-11	29/10/2017			Normal	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGL-GW11	GW-11-SGS_Historical_291017	GW-11	29/10/2017			Normal	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGL-GW12	GW-12_Historical_291017	GW-12	29/10/2017			Normal	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGL-GW12	GW-12-SGS_Historical_291017	GW-12	29/10/2017			Normal	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGL-GW13	GW-13_Historical_291017	GW-13	29/10/2017			Normal	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGL-GW13	GW-13-SGS_Historical_291017	GW-13	29/10/2017			Normal	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGL-GW14	GW-14_Historical_291017	GW-14	29/10/2017			Normal	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGL-GW14	GW-14-SGS_Historical_291017	GW-14	29/10/2017			Normal	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGL-GW15	GW-15_Historical_291017	GW-15	29/10/2017			Normal	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGL-GW15	GW-15-SGS_Historical_291017	GW-15	29/10/2017			Normal	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGL-GW5	GW-5_Historical_291017	GW-5	29/10/2017			Normal	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGL-GW5	GW-5-SGS_Historical_291017	GW-5	29/10/2017			Normal	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGP-GW17	GW-17_Historical_291017	GW-17	29/10/2017			Normal	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGP-GW17	GW-17-SGS_Historical_291017	GW-17	29/10/2017			Normal	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGP-GW19	GW-19_Historical_291017	GW-19	29/10/2017			Normal	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGP-GW19	GW-19-SGS_Historical_291017	GW-19	29/10/2017			Normal	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGP-GW20	GW-20_Historical_291017	GW-20	29/10/2017			Normal	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGP-GW20	GW-20-SGS_Historical_291017	GW-20	29/10/2017			Normal	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGP-GW21	GW-21_Historical_291017	GW-21	29/10/2017			Normal	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGP-GW21	GW-21-SGS_Historical_291017	GW-21	29/10/2017			Normal	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGP-GW22	GW-22_Historical_291017	GW-22	29/10/2017			Normal	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGP-GW22	GW-22-SGS_Historical_291017	GW-22	29/10/2017			Normal	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGP-MW2	MW-2_Historical_291017	MW-2	29/10/2017			Normal	-	-	-	-	-	-	-	-	-	-

									Phenols							Other		
									2,6-Dichlorophenol	2-Chlorophenol	2-Methylphenol	2-Nitrophenol	4-chloro-3-methylphenol	Pentachlorophenol	Phenol	Diethanolamine	Ethanolamine	Methyldiethanolamine
									mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
EQL									**0.001**	**0.001**	**0.001**	**0.001**	**0.001**	**0.002**	**0.001**	**0.001**	**0.001**	**0.001**
NHMRC 2008 Recreational Water																		
PNG Water Quality Criteria for Freshwater Aquatic Ecosystem (guideline only)															0.002			
PNG Water Quality Criteria for Marine Aquatic Ecosystem (guideline only)															0.002	0.36	0.38	1.5
Environment Permit Criteria (Baseline Range)									0.001	0.001	0.001	0.001	0.001	0.002	0.175			
PNG DWG (1987)																		
Site_ID	**Location_Code**	**SampleCode**	**Field_ID**	**Sampled_Date_Time**	**Lab_Name**	**Lab_Report_Number**	**Sample_Type**											
PNG LNG	LNGP-MW2	MW-2-SGS_Historical_291017	MW-2	29/10/2017			Normal	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGL-GW11	GW-11_Historical_280518	GW-11	28/05/2018			Normal	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGL-GW11	GW-11-EM_Historical_280518	GW-11	28/05/2018			Normal	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGL-GW11	GW-11-SGS_Historical_280518	GW-11	28/05/2018			Normal	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGL-GW12	GW-12_Historical_280518	GW-12	28/05/2018			Normal	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGL-GW12	GW-12-EM_Historical_280518	GW-12	28/05/2018			Normal	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGL-GW12	GW-12-SGS_Historical_280518	GW-12	28/05/2018			Normal	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGL-GW13	GW-13_Historical_280518	GW-13	28/05/2018			Normal	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGL-GW13	GW-13-EM_Historical_280518	GW-13	28/05/2018			Normal	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGL-GW13	GW-13-SGS_Historical_280518	GW-13	28/05/2018			Normal	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGL-GW14	GW-14_Historical_280518	GW-14	28/05/2018			Normal	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGL-GW14	GW-14-EM_Historical_280518	GW-14	28/05/2018			Normal	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGL-GW14	GW-14-SGS_Historical_280518	GW-14	28/05/2018			Normal	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGL-GW15	GW-15_Historical_280518	GW-15	28/05/2018			Normal	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGL-GW15	GW-15-EM_Historical_280518	GW-15	28/05/2018			Normal	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGL-GW15	GW-15-SGS_Historical_280518	GW-15	28/05/2018			Normal	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGL-GW5	GW-5_Historical_280518	GW-5	28/05/2018			Normal	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGL-GW5	GW-5-EM_Historical_280518	GW-5	28/05/2018			Normal	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGL-GW5	GW-5-SGS_Historical_280518	GW-5	28/05/2018			Normal	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGP-GW17	GW-17_Historical_280518	GW-17	28/05/2018			Normal	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGP-GW17	GW-17-EM_Historical_280518	GW-17	28/05/2018			Normal	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGP-GW17	GW-17-SGS_Historical_280518	GW-17	28/05/2018			Normal	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGP-GW19	GW-19_Historical_280518	GW-19	28/05/2018			Normal	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGP-GW19	GW-19-EM_Historical_280518	GW-19	28/05/2018			Normal	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGP-GW19	GW-19-SGS_Historical_280518	GW-19	28/05/2018			Normal	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGP-GW20	GW-20_Historical_280518	GW-20	28/05/2018			Normal	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGP-GW20	GW-20-EM_Historical_280518	GW-20	28/05/2018			Normal	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGP-GW20	GW-20-SGS_Historical_280518	GW-20	28/05/2018			Normal	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGP-GW21	GW-21_Historical_280518	GW-21	28/05/2018			Normal	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGP-GW21	GW-21-EM_Historical_280518	GW-21	28/05/2018			Normal	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGP-GW21	GW-21-SGS_Historical_280518	GW-21	28/05/2018			Normal	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGP-GW22	GW-22_Historical_280518	GW-22	28/05/2018			Normal	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGP-GW22	GW-22-EM_Historical_280518	GW-22	28/05/2018			Normal	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGP-GW22	GW-22-SGS_Historical_280518	GW-22	28/05/2018			Normal	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGP-MW2	MW-2_Historical_280518	MW-2	28/05/2018			Normal	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGP-MW2	MW-2-EM_Historical_280518	MW-2	28/05/2018			Normal	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGP-MW2	MW-2-SGS_Historical_280518	MW-2	28/05/2018			Normal	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGP-GW20	EB1813230004	LNGP-GW20	28/05/2018	ALSE-Brisbane	EB1813230	Normal	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	-	-	-
PNG LNG	LNGP-GW21	EB1813230005	LNGP-GW21	28/05/2018	ALSE-Brisbane	EB1813230	Normal	<0.001	<0.001	<0.001	<0.001	<0.001	<0.002	<0.001	-	-	-
PNG LNG	LNGP-GW22	EB1813230006	LNGP-GW22	28/05/2018	ALSE-Brisbane	EB1813230	Normal	<0.001	<0.001	<0.001	<0.001	<0.001	<0.002	<0.001	-	-	-
PNG LNG	LNGL-GW13	EB1813230009	LNGP-GW13	28/05/2018	ALSE-Brisbane	EB1813230	Normal	<0.001	<0.001	<0.001	<0.001	<0.001	<0.002	<0.001	-	-	-
PNG LNG	LNGL-GW11	EB1813230010	LNGP-GW11	28/05/2018	ALSE-Brisbane	EB1813230	Normal	<0.001	<0.001	<0.001	<0.001	<0.001	<0.002	<0.001	-	-	-
PNG LNG	LNGL-GW15	EB1813230012	LNGP-GW15	28/05/2018	ALSE-Brisbane	EB1813230	Normal	<0.001	<0.001	<0.001	<0.001	<0.001	<0.002	<0.001	-	-	-
PNG LNG		EB1813230013	LNGP-QC1	28/05/2018	ALSE-Brisbane	EB1813230	Normal	<0.001	<0.001	<0.001	<0.001	<0.001	<0.002	<0.001	-	-	-
PNG LNG	LNGL-GW12	EB1813230008	LNGP-GW12	28/05/2018	ALSE-Brisbane	EB1813230	Normal	<0.001	<0.001	<0.001	<0.001	<0.001	<0.002	<0.001	-	-	-
PNG LNG		EB1813230014	LNGP-QC2	28/05/2018	ALSE-Brisbane	EB1813230	Normal	<0.001	<0.001	<0.001	<0.001	<0.001	<0.002	<0.001	-	-	-
PNG LNG	LNGL-GW5	EB1813230007	LNGP-GW5	28/05/2018	ALSE-Brisbane	EB1813230	Normal	<0.001	<0.001	<0.001	<0.001	<0.001	<0.002	<0.001	-	-	-
PNG LNG	LNGL-GW14	EB1813230011	LNGP-GW14	28/05/2018	ALSE-Brisbane	EB1813230	Normal	<0.001	<0.001	<0.001	<0.001	<0.001	<0.002	<0.001	-	-	-
PNG LNG	LNGP-MW2	EB1813230001	LNGP-MW2	28/05/2018	ALSE-Brisbane	EB1813230	Normal	<0.001	<0.001	<0.001	<0.001	<0.001	<0.002	<0.001	-	-	-
PNG LNG	LNGP-GW17	EB1813230002	LNGP-GW17	28/05/2018	ALSE-Brisbane	EB1813230	Normal	<0.001	<0.001	<0.001	<0.001	<0.001	<0.002	<0.001	-	-	-
PNG LNG	LNGP-GW19	EB1813230003	LNGP-GW19	28/05/2018	ALSE-Brisbane	EB1813230	Normal	<0.001	<0.001	<0.001	<0.001	<0.001	<0.002	<0.001	-	-	-
PNG LNG		EB1813230015	LNGP-QC3	28/05/2018	ALSE-Brisbane	EB1813230	Normal	<0.001	<0.001	<0.001	<0.001	<0.001	<0.002	<0.001	-	-	-
PNG LNG		EB1813230016	LNGP-QC4	28/05/2018	ALSE-Brisbane	EB1813230	Normal	<0.001	<0.001	<0.001	<0.001	<0.001	<0.002	<0.001	-	-	-
PNG LNG	LNGL-GW11	GW-11_Historical_261118	GW-11	26/11/2018			Normal	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGL-GW11	GW-11-ALS_Historical_261118	GW-11	26/11/2018			Normal	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGL-GW11	GW-11-EM_Historical_261118	GW-11	26/11/2018			Normal	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGL-GW12	GW-12_Historical_261118	GW-12	26/11/2018			Normal	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGL-GW12	GW-12-ALS_Historical_261118	GW-12	26/11/2018			Normal	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGL-GW12	GW-12-EM_Historical_261118	GW-12	26/11/2018			Normal	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGL-GW13	GW-13_Historical_261118	GW-13	26/11/2018			Normal	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGL-GW13	GW-13-ALS_Historical_261118	GW-13	26/11/2018			Normal	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGL-GW13	GW-13-EM_Historical_261118	GW-13	26/11/2018			Normal	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGL-GW14	GW-14_Historical_261118	GW-14	26/11/2018			Normal	-	-	-	-	-	-	-	-	-	-

									Phenols							Other		
									2,6-Dichlorophenol	2-Chlorophenol	2-Methylphenol	2-Nitrophenol	4-chloro-3-methylphenol	Pentachlorophenol	Phenol	Diethanolamine	Ethanolamine	Methyldiethanolamine
									mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
EQL									**0.001**	**0.001**	**0.001**	**0.001**	**0.001**	**0.002**	**0.001**	**0.001**	**0.001**	**0.001**
NHMRC 2008 Recreational Water																		
PNG Water Quality Criteria for Freshwater Aquatic Ecosystem (guideline only)															0.002			
PNG Water Quality Criteria for Marine Aquatic Ecosystem (guideline only)															0.002	0.36	0.38	1.5
Environment Permit Criteria (Baseline Range)									0.001	0.001	0.001	0.001	0.001	0.002	0.175			
PNG DWG (1987)																		
Site_ID	**Location_Code**	**SampleCode**	**Field_ID**	**Sampled_Date_Time**	**Lab_Name**	**Lab_Report_Number**	**Sample_Type**											
PNG LNG	LNGL-GW14	GW-14-ALS_Historical_261118	GW-14	26/11/2018			Normal	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGL-GW14	GW-14-EM_Historical_261118	GW-14	26/11/2018			Normal	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGL-GW15	GW-15_Historical_261118	GW-15	26/11/2018			Normal	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGL-GW15	GW-15-ALS_Historical_261118	GW-15	26/11/2018			Normal	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGL-GW15	GW-15-EM_Historical_261118	GW-15	26/11/2018			Normal	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGL-GW5	GW-5_Historical_261118	GW-5	26/11/2018			Normal	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGL-GW5	GW-5-ALS_Historical_261118	GW-5	26/11/2018			Normal	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGL-GW5	GW-5-EM_Historical_261118	GW-5	26/11/2018			Normal	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGP-GW17	GW-17_Historical_261118	GW-17	26/11/2018			Normal	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGP-GW17	GW-17-ALS_Historical_261118	GW-17	26/11/2018			Normal	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGP-GW17	GW-17-EM_Historical_261118	GW-17	26/11/2018			Normal	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGP-GW19	GW-19_Historical_261118	GW-19	26/11/2018			Normal	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGP-GW19	GW-19-ALS_Historical_261118	GW-19	26/11/2018			Normal	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGP-GW19	GW-19-EM_Historical_261118	GW-19	26/11/2018			Normal	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGP-GW20	GW-20_Historical_261118	GW-20	26/11/2018			Normal	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGP-GW20	GW-20-ALS_Historical_261118	GW-20	26/11/2018			Normal	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGP-GW20	GW-20-EM_Historical_261118	GW-20	26/11/2018			Normal	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGP-GW21	GW-21_Historical_261118	GW-21	26/11/2018			Normal	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGP-GW21	GW-21-ALS_Historical_261118	GW-21	26/11/2018			Normal	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGP-GW21	GW-21-EM_Historical_261118	GW-21	26/11/2018			Normal	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGP-GW22	GW-22_Historical_261118	GW-22	26/11/2018			Normal	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGP-GW22	GW-22-ALS_Historical_261118	GW-22	26/11/2018			Normal	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGP-GW22	GW-22-EM_Historical_261118	GW-22	26/11/2018			Normal	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGP-MW2	MW-2_Historical_261118	MW-2	26/11/2018			Normal	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGP-MW2	MW-2-ALS_Historical_261118	MW-2	26/11/2018			Normal	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGP-MW2	MW-2-EM_Historical_261118	MW-2	26/11/2018			Normal	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGP-MW2	EB1829402001	LNGP-MW2	26/11/2018	ALSE-Brisbane	EB1829402	Normal	-	-	-	-	-	-	-	-	-	-
PNG LNG		EB1829402013	LNGP-QC1	26/11/2018	ALSE-Brisbane	EB1829402	Normal	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGP-GW20	EB1829402004	LNGP-GW20	26/11/2018	ALSE-Brisbane	EB1829402	Normal	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGP-GW22	EB1829402006	LNGP-GW22	26/11/2018	ALSE-Brisbane	EB1829402	Normal	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGP-GW21	EB1829402005	LNGP-GW21	26/11/2018	ALSE-Brisbane	EB1829402	Normal	<0.001	<0.001	<0.001	<0.001	<0.001	<0.002	<0.001	-	-	-
PNG LNG	LNGL-GW5	EB1829402007	LNGP-GW5	26/11/2018	ALSE-Brisbane	EB1829402	Normal	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGL-GW12	EB1829402008	LNGP-GW12	26/11/2018	ALSE-Brisbane	EB1829402	Normal	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGL-GW14	EB1829402011	LNGP-GW14	26/11/2018	ALSE-Brisbane	EB1829402	Normal	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGL-GW13	EB1829402009	LNGP-GW13	26/11/2018	ALSE-Brisbane	EB1829402	Normal	-	-	-	-	-	-	-	-	-	-
PNG LNG		EB1829402014	LNGP-QC2	26/11/2018	ALSE-Brisbane	EB1829402	Normal	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGL-GW11	EB1829402010	LNGP-GW11	26/11/2018	ALSE-Brisbane	EB1829402	Normal	<0.001	<0.001	<0.001	<0.001	<0.001	<0.002	<0.001	-	-	-
PNG LNG	LNGL-GW15	EB1829402012	LNGP-GW15	26/11/2018	ALSE-Brisbane	EB1829402	Normal	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGP-GW17	EB1829402002	LNGP-GW17	26/11/2018	ALSE-Brisbane	EB1829402	Normal	<0.001	<0.001	<0.001	<0.001	<0.001	<0.002	<0.001	-	-	-
PNG LNG	LNGP-GW19	EB1829402003	LNGP-GW19	26/11/2018	ALSE-Brisbane	EB1829402	Normal	-	-	-	-	-	-	-	-	-	-
PNG LNG		EB1829402016	LNGP-QC4	26/11/2018	ALSE-Brisbane	EB1829402	Normal	<0.001	<0.001	<0.001	<0.001	<0.001	<0.002	<0.001	-	-	-
PNG LNG		EB1829402015	LNGP-QC3	26/11/2018	ALSE-Brisbane	EB1829402	Normal	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGL-GW11	GW-11_Historical_020919	GW-11	2/09/2019			Normal	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGL-GW11	GW-11-ALS_Historical_020919	GW-11	2/09/2019			Normal	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGL-GW11	GW-11-EM_Historical_020919	GW-11	2/09/2019			Normal	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGL-GW12	GW-12_Historical_020919	GW-12	2/09/2019			Normal	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGL-GW12	GW-12-ALS_Historical_020919	GW-12	2/09/2019			Normal	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGL-GW12	GW-12-EM_Historical_020919	GW-12	2/09/2019			Normal	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGL-GW13	GW-13_Historical_020919	GW-13	2/09/2019			Normal	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGL-GW13	GW-13-ALS_Historical_020919	GW-13	2/09/2019			Normal	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGL-GW13	GW-13-EM_Historical_020919	GW-13	2/09/2019			Normal	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGL-GW14	GW-14_Historical_020919	GW-14	2/09/2019			Normal	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGL-GW14	GW-14-ALS_Historical_020919	GW-14	2/09/2019			Normal	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGL-GW14	GW-14-EM_Historical_020919	GW-14	2/09/2019			Normal	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGL-GW15	GW-15_Historical_020919	GW-15	2/09/2019			Normal	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGL-GW15	GW-15-ALS_Historical_020919	GW-15	2/09/2019			Normal	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGL-GW15	GW-15-EM_Historical_020919	GW-15	2/09/2019			Normal	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGL-GW5	GW-5_Historical_020919	GW-5	2/09/2019			Normal	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGL-GW5	GW-5-ALS_Historical_020919	GW-5	2/09/2019			Normal	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGL-GW5	GW-5-EM_Historical_020919	GW-5	2/09/2019			Normal	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGP-GW17	GW-17_Historical_020919	GW-17	2/09/2019			Normal	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGP-GW17	GW-17-EM_Historical_020919	GW-17	2/09/2019			Normal	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGP-GW19	GW-19_Historical_020919	GW-19	2/09/2019			Normal	-	-	-	-	-	-	-	-	-	-

									Phenols							Other		
									2,6-Dichlorophenol	2-Chlorophenol	2-Methylphenol	2-Nitrophenol	4-chloro-3-methylphenol	Pentachlorophenol	Phenol	Diethanolamine	Ethanolamine	Methyldiethanolamine
									mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
EQL									**0.001**	**0.001**	**0.001**	**0.001**	**0.001**	**0.002**	**0.001**	**0.001**	**0.001**	**0.001**
NHMRC 2008 Recreational Water																		
PNG Water Quality Criteria for Freshwater Aquatic Ecosystem (guideline only)															0.002			
PNG Water Quality Criteria for Marine Aquatic Ecosystem (guideline only)															0.002	0.36	0.38	1.5
Environment Permit Criteria (Baseline Range)									0.001	0.001	0.001	0.001	0.001	0.002	0.175			
PNG DWG (1987)																		
Site_ID	**Location_Code**	**SampleCode**	**Field_ID**	**Sampled_Date_Time**	**Lab_Name**	**Lab_Report_Number**	**Sample_Type**											
PNG LNG	LNGP-GW19	GW-19-EM_Historical_020919	GW-19	2/09/2019			Normal		-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGP-GW20	GW-20_Historical_020919	GW-20	2/09/2019			Normal		-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGP-GW20	GW-20-EM_Historical_020919	GW-20	2/09/2019			Normal		-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGP-GW21	GW-21 _Historical_020919	GW-21	2/09/2019			Normal		-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGP-GW21	GW-21 -ALS_Historical_020919	GW-21	2/09/2019			Normal		-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGP-GW21	GW-21 -EM_Historical_020919	GW-21	2/09/2019			Normal		-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGP-GW22	GW-22_Historical_020919	GW-22	2/09/2019			Normal		-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGP-GW22	GW-22-ALS_Historical_020919	GW-22	2/09/2019			Normal		-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGP-GW22	GW-22-EM_Historical_020919	GW-22	2/09/2019			Normal		-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGP-GW23	GW-23_Historical_020919	GW-23	2/09/2019			Normal		-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGP-GW23	GW-23-ALS_Historical_020919	GW-23	2/09/2019			Normal		-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGP-GW23	GW-23-EM_Historical_020919	GW-23	2/09/2019			Normal		-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGP-GW24	GW-24_Historical_020919	GW-24	2/09/2019			Normal		-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGP-GW24	GW-24-ALS_Historical_020919	GW-24	2/09/2019			Normal		-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGP-GW24	GW-24-EM_Historical_020919	GW-24	2/09/2019			Normal		-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGP-MW2	MW-2_Historical_020919	MW-2	2/09/2019			Normal		-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGP-MW2	MW-2-ALS_Historical_020919	MW-2	2/09/2019			Normal		-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGP-MW2	MW-2-EM_Historical_020919	MW-2	2/09/2019			Normal		-	-	-	-	-	-	-	-	-	-
PNG LNG		EB1922977016	LNGP-QC2	2/09/2019	ALSE-Brisbane	EB1922977	Normal		<0.001	<0.001	<0.001	<0.001	<0.001	<0.002	<0.001	<0.001	<0.001	<0.001
PNG LNG	LNGP-GW20	EB1922977004	LNGP-GW20	2/09/2019	ALSE-Brisbane	EB1922977	Normal		<0.001	<0.001	<0.001	<0.001	<0.001	<0.002	<0.001	<0.001	<0.001	<0.001
PNG LNG		EB1922977015	LNGP-QC1	2/09/2019	ALSE-Brisbane	EB1922977	Normal		<0.001	<0.001	<0.001	<0.001	<0.001	<0.002	<0.001	<0.001	<0.001	<0.001
PNG LNG	LNGP-GW24	EB1922977010	LNGP-GW24	2/09/2019	ALSE-Brisbane	EB1922977	Normal		<0.001	<0.001	<0.001	<0.001	<0.001	<0.002	<0.001	<0.001	<0.001	<0.001
PNG LNG	LNGP-GW19	EB1922977003	LNGP-GW19	2/09/2019	ALSE-Brisbane	EB1922977	Normal		<0.001	<0.001	<0.001	<0.001	<0.001	<0.002	<0.001	<0.001	<0.001	<0.001
PNG LNG	LNGP-GW17	EB1922977002	LNGP-GW17	2/09/2019	ALSE-Brisbane	EB1922977	Normal		<0.001	<0.001	<0.001	<0.001	<0.001	<0.002	<0.001	<0.001	<0.001	<0.001
PNG LNG	LNGP-MW2	EB1922977001	LNGP-MW2	2/09/2019	ALSE-Brisbane	EB1922977	Normal		<0.001	<0.001	<0.001	<0.001	<0.001	<0.002	<0.001	<0.001	<0.001	<0.001
PNG LNG		EB1922977017	LNGP-QC3	2/09/2019	ALSE-Brisbane	EB1922977	Normal		<0.001	<0.001	<0.001	<0.001	<0.001	<0.002	<0.001	<0.001	<0.001	<0.001
PNG LNG	LNGL-GW5	EB1922977007	LNGP-GW5	2/09/2019	ALSE-Brisbane	EB1922977	Normal		<0.001	<0.001	<0.001	<0.001	<0.001	<0.002	<0.001	<0.001	<0.001	<0.001
PNG LNG	LNGL-GW12	EB1922977008	LNGP-GW12	2/09/2019	ALSE-Brisbane	EB1922977	Normal		<0.001	<0.001	<0.001	<0.001	<0.001	<0.002	<0.001	<0.001	<0.001	<0.001
PNG LNG	LNGL-GW14	EB1922977013	LNGP-GW14	2/09/2019	ALSE-Brisbane	EB1922977	Normal		<0.001	<0.001	<0.001	<0.001	<0.001	<0.002	<0.001	<0.001	<0.001	<0.001
PNG LNG	LNGP-GW23	EB1922977009	LNGP-GW23	2/09/2019	ALSE-Brisbane	EB1922977	Normal		<0.001	<0.001	<0.001	<0.001	<0.001	<0.002	<0.001	<0.001	<0.001	<0.001
PNG LNG	LNGP-GW22	EB1922977006	LNGP-GW22	2/09/2019	ALSE-Brisbane	EB1922977	Normal		<0.001	<0.001	<0.001	<0.001	<0.001	<0.002	<0.001	<0.001	<0.001	<0.001
PNG LNG	LNGP-GW21	EB1922977005	LNGP-GW21	2/09/2019	ALSE-Brisbane	EB1922977	Normal		<0.001	<0.001	<0.001	<0.001	<0.001	<0.002	<0.001	<0.001	<0.001	<0.001
PNG LNG	LNGL-GW15	EB1922977014	LNGP-GW15	2/09/2019	ALSE-Brisbane	EB1922977	Normal		<0.001	<0.001	<0.001	<0.001	<0.001	<0.002	<0.001	<0.001	<0.001	<0.001
PNG LNG	LNGL-GW11	EB1922977012	LNGP-GW11	2/09/2019	ALSE-Brisbane	EB1922977	Normal		<0.001	<0.001	<0.001	<0.001	<0.001	<0.002	<0.001	<0.001	<0.001	<0.001
PNG LNG	LNGL-GW13	EB1922977011	LNGP-GW13	2/09/2019	ALSE-Brisbane	EB1922977	Normal		<0.001	<0.001	<0.001	<0.001	<0.001	<0.002	<0.001	<0.001	<0.001	<0.001
PNG LNG		EB1922977019	LNGP-QC5	2/09/2019	ALSE-Brisbane	EB1922977	Normal		<0.001	<0.001	<0.001	<0.001	<0.001	<0.002	<0.001	<0.001	<0.001	<0.001
PNG LNG		EB1922977018	LNGP-QC4	2/09/2019	ALSE-Brisbane	EB1922977	Normal		<0.001	<0.001	<0.001	<0.001	<0.001	<0.002	<0.001	<0.001	<0.001	<0.001
PNG LNG	LNGL-GW11	GW-11_Historical_021219	GW-11	2/12/2019			Normal		-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGL-GW11	GW-11-EM_Historical_021219	GW-11	2/12/2019			Normal		-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGL-GW11	PG04429-3	GW-11	2/12/2019	SGS EHS PNG Lab	PG04429	Normal		-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGL-GW12	GW-12_Historical_021219	GW-12	2/12/2019			Normal		-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGL-GW12	GW-12-EM_Historical_021219	GW-12	2/12/2019			Normal		-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGL-GW12	PG04429-4	GW-12	2/12/2019	SGS EHS PNG Lab	PG04429	Normal		-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGL-GW13	GW-13_Historical_021219	GW-13	2/12/2019			Normal		-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGL-GW13	GW-13-EM_Historical_021219	GW-13	2/12/2019			Normal		-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGL-GW13	PG04429-5	GW-13	2/12/2019	SGS EHS PNG Lab	PG04429	Normal		-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGL-GW14	GW-14_Historical_021219	GW-14	2/12/2019			Normal		-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGL-GW14	GW-14-EM_Historical_021219	GW-14	2/12/2019			Normal		-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGL-GW14	PG04429-6	GW-14	2/12/2019	SGS EHS PNG Lab	PG04429	Normal		-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGL-GW15	GW-15_Historical_021219	GW-15	2/12/2019			Normal		-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGL-GW15	GW-15-EM_Historical_021219	GW-15	2/12/2019			Normal		-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGL-GW15	PG04429-7	GW-15	2/12/2019	SGS EHS PNG Lab	PG04429	Normal		-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGL-GW5	GW-5_Historical_021219	GW-5	2/12/2019			Normal		-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGL-GW5	GW-5-EM_Historical_021219	GW-5	2/12/2019			Normal		-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGL-GW5	PG04429-2	GW-5	2/12/2019	SGS EHS PNG Lab	PG04429	Normal		-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGP-GW17	GW-17_Historical_021219	GW-17	2/12/2019			Normal		-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGP-GW17	GW-17-EM_Historical_021219	GW-17	2/12/2019			Normal		-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGP-GW17	PG04429-8	GW17	2/12/2019	SGS EHS PNG Lab	PG04429	Normal		-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGP-GW19	GW-19_Historical_021219	GW-19	2/12/2019			Normal		-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGP-GW19	GW-19-EM_Historical_021219	GW-19	2/12/2019			Normal		-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGP-GW19	PG04429-9	GW19	2/12/2019	SGS EHS PNG Lab	PG04429	Normal		-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGP-GW20	GW-20_Historical_021219	GW-20	2/12/2019			Normal		-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGP-GW20	GW-20-EM_Historical_021219	GW-20	2/12/2019			Normal		-	-	-	-	-	-	-	-	-	-

								Phenols							Other		
								2,6-Dichlorophenol	2-Chlorophenol	2-Methylphenol	2-Nitrophenol	4-chloro-3-methylphenol	Pentachlorophenol	Phenol	Diethanolamine	Ethanolamine	Methyldiethanolamine
								mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
EQL								**0.001**	**0.001**	**0.001**	**0.001**	**0.001**	**0.002**	**0.001**	**0.001**	**0.001**	**0.001**
NHMRC 2008 Recreational Water																	
PNG Water Quality Criteria for Freshwater Aquatic Ecosystem (guideline only)														0.002			
PNG Water Quality Criteria for Marine Aquatic Ecosystem (guideline only)														0.002	0.36	0.38	1.5
Environment Permit Criteria (Baseline Range)								0.001	0.001	0.001	0.001	0.001	0.002	0.175			
PNG DWG (1987)																	
Site_ID	**Location_Code**	**SampleCode**	**Field_ID**	**Sampled_Date_Time**	**Lab_Name**	**Lab_Report_Number**	**Sample_Type**										
PNG LNG	LNGP-GW20	PG04429-10	Gw20	2/12/2019	SGS EHS PNG Lab	PG04429	Normal	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGP-GW20	PG04429-16	QC2	2/12/2019	SGS EHS PNG Lab	PG04429	Field_D	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGP-GW21	GW-21_Historical_021219	GW-21	2/12/2019			Normal	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGP-GW21	GW-21-EM_Historical_021219	GW-21	2/12/2019			Normal	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGP-GW21	PG04429-11	GW21	2/12/2019	SGS EHS PNG Lab	PG04429	Normal	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGP-GW22	GW-22_Historical_021219	GW-22	2/12/2019			Normal	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGP-GW22	GW-22-EM_Historical_021219	GW-22	2/12/2019			Normal	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGP-GW22	PG04429-12	Gw22	2/12/2019	SGS EHS PNG Lab	PG04429	Normal	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGP-GW22	PG04429-15	QC1	2/12/2019	SGS EHS PNG Lab	PG04429	Field_D	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGP-GW23	GW-23_Historical_021219	GW-23	2/12/2019			Normal	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGP-GW23	GW-23-EM_Historical_021219	GW-23	2/12/2019			Normal	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGP-GW23	PG04429-13	GW23	2/12/2019	SGS EHS PNG Lab	PG04429	Normal	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGP-GW24	GW-24_Historical_021219	GW-24	2/12/2019			Normal	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGP-GW24	GW-24-EM_Historical_021219	GW-24	2/12/2019			Normal	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGP-GW24	PG04429-14	GW24	2/12/2019	SGS EHS PNG Lab	PG04429	Normal	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGP-MW2	MW-2_Historical_021219	MW-2	2/12/2019			Normal	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGP-MW2	MW-2-EM_Historical_021219	MW-2	2/12/2019			Normal	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGP-MW2	PG04429-1	MV-2	2/12/2019	SGS EHS PNG Lab	PG04429	Normal	-	-	-	-	-	-	-	-	-	-
PNG LNG	QC3	PG04429-17	QC3	2/12/2019	SGS EHS PNG Lab	PG04429	Field_B	-	-	-	-	-	-	-	-	-	-
PNG LNG	QC4	PG04429-18	QC4	2/12/2019	SGS EHS PNG Lab	PG04429	Field_B	-	-	-	-	-	-	-	-	-	-
PNG LNG	LNGP-GW19	EB1932832009	LNGP-GW19	2/12/2019	ALSE-Brisbane	EB1932832	Normal	<0.001	<0.001	<0.001	<0.001	<0.001	<0.002	<0.001	-	-	-
PNG LNG	LNGP-GW17	EB1932832008	LNGP-GW17	2/12/2019	ALSE-Brisbane	EB1932832	Normal	<0.001	<0.001	<0.001	<0.001	<0.001	<0.002	<0.001	-	-	-
PNG LNG	LNGP-MW2	EB1932832001	LNGP-MW2	2/12/2019	ALSE-Brisbane	EB1932832	Normal	<0.001	<0.001	<0.001	<0.001	<0.001	<0.002	<0.001	-	-	-
PNG LNG		EB1932832017	LNGP-QC3	2/12/2019	ALSE-Brisbane	EB1932832	Field_B	<0.001	<0.001	<0.001	<0.001	<0.001	<0.002	<0.001	-	-	-
PNG LNG	LNGL-GW5	EB1932832002	LNGP-GW5	2/12/2019	ALSE-Brisbane	EB1932832	Normal	<0.001	<0.001	<0.001	<0.001	<0.001	<0.002	<0.001	-	-	-
PNG LNG	LNGL-GW12	EB1932832004	LNGP-GW12	2/12/2019	ALSE-Brisbane	EB1932832	Normal	<0.001	<0.001	<0.001	<0.001	<0.001	<0.002	<0.001	-	-	-
PNG LNG	LNGL-GW14	EB1932832006	LNGP-GW14	2/12/2019	ALSE-Brisbane	EB1932832	Normal	<0.001	<0.001	<0.001	<0.001	<0.001	<0.002	<0.001	-	-	-
PNG LNG	LNGL-GW15	EB1932832007	LNGP-GW15	2/12/2019	ALSE-Brisbane	EB1932832	Normal	<0.001	<0.001	<0.001	<0.001	<0.001	<0.002	<0.001	-	-	-
PNG LNG	LNGL-GW11	EB1932832003	LNGP-GW11	2/12/2019	ALSE-Brisbane	EB1932832	Normal	<0.001	<0.001	<0.001	<0.001	<0.001	<0.002	<0.001	-	-	-
PNG LNG	LNGL-GW13	EB1932832005	LNGP-GW13	2/12/2019	ALSE-Brisbane	EB1932832	Normal	<0.001	<0.001	<0.001	<0.001	<0.001	<0.002	<0.001	-	-	-
PNG LNG	LNGP-GW22	EB1932832012	LNGP-GW22	2/12/2019	ALSE-Brisbane	EB1932832	Normal	<0.001	<0.001	<0.001	<0.001	<0.001	<0.002	<0.001	-	-	-
PNG LNG	LNGP-GW22	EB1932832015	LNGP-QC1	2/12/2019	ALSE-Brisbane	EB1932832	Field_D	<0.001	<0.001	<0.001	<0.001	<0.001	<0.002	<0.001	-	-	-
PNG LNG	LNGP-GW24	EB1932832014	LNGP-GW24	2/12/2019	ALSE-Brisbane	EB1932832	Normal	<0.001	<0.001	<0.001	<0.001	<0.001	<0.002	<0.001	-	-	-
PNG LNG	LNGP-GW21	EB1932832011	LNGP-GW21	2/12/2019	ALSE-Brisbane	EB1932832	Normal	<0.001	<0.001	<0.001	<0.001	<0.001	<0.002	<0.001	-	-	-
PNG LNG		EB1932832018	LNGP-QC4	2/12/2019	ALSE-Brisbane	EB1932832	Field_B	<0.001	<0.001	<0.001	<0.001	<0.001	<0.002	<0.001	-	-	-
PNG LNG	LNGP-GW23	EB1932832013	LNGP-GW23	2/12/2019	ALSE-Brisbane	EB1932832	Normal	<0.001	<0.001	<0.001	<0.001	<0.001	<0.002	<0.001	-	-	-
PNG LNG	LNGP-GW20	EB1932832010	LNGP-GW20	2/12/2019	ALSE-Brisbane	EB1932832	Normal	<0.001	<0.001	<0.001	<0.001	<0.001	<0.002	<0.001	-	-	-
PNG LNG	LNGP-GW20	EB1932832016	LNGP-QC2	2/12/2019	ALSE-Brisbane	EB1932832	Field_D	<0.001	<0.001	<0.001	<0.001	<0.001	<0.002	<0.001	-	-	-

Statistical Summary

Number of Results	195	195	195	195	195	195	211	19	19	19
Number of Detects	13	13	13	13	13	12	23	0	0	0
Minimum Concentration	<0.001	<0.001	<0.001	<0.001	<0.001	<0.002	<0.001	<0.001	<0.001	<0.001
Minimum Detect	ND	ND	ND	ND	ND	ND	0.003	ND	ND	ND
Maximum Concentration	<0.001	<0.001	<0.001	<0.001	<0.001	<0.002	0.175	<0.001	<0.001	<0.001
Maximum Detect	ND	ND	ND	ND	ND	ND	0.175	ND	ND	ND
Average Concentration	0.0005	0.0005	0.0005	0.0005	0.0005	0.001	0.0047	0.0005	0.0005	0.0005
Median Concentration	0.0005	0.0005	0.0005	0.0005	0.0005	0.001	0.0005	0.0005	0.0005	0.0005
Standard Deviation	0	0	0	0	0	0	0.018	0	0	0
Number of Guideline Exceedances	0	0	0	0	0	0	18	0	0	0
Number of Guideline Exceedances(Detects Only)	0	0	0	0	0	0	18	0	0	0

APPENDIX B: LABORATORY ANALYTICAL REPORTS

ALS Environmental

CERTIFICATE OF ANALYSIS

Work Order	: **EB1932832**	Page	: 1 of 19
Client	: **EXXONMOBIL PNG LTD**	Laboratory	: Environmental Division Brisbane
Contact	: MS MELANIE BOK	Contact	: David Buckley
Address	: PO BOX 118 PORT MORESBY PAPUA NEW GUINEA NDC 121	Address	: 2 Byth Street Stafford QLD Australia 4053
Telephone	: +61 03 9270 3727	Telephone	: +61-7-3243 7222
Project	: PNG LNG - LNGP	Date Samples Received	: 05-Dec-2019 10:35
Order number	: 4501315165	Date Analysis Commenced	: 06-Dec-2019
C-O-C number	: ----	Issue Date	: 16-Dec-2019 15:12
Sampler	: B.SARI/F.ALYELE		
Site	: ----		
Quote number	: BN/046/19 V5		
No. of samples received	: 18		
No. of samples analysed	: 18		

Accreditation No. 825
Accredited for compliance with
ISO/IEC 17025 - Testing

This report supersedes any previous report(s) with this reference. Results apply to the sample(s) as submitted. This document shall not be reproduced, except in full.

This Certificate of Analysis contains the following information:

- General Comments
- Analytical Results
- Surrogate Control Limits

Additional information pertinent to this report will be found in the following separate attachments: Quality Control Report, QA/QC Compliance Assessment to assist with Quality Review and Sample Receipt Notification.

Signatories

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

Signatories	*Position*	*Accreditation Category*
Diana Mesa	2IC Organic Chemist	Brisbane Organics, Stafford, QLD
Kim McCabe	Senior Inorganic Chemist	Brisbane Inorganics, Stafford, QLD

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.

Where a result is required to meet compliance limits the associated uncertainty must be considered. Refer to the ALS Contact for details.

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
ø = ALS is not NATA accredited for these tests.
~ = Indicates an estimated value.

- EG020F (Dissolved Metals by ICP-MS): Limit of reporting raised due to matrix interference.
- EP075(SIM)PAH/Phenols: Sample 'LNGP-GW23' shows poor surrogate recovery due to matrix interference.
- EK067G (Total Phosphorus as P): Some samples were diluted due to matrix interference. LOR adjusted accordingly.
- Benzo(a)pyrene Toxicity Equivalent Quotient (TEQ) per the NEPM (2013) is the sum total of the concentration of the eight carcinogenic PAHs multiplied by their Toxicity Equivalence Factor (TEF) relative to Benzo(a)pyrene. TEF values are provided in brackets as follows: Benz(a)anthracene (0.1), Chrysene (0.01), Benzo(b+j) & Benzo(k)fluoranthene (0.1), Benzo(a)pyrene (1.0), Indeno(1.2.3.cd)pyrene (0.1), Dibenz(a.h)anthracene (1.0), Benzo(g.h.i)perylene (0.01). Less than LOR results for 'TEQ Zero' are treated as zero.
- EP026SP(COD) Particular samples required dilution prior to analysis due to matrix interferences. LOR values have been adjusted accordingly.
- It is recognised that EK059G (Nitrite + Nitrate) is less than EK057G (Nitrite) for sample EB1932832_015. However, the difference is within experimental variation of the methods.
- It is recognised that EK061G (Total Kjeldahl Nitrogen) is less than EK055G (Ammonia) for sample It is recognised that EK061G (Total Kjeldahl Nitrogen) is less than EK055G (Ammonia) for sample EB1932832_015. However, the difference is within experimental variation of the methods.
- EG035F (Dissolved Mercury): Some samples diluted due to matrix interference. LOR adjusted accordingly.
- Sodium Adsorption Ratio (where reported): Where results for Na, Ca or Mg are <LOR, a concentration at half the reported LOR is incorporated into the SAR calculation. This represents a conservative approach for Na relative to the assumption that <LOR = zero concentration and a conservative approach for Ca & Mg relative to the assumption that <LOR is equivalent to the LOR concentration.

Analytical Results

Sub-Matrix: WATER (Matrix: WATER)				Client sample ID	LNGP-MW2	LNGP-GW5	LNGP-GW11	LNGP-GW12	LNGP-GW13
				Client sampling date / time	02-Dec-2019 07:25	02-Dec-2019 07:46	02-Dec-2019 08:55	02-Dec-2019 08:03	02-Dec-2019 09:10
Compound	CAS Number	LOR	Unit		EB1932832-001	EB1932832-002	EB1932832-003	EB1932832-004	EB1932832-005
					Result	Result	Result	Result	Result
EA015: Total Dissolved Solids dried at 180 ± 5 °C									
Total Dissolved Solids @180°C	----	10	mg/L		6630	6830	3900	1990	4100
EA045: Turbidity									
Turbidity	----	0.1	NTU		1.3	3.2	1.1	2.0	7.5
ED037P: Alkalinity by PC Titrator									
Hydroxide Alkalinity as CaCO3	DMO-210-001	1	mg/L		<1	<1	<1	<1	<1
Carbonate Alkalinity as CaCO3	3812-32-6	1	mg/L		<1	<1	<1	<1	<1
Bicarbonate Alkalinity as CaCO3	71-52-3	1	mg/L		452	261	206	227	190
Total Alkalinity as CaCO3	----	1	mg/L		452	261	206	227	190
ED041G: Sulfate (Turbidimetric) as SO4 2- by DA									
Sulfate as SO4 - Turbidimetric	14808-79-8	1	mg/L		3010	151	188	178	213
ED045G: Chloride by Discrete Analyser									
Chloride	16887-00-6	1	mg/L		612	3310	1750	844	1860
ED093F: Dissolved Major Cations									
Calcium	7440-70-2	1	mg/L		598	621	348	139	340
Magnesium	7439-95-4	1	mg/L		277	206	95	42	89
Sodium	7440-23-5	1	mg/L		973	1250	814	524	947
Potassium	7440-09-7	1	mg/L		16	12	8	4	5
EG020F: Dissolved Metals by ICP-MS									
Arsenic	7440-38-2	0.001	mg/L		<0.001	<0.001	0.004	<0.001	<0.001
Barium	7440-39-3	0.001	mg/L		0.066	0.180	0.309	0.091	0.097
Cadmium	7440-43-9	0.0001	mg/L		<0.0001	<0.0001	0.0002	<0.0001	<0.0001
Cobalt	7440-48-4	0.001	mg/L		<0.001	0.005	0.003	<0.001	<0.001
Copper	7440-50-8	0.001	mg/L		<0.001	<0.001	<0.001	0.002	<0.001
Lead	7439-92-1	0.001	mg/L		<0.001	<0.001	<0.001	<0.001	<0.001
Manganese	7439-96-5	0.001	mg/L		0.693	1.01	2.42	0.078	0.007
Nickel	7440-02-0	0.001	mg/L		0.001	0.001	0.002	<0.001	<0.001
Selenium	7782-49-2	0.01	mg/L		<0.01	<0.01	<0.01	0.01	0.02
Silver	7440-22-4	0.001	mg/L		<0.001	<0.001	<0.001	<0.001	<0.001
Tin	7440-31-5	0.001	mg/L		<0.001	<0.001	<0.001	<0.001	<0.001
Zinc	7440-66-6	0.005	mg/L		<0.005	<0.005	<0.005	<0.005	0.006
Boron	7440-42-8	0.05	mg/L		1.09	0.28	0.45	0.13	0.41
Iron	7439-89-6	0.05	mg/L		<0.05	<0.05	<0.05	<0.05	<0.05
EG035F: Dissolved Mercury by FIMS									
Mercury	7439-97-6	0.0001	mg/L		<0.0001	<0.0001	<0.0001	<0.0001	<0.0001

Analytical Results

Sub-Matrix: WATER (Matrix: WATER)				Client sample ID	LNGP-MW2	LNGP-GW5	LNGP-GW11	LNGP-GW12	LNGP-GW13
				Client sampling date / time	02-Dec-2019 07:25	02-Dec-2019 07:46	02-Dec-2019 08:55	02-Dec-2019 08:03	02-Dec-2019 09:10
Compound	CAS Number	LOR	Unit		EB1932832-001	EB1932832-002	EB1932832-003	EB1932832-004	EB1932832-005
					Result	Result	Result	Result	Result
EG050G: Hexavalent Chromium by Discrete Analyser									
Hexavalent Chromium	18540-29-9	0.01	mg/L		<0.01	<0.01	<0.01	<0.01	<0.01
EK055G: Ammonia as N by Discrete Analyser									
Ammonia as N	7664-41-7	0.01	mg/L		**0.02**	<0.01	**0.71**	<0.01	<0.01
EK057G: Nitrite as N by Discrete Analyser									
Nitrite as N	14797-65-0	0.01	mg/L		**0.07**	**0.06**	**0.01**	**0.06**	<0.01
EK058G: Nitrate as N by Discrete Analyser									
Nitrate as N	14797-55-8	0.01	mg/L		**12.3**	**0.46**	**0.16**	**0.48**	**0.57**
EK059G: Nitrite plus Nitrate as N (NOx) by Discrete Analyser									
Nitrite + Nitrate as N	----	0.01	mg/L		**12.4**	**0.52**	**0.17**	**0.54**	**0.57**
EK061G: Total Kjeldahl Nitrogen By Discrete Analyser									
Total Kjeldahl Nitrogen as N	----	0.1	mg/L		**1.8**	**0.1**	**1.2**	**0.2**	**0.1**
EK062G: Total Nitrogen as N (TKN + NOx) by Discrete Analyser									
^ Total Nitrogen as N	----	0.1	mg/L		**14.2**	**0.6**	**1.4**	**0.7**	**0.7**
EK067G: Total Phosphorus as P by Discrete Analyser									
Total Phosphorus as P	----	0.01	mg/L		<0.05	**0.02**	**0.02**	**0.01**	<0.01
EK071G: Reactive Phosphorus as P by discrete analyser									
Reactive Phosphorus as P	14265-44-2	0.01	mg/L		<0.01	<0.01	<0.01	<0.01	<0.01
EN055: Ionic Balance									
ø Total Anions	----	0.01	meq/L		**89.0**	**102**	**57.4**	**32.0**	**60.7**
ø Total Cations	----	0.01	meq/L		**95.4**	**103**	**60.8**	**33.3**	**65.6**
ø Ionic Balance	----	0.01	%		**3.48**	**0.44**	**2.88**	**1.89**	**3.89**
EP026SP: Chemical Oxygen Demand (Spectrophotometric)									
Chemical Oxygen Demand	----	10	mg/L		**12**	<100	<100	**16**	<50
EP075(SIM)A: Phenolic Compounds									
Phenol	108-95-2	1.0	µg/L		<1.0	<1.0	<1.0	<1.0	<1.0
2-Chlorophenol	95-57-8	1.0	µg/L		<1.0	<1.0	<1.0	<1.0	<1.0
2-Methylphenol	95-48-7	1.0	µg/L		<1.0	<1.0	<1.0	<1.0	<1.0
3- & 4-Methylphenol	1319-77-3	2.0	µg/L		<2.0	<2.0	<2.0	<2.0	<2.0
2-Nitrophenol	88-75-5	1.0	µg/L		<1.0	<1.0	<1.0	<1.0	<1.0
2.4-Dimethylphenol	105-67-9	1.0	µg/L		<1.0	<1.0	<1.0	<1.0	<1.0
2.4-Dichlorophenol	120-83-2	1.0	µg/L		<1.0	<1.0	<1.0	<1.0	<1.0
2.6-Dichlorophenol	87-65-0	1.0	µg/L		<1.0	<1.0	<1.0	<1.0	<1.0
4-Chloro-3-methylphenol	59-50-7	1.0	µg/L		<1.0	<1.0	<1.0	<1.0	<1.0

Analytical Results

Sub-Matrix: WATER (Matrix: WATER)				Client sample ID	LNGP-MW2	LNGP-GW5	LNGP-GW11	LNGP-GW12	LNGP-GW13
				Client sampling date / time	02-Dec-2019 07:25	02-Dec-2019 07:46	02-Dec-2019 08:55	02-Dec-2019 08:03	02-Dec-2019 09:10
Compound	CAS Number	LOR	Unit		EB1932832-001	EB1932832-002	EB1932832-003	EB1932832-004	EB1932832-005
					Result	Result	Result	Result	Result
EP075(SIM)A: Phenolic Compounds - Continued									
2.4.6-Trichlorophenol	88-06-2	1.0	µg/L		<1.0	<1.0	<1.0	<1.0	<1.0
2.4.5-Trichlorophenol	95-95-4	1.0	µg/L		<1.0	<1.0	<1.0	<1.0	<1.0
Pentachlorophenol	87-86-5	2.0	µg/L		<2.0	<2.0	<2.0	<2.0	<2.0
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons									
Naphthalene	91-20-3	1.0	µg/L		<1.0	<1.0	<1.0	<1.0	<1.0
Acenaphthylene	208-96-8	1.0	µg/L		<1.0	<1.0	<1.0	<1.0	<1.0
Acenaphthene	83-32-9	1.0	µg/L		<1.0	<1.0	<1.0	<1.0	<1.0
Fluorene	86-73-7	1.0	µg/L		<1.0	<1.0	<1.0	<1.0	<1.0
Phenanthrene	85-01-8	1.0	µg/L		<1.0	<1.0	<1.0	<1.0	<1.0
Anthracene	120-12-7	1.0	µg/L		<1.0	<1.0	<1.0	<1.0	<1.0
Fluoranthene	206-44-0	1.0	µg/L		<1.0	<1.0	<1.0	<1.0	<1.0
Pyrene	129-00-0	1.0	µg/L		<1.0	<1.0	<1.0	<1.0	<1.0
Benz(a)anthracene	56-55-3	1.0	µg/L		<1.0	<1.0	<1.0	<1.0	<1.0
Chrysene	218-01-9	1.0	µg/L		<1.0	<1.0	<1.0	<1.0	<1.0
Benzo(b+j)fluoranthene	205-99-2 205-82-3	1.0	µg/L		<1.0	<1.0	<1.0	<1.0	<1.0
Benzo(k)fluoranthene	207-08-9	1.0	µg/L		<1.0	<1.0	<1.0	<1.0	<1.0
Benzo(a)pyrene	50-32-8	0.5	µg/L		<0.5	<0.5	<0.5	<0.5	<0.5
Indeno(1.2.3.cd)pyrene	193-39-5	1.0	µg/L		<1.0	<1.0	<1.0	<1.0	<1.0
Dibenz(a.h)anthracene	53-70-3	1.0	µg/L		<1.0	<1.0	<1.0	<1.0	<1.0
Benzo(g.h.i)perylene	191-24-2	1.0	µg/L		<1.0	<1.0	<1.0	<1.0	<1.0
^ Sum of polycyclic aromatic hydrocarbons	----	0.5	µg/L		<0.5	<0.5	<0.5	<0.5	<0.5
^ Benzo(a)pyrene TEQ (zero)	----	0.5	µg/L		<0.5	<0.5	<0.5	<0.5	<0.5
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		<100	<100	<100	<100	<100
C29 - C36 Fraction	----	50	µg/L		<50	<50	<50	<50	<50
^ C10 - C36 Fraction (sum)	----	50	µg/L		<50	<50	<50	<50	<50
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions									
C6 - C10 Fraction	C6_C10	20	µg/L		<20	<20	<20	<20	<20
^ C6 - C10 Fraction minus BTEX (F1)	C6_C10-BTEX	20	µg/L		<20	<20	<20	<20	<20
>C10 - C16 Fraction	----	100	µg/L		<100	<100	<100	<100	<100
>C16 - C34 Fraction	----	100	µg/L		<100	<100	<100	<100	<100

Analytical Results

Sub-Matrix: WATER (Matrix: WATER)				Client sample ID	LNGP-MW2	LNGP-GW5	LNGP-GW11	LNGP-GW12	LNGP-GW13
				Client sampling date / time	02-Dec-2019 07:25	02-Dec-2019 07:46	02-Dec-2019 08:55	02-Dec-2019 08:03	02-Dec-2019 09:10
Compound	CAS Number	LOR	Unit		EB1932832-001	EB1932832-002	EB1932832-003	EB1932832-004	EB1932832-005
					Result	Result	Result	Result	Result
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions - Continued									
>C34 - C40 Fraction	----	100	µg/L		<100	<100	<100	<100	<100
^ **>C10 - C40 Fraction (sum)**	----	100	µg/L		<100	<100	<100	<100	<100
^ **>C10 - C16 Fraction minus Naphthalene (F2)**	----	100	µg/L		<100	<100	<100	<100	<100
EP080: BTEXN									
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
ortho-Xylene	95-47-6	2	µg/L		<2	<2	<2	<2	<2
^ **Total Xylenes**	----	2	µg/L		<2	<2	<2	<2	<2
^ **Sum of BTEX**	----	1	µg/L		<1	<1	<1	<1	<1
Naphthalene	91-20-3	5	µg/L		<5	<5	<5	<5	<5
EP075(SIM)S: Phenolic Compound Surrogates									
Phenol-d6	13127-88-3	1.0	%		**29.9**	**24.8**	**22.6**	**24.5**	**25.1**
2-Chlorophenol-D4	93951-73-6	1.0	%		**82.9**	**69.4**	**64.9**	**70.6**	**71.3**
2.4.6-Tribromophenol	118-79-6	1.0	%		**69.9**	**61.2**	**56.1**	**56.4**	**54.9**
EP075(SIM)T: PAH Surrogates									
2-Fluorobiphenyl	321-60-8	1.0	%		**92.6**	**77.7**	**73.1**	**80.0**	**78.9**
Anthracene-d10	1719-06-8	1.0	%		**90.7**	**81.1**	**71.2**	**78.6**	**75.8**
4-Terphenyl-d14	1718-51-0	1.0	%		**102**	**88.1**	**83.1**	**90.0**	**90.8**
EP080S: TPH(V)/BTEX Surrogates									
1.2-Dichloroethane-D4	17060-07-0	2	%		**105**	**101**	**102**	**101**	**104**
Toluene-D8	2037-26-5	2	%		**98.2**	**96.9**	**96.2**	**95.8**	**97.4**
4-Bromofluorobenzene	460-00-4	2	%		**99.6**	**99.3**	**102**	**104**	**100**

Analytical Results

Sub-Matrix: WATER (Matrix: WATER)			Client sample ID	LNGP-GW14	LNGP-GW15	LNGP-GW17	LNGP-GW19	LNGP-GW20
			Client sampling date / time	02-Dec-2019 08:26	02-Dec-2019 08:43	02-Dec-2019 07:01	02-Dec-2019 06:40	02-Dec-2019 11:33
Compound	CAS Number	LOR	Unit	EB1932832-006	EB1932832-007	EB1932832-008	EB1932832-009	EB1932832-010
				Result	Result	Result	Result	Result
EA015: Total Dissolved Solids dried at 180 ± 5 °C								
Total Dissolved Solids @180°C	----	10	mg/L	7990	4120	1770	8590	5900
EA045: Turbidity								
Turbidity	----	0.1	NTU	1.6	1.2	218	5.5	0.5
ED037P: Alkalinity by PC Titrator								
Hydroxide Alkalinity as CaCO3	DMO-210-001	1	mg/L	<1	<1	<1	<1	<1
Carbonate Alkalinity as CaCO3	3812-32-6	1	mg/L	<1	<1	<1	<1	<1
Bicarbonate Alkalinity as CaCO3	71-52-3	1	mg/L	409	260	492	268	437
Total Alkalinity as CaCO3	----	1	mg/L	409	260	492	268	437
ED041G: Sulfate (Turbidimetric) as SO4 2- by DA								
Sulfate as SO4 - Turbidimetric	14808-79-8	1	mg/L	1980	724	133	920	2180
ED045G: Chloride by Discrete Analyser								
Chloride	16887-00-6	1	mg/L	2660	1480	646	4020	1290
ED093F: Dissolved Major Cations								
Calcium	7440-70-2	1	mg/L	607	348	76	473	489
Magnesium	7439-95-4	1	mg/L	288	99	26	201	199
Sodium	7440-23-5	1	mg/L	1660	975	600	2310	1230
Potassium	7440-09-7	1	mg/L	17	9	3	12	11
EG020F: Dissolved Metals by ICP-MS								
Arsenic	7440-38-2	0.001	mg/L	0.002	<0.001	<0.001	0.002	<0.001
Barium	7440-39-3	0.001	mg/L	0.032	0.042	0.049	0.078	0.117
Cadmium	7440-43-9	0.0001	mg/L	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Cobalt	7440-48-4	0.001	mg/L	0.001	<0.001	<0.001	0.001	0.002
Copper	7440-50-8	0.001	mg/L	<0.001	<0.001	<0.001	<0.001	<0.001
Lead	7439-92-1	0.001	mg/L	<0.001	<0.001	<0.001	<0.001	<0.001
Manganese	7439-96-5	0.001	mg/L	0.230	0.132	0.006	0.404	0.190
Nickel	7440-02-0	0.001	mg/L	<0.001	<0.001	<0.001	<0.001	<0.001
Selenium	7782-49-2	0.01	mg/L	<0.01	<0.01	0.01	<0.01	0.17
Silver	7440-22-4	0.001	mg/L	<0.001	<0.001	<0.001	<0.001	<0.001
Tin	7440-31-5	0.001	mg/L	<0.001	<0.001	<0.001	<0.001	<0.001
Zinc	7440-66-6	0.005	mg/L	<0.005	<0.005	<0.005	0.006	<0.005
Boron	7440-42-8	0.05	mg/L	1.17	0.64	0.19	0.95	0.63
Iron	7439-89-6	0.05	mg/L	1.51	0.12	<0.05	0.38	<0.05
EG035F: Dissolved Mercury by FIMS								
Mercury	7439-97-6	0.0001	mg/L	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001

Analytical Results

Sub-Matrix: WATER (Matrix: WATER)				Client sample ID	LNGP-GW14	LNGP-GW15	LNGP-GW17	LNGP-GW19	LNGP-GW20
				Client sampling date / time	02-Dec-2019 08:26	02-Dec-2019 08:43	02-Dec-2019 07:01	02-Dec-2019 06:40	02-Dec-2019 11:33
Compound	CAS Number	LOR	Unit		EB1932832-006	EB1932832-007	EB1932832-008	EB1932832-009	EB1932832-010
					Result	Result	Result	Result	Result
EG050G: Hexavalent Chromium by Discrete Analyser									
Hexavalent Chromium	18540-29-9	0.01	mg/L		<0.01	<0.01	<0.01	<0.01	<0.01
EK055G: Ammonia as N by Discrete Analyser									
Ammonia as N	7664-41-7	0.01	mg/L		<0.01	<0.01	**0.02**	**0.04**	**0.05**
EK057G: Nitrite as N by Discrete Analyser									
Nitrite as N	14797-65-0	0.01	mg/L		<0.01	<0.01	<0.01	<0.01	**0.02**
EK058G: Nitrate as N by Discrete Analyser									
Nitrate as N	14797-55-8	0.01	mg/L		<0.01	<0.01	**0.09**	<0.01	**1.00**
EK059G: Nitrite plus Nitrate as N (NOx) by Discrete Analyser									
Nitrite + Nitrate as N	----	0.01	mg/L		<0.01	<0.01	**0.09**	<0.01	**1.02**
EK061G: Total Kjeldahl Nitrogen By Discrete Analyser									
Total Kjeldahl Nitrogen as N	----	0.1	mg/L		<0.1	**0.2**	**0.3**	<0.5	**0.2**
EK062G: Total Nitrogen as N (TKN + NOx) by Discrete Analyser									
^ Total Nitrogen as N	----	0.1	mg/L		<0.1	**0.2**	**0.4**	<0.5	**1.2**
EK067G: Total Phosphorus as P by Discrete Analyser									
Total Phosphorus as P	----	0.01	mg/L		**0.02**	<0.01	**0.07**	<0.05	<0.01
EK071G: Reactive Phosphorus as P by discrete analyser									
Reactive Phosphorus as P	14265-44-2	0.01	mg/L		<0.01	<0.01	<0.01	<0.01	<0.01
EN055: Ionic Balance									
ø Total Anions	----	0.01	meq/L		**124**	**62.0**	**30.8**	**138**	**90.5**
ø Total Cations	----	0.01	meq/L		**127**	**68.2**	**32.1**	**141**	**94.6**
ø Ionic Balance	----	0.01	%		**0.88**	**4.71**	**2.04**	**1.08**	**2.19**
EP026SP: Chemical Oxygen Demand (Spectrophotometric)									
Chemical Oxygen Demand	----	10	mg/L		<50	<50	<10	**65**	<50
EP075(SIM)A: Phenolic Compounds									
Phenol	108-95-2	1.0	µg/L		<1.0	<1.0	<1.0	<1.0	<1.0
2-Chlorophenol	95-57-8	1.0	µg/L		<1.0	<1.0	<1.0	<1.0	<1.0
2-Methylphenol	95-48-7	1.0	µg/L		<1.0	<1.0	<1.0	<1.0	<1.0
3- & 4-Methylphenol	1319-77-3	2.0	µg/L		<2.0	<2.0	<2.0	<2.0	<2.0
2-Nitrophenol	88-75-5	1.0	µg/L		<1.0	<1.0	<1.0	<1.0	<1.0
2.4-Dimethylphenol	105-67-9	1.0	µg/L		<1.0	<1.0	<1.0	<1.0	<1.0
2.4-Dichlorophenol	120-83-2	1.0	µg/L		<1.0	<1.0	<1.0	<1.0	<1.0
2.6-Dichlorophenol	87-65-0	1.0	µg/L		<1.0	<1.0	<1.0	<1.0	<1.0
4-Chloro-3-methylphenol	59-50-7	1.0	µg/L		<1.0	<1.0	<1.0	<1.0	<1.0

Analytical Results

Sub-Matrix: WATER (Matrix: WATER)				Client sample ID	LNGP-GW14	LNGP-GW15	LNGP-GW17	LNGP-GW19	LNGP-GW20
				Client sampling date / time	02-Dec-2019 08:26	02-Dec-2019 08:43	02-Dec-2019 07:01	02-Dec-2019 06:40	02-Dec-2019 11:33
Compound	CAS Number	LOR	Unit		EB1932832-006	EB1932832-007	EB1932832-008	EB1932832-009	EB1932832-010
					Result	Result	Result	Result	Result
EP075(SIM)A: Phenolic Compounds - Continued									
2.4.6-Trichlorophenol	88-06-2	1.0	µg/L		<1.0	<1.0	<1.0	<1.0	<1.0
2.4.5-Trichlorophenol	95-95-4	1.0	µg/L		<1.0	<1.0	<1.0	<1.0	<1.0
Pentachlorophenol	87-86-5	2.0	µg/L		<2.0	<2.0	<2.0	<2.0	<2.0
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons									
Naphthalene	91-20-3	1.0	µg/L		<1.0	<1.0	<1.0	<1.0	<1.0
Acenaphthylene	208-96-8	1.0	µg/L		<1.0	<1.0	<1.0	<1.0	<1.0
Acenaphthene	83-32-9	1.0	µg/L		<1.0	<1.0	<1.0	<1.0	<1.0
Fluorene	86-73-7	1.0	µg/L		<1.0	<1.0	<1.0	<1.0	<1.0
Phenanthrene	85-01-8	1.0	µg/L		<1.0	<1.0	<1.0	<1.0	<1.0
Anthracene	120-12-7	1.0	µg/L		<1.0	<1.0	<1.0	<1.0	<1.0
Fluoranthene	206-44-0	1.0	µg/L		<1.0	<1.0	<1.0	<1.0	<1.0
Pyrene	129-00-0	1.0	µg/L		<1.0	<1.0	<1.0	<1.0	<1.0
Benz(a)anthracene	56-55-3	1.0	µg/L		<1.0	<1.0	<1.0	<1.0	<1.0
Chrysene	218-01-9	1.0	µg/L		<1.0	<1.0	<1.0	<1.0	<1.0
Benzo(b+j)fluoranthene	205-99-2 205-82-3	1.0	µg/L		<1.0	<1.0	<1.0	<1.0	<1.0
Benzo(k)fluoranthene	207-08-9	1.0	µg/L		<1.0	<1.0	<1.0	<1.0	<1.0
Benzo(a)pyrene	50-32-8	0.5	µg/L		<0.5	<0.5	<0.5	<0.5	<0.5
Indeno(1.2.3.cd)pyrene	193-39-5	1.0	µg/L		<1.0	<1.0	<1.0	<1.0	<1.0
Dibenz(a.h)anthracene	53-70-3	1.0	µg/L		<1.0	<1.0	<1.0	<1.0	<1.0
Benzo(g.h.i)perylene	191-24-2	1.0	µg/L		<1.0	<1.0	<1.0	<1.0	<1.0
^ Sum of polycyclic aromatic hydrocarbons	----	0.5	µg/L		<0.5	<0.5	<0.5	<0.5	<0.5
^ Benzo(a)pyrene TEQ (zero)	----	0.5	µg/L		<0.5	<0.5	<0.5	<0.5	<0.5
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		<100	<100	<100	<100	<100
C29 - C36 Fraction	----	50	µg/L		<50	<50	<50	<50	<50
^ C10 - C36 Fraction (sum)	----	50	µg/L		<50	<50	<50	<50	<50
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions									
C6 - C10 Fraction	C6_C10	20	µg/L		<20	<20	<20	<20	<20
^ C6 - C10 Fraction minus BTEX (F1)	C6_C10-BTEX	20	µg/L		<20	<20	<20	<20	<20
>C10 - C16 Fraction	----	100	µg/L		<100	<100	<100	<100	<100
>C16 - C34 Fraction	----	100	µg/L		<100	<100	<100	<100	<100

Analytical Results

Sub-Matrix: WATER (Matrix: WATER)				Client sample ID	LNGP-GW14	LNGP-GW15	LNGP-GW17	LNGP-GW19	LNGP-GW20
				Client sampling date / time	02-Dec-2019 08:26	02-Dec-2019 08:43	02-Dec-2019 07:01	02-Dec-2019 06:40	02-Dec-2019 11:33
Compound	CAS Number	LOR	Unit		EB1932832-006	EB1932832-007	EB1932832-008	EB1932832-009	EB1932832-010
					Result	Result	Result	Result	Result
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions - Continued									
>C34 - C40 Fraction	----	100	µg/L		<100	<100	<100	<100	<100
^ **>C10 - C40 Fraction (sum)**	----	100	µg/L		<100	<100	<100	<100	<100
^ **>C10 - C16 Fraction minus Naphthalene (F2)**	----	100	µg/L		<100	<100	<100	<100	<100
EP080: BTEXN									
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
ortho-Xylene	95-47-6	2	µg/L		<2	<2	<2	<2	<2
^ **Total Xylenes**	----	2	µg/L		<2	<2	<2	<2	<2
^ **Sum of BTEX**	----	1	µg/L		<1	<1	<1	<1	<1
Naphthalene	91-20-3	5	µg/L		<5	<5	<5	<5	<5
EP075(SIM)S: Phenolic Compound Surrogates									
Phenol-d6	13127-88-3	1.0	%		**23.4**	**25.9**	**23.1**	**24.6**	**28.1**
2-Chlorophenol-D4	93951-73-6	1.0	%		**66.9**	**72.2**	**65.0**	**64.8**	**78.3**
2.4.6-Tribromophenol	118-79-6	1.0	%		**53.5**	**64.1**	**53.1**	**58.8**	**68.0**
EP075(SIM)T: PAH Surrogates									
2-Fluorobiphenyl	321-60-8	1.0	%		**73.8**	**78.0**	**72.4**	**70.3**	**76.1**
Anthracene-d10	1719-06-8	1.0	%		**78.3**	**76.3**	**75.7**	**73.1**	**82.2**
4-Terphenyl-d14	1718-51-0	1.0	%		**86.4**	**93.3**	**93.1**	**91.5**	**98.9**
EP080S: TPH(V)/BTEX Surrogates									
1.2-Dichloroethane-D4	17060-07-0	2	%		**104**	**99.8**	**81.1**	**78.4**	**103**
Toluene-D8	2037-26-5	2	%		**99.1**	**97.3**	**95.3**	**96.3**	**98.8**
4-Bromofluorobenzene	460-00-4	2	%		**105**	**105**	**101**	**100**	**100**

Analytical Results

Sub-Matrix: WATER (Matrix: WATER)				Client sample ID	LNGP-GW21	LNGP-GW22	LNGP-GW23	LNGP-GW24	LNGP-QC1
				Client sampling date / time	02-Dec-2019 10:55	02-Dec-2019 09:34	02-Dec-2019 11:16	02-Dec-2019 10:14	02-Dec-2019 09:34
Compound	CAS Number	LOR	Unit		EB1932832-011	EB1932832-012	EB1932832-013	EB1932832-014	EB1932832-015
					Result	Result	Result	Result	Result
EA015: Total Dissolved Solids dried at 180 ± 5 °C									
Total Dissolved Solids @180°C	----	10	mg/L		**44600**	**62600**	**6750**	**14900**	**62400**
EA045: Turbidity									
Turbidity	----	0.1	NTU		**4.2**	**72.8**	**1.4**	**1.7**	**84.9**
ED037P: Alkalinity by PC Titrator									
Hydroxide Alkalinity as CaCO3	DMO-210-001	1	mg/L		<1	<1	<1	<1	<1
Carbonate Alkalinity as CaCO3	3812-32-6	1	mg/L		<1	<1	<1	<1	<1
Bicarbonate Alkalinity as CaCO3	71-52-3	1	mg/L		**359**	**654**	**345**	**216**	**677**
Total Alkalinity as CaCO3	----	1	mg/L		**359**	**654**	**345**	**216**	**677**
ED041G: Sulfate (Turbidimetric) as SO4 2- by DA									
Sulfate as SO4 - Turbidimetric	14808-79-8	1	mg/L		**3080**	**2760**	**808**	**590**	**2750**
ED045G: Chloride by Discrete Analyser									
Chloride	16887-00-6	1	mg/L		**21800**	**33900**	**2960**	**7470**	**33900**
ED093F: Dissolved Major Cations									
Calcium	7440-70-2	1	mg/L		**1750**	**719**	**252**	**1060**	**748**
Magnesium	7439-95-4	1	mg/L		**1710**	**2170**	**166**	**579**	**2170**
Sodium	7440-23-5	1	mg/L		**10400**	**18500**	**1920**	**2800**	**18400**
Potassium	7440-09-7	1	mg/L		**202**	**280**	**26**	**34**	**286**
EG020F: Dissolved Metals by ICP-MS									
Arsenic	7440-38-2	0.001	mg/L		<0.005	<0.005	**0.002**	**0.005**	<0.005
Barium	7440-39-3	0.001	mg/L		**0.091**	**0.112**	**0.199**	**0.656**	**0.124**
Cadmium	7440-43-9	0.0001	mg/L		<0.0005	<0.0005	<0.0001	<0.0001	<0.0005
Cobalt	7440-48-4	0.001	mg/L		**0.008**	<0.005	**0.002**	**0.002**	<0.005
Copper	7440-50-8	0.001	mg/L		<0.005	<0.005	<0.001	<0.001	<0.005
Lead	7439-92-1	0.001	mg/L		<0.005	<0.005	<0.001	<0.001	<0.005
Manganese	7439-96-5	0.001	mg/L		**4.60**	**0.820**	**1.22**	**1.68**	**0.842**
Nickel	7440-02-0	0.001	mg/L		<0.005	<0.005	<0.001	**0.002**	<0.005
Selenium	7782-49-2	0.01	mg/L		<0.05	<0.05	<0.01	<0.01	<0.05
Silver	7440-22-4	0.001	mg/L		<0.005	<0.005	<0.001	<0.001	<0.005
Tin	7440-31-5	0.001	mg/L		<0.005	<0.005	<0.001	<0.001	<0.005
Zinc	7440-66-6	0.005	mg/L		<0.025	<0.025	**0.006**	<0.005	<0.025
Boron	7440-42-8	0.05	mg/L		**1.64**	**1.85**	**0.61**	**0.42**	**1.91**
Iron	7439-89-6	0.05	mg/L		**0.26**	**12.6**	<0.05	**0.32**	**12.4**
EG035F: Dissolved Mercury by FIMS									
Mercury	7439-97-6	0.0001	mg/L		<0.0005	<0.0005	<0.0001	<0.0001	<0.0005

Analytical Results

Sub-Matrix: WATER (Matrix: WATER)				Client sample ID	LNGP-GW21	LNGP-GW22	LNGP-GW23	LNGP-GW24	LNGP-QC1
				Client sampling date / time	02-Dec-2019 10:55	02-Dec-2019 09:34	02-Dec-2019 11:16	02-Dec-2019 10:14	02-Dec-2019 09:34
Compound	CAS Number	LOR	Unit		EB1932832-011	EB1932832-012	EB1932832-013	EB1932832-014	EB1932832-015
					Result	Result	Result	Result	Result
EG050G: Hexavalent Chromium by Discrete Analyser									
Hexavalent Chromium	18540-29-9	0.01	mg/L		<0.01	<0.01	<0.01	<0.01	<0.01
EK055G: Ammonia as N by Discrete Analyser									
Ammonia as N	7664-41-7	0.01	mg/L		**1.50**	**8.04**	**0.10**	**1.46**	**8.01**
EK057G: Nitrite as N by Discrete Analyser									
Nitrite as N	14797-65-0	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		<0.01	<0.01	<0.01	**0.07**	<0.01
EK059G: Nitrite plus Nitrate as N (NOx) by Discrete Analyser									
Nitrite + Nitrate as N	----	0.01	mg/L		<0.01	<0.01	<0.01	**0.08**	<0.01
EK061G: Total Kjeldahl Nitrogen By Discrete Analyser									
Total Kjeldahl Nitrogen as N	----	0.1	mg/L		**2.3**	**8.4**	**0.2**	**1.9**	**8.3**
EK062G: Total Nitrogen as N (TKN + NOx) by Discrete Analyser									
^ Total Nitrogen as N	----	0.1	mg/L		**2.3**	**8.4**	**0.2**	**2.0**	**8.3**
EK067G: Total Phosphorus as P by Discrete Analyser									
Total Phosphorus as P	----	0.01	mg/L		<0.10	<0.10	**0.03**	**0.19**	<0.10
EK071G: Reactive Phosphorus as P by discrete analyser									
Reactive Phosphorus as P	14265-44-2	0.01	mg/L		<0.01	<0.01	**0.01**	**0.11**	<0.01
EN055: Ionic Balance									
ø Total Anions	----	0.01	meq/L		**686**	**1030**	**107**	**227**	**1030**
ø Total Cations	----	0.01	meq/L		**686**	**1030**	**110**	**223**	**1020**
ø Ionic Balance	----	0.01	%		**0.05**	**0.02**	**1.47**	**0.91**	**0.17**
EP026SP: Chemical Oxygen Demand (Spectrophotometric)									
Chemical Oxygen Demand	----	10	mg/L		**432**	**408**	**61**	**120**	**545**
EP075(SIM)A: Phenolic Compounds									
Phenol	108-95-2	1.0	µg/L		<1.0	<1.0	<1.0	<1.0	<1.0
2-Chlorophenol	95-57-8	1.0	µg/L		<1.0	<1.0	<1.0	<1.0	<1.0
2-Methylphenol	95-48-7	1.0	µg/L		<1.0	<1.0	<1.0	<1.0	<1.0
3- & 4-Methylphenol	1319-77-3	2.0	µg/L		<2.0	<2.0	<2.0	<2.0	<2.0
2-Nitrophenol	88-75-5	1.0	µg/L		<1.0	<1.0	<1.0	<1.0	<1.0
2.4-Dimethylphenol	105-67-9	1.0	µg/L		<1.0	<1.0	<1.0	<1.0	<1.0
2.4-Dichlorophenol	120-83-2	1.0	µg/L		<1.0	<1.0	<1.0	<1.0	<1.0
2.6-Dichlorophenol	87-65-0	1.0	µg/L		<1.0	<1.0	<1.0	<1.0	<1.0
4-Chloro-3-methylphenol	59-50-7	1.0	µg/L		<1.0	<1.0	<1.0	<1.0	<1.0

Analytical Results

Sub-Matrix: WATER (Matrix: WATER)				Client sample ID	LNGP-GW21	LNGP-GW22	LNGP-GW23	LNGP-GW24	LNGP-QC1
				Client sampling date / time	02-Dec-2019 10:55	02-Dec-2019 09:34	02-Dec-2019 11:16	02-Dec-2019 10:14	02-Dec-2019 09:34
Compound	CAS Number	LOR	Unit		EB1932832-011	EB1932832-012	EB1932832-013	EB1932832-014	EB1932832-015
					Result	Result	Result	Result	Result
EP075(SIM)A: Phenolic Compounds - Continued									
2.4.6-Trichlorophenol	88-06-2	1.0	µg/L		<1.0	<1.0	<1.0	<1.0	<1.0
2.4.5-Trichlorophenol	95-95-4	1.0	µg/L		<1.0	<1.0	<1.0	<1.0	<1.0
Pentachlorophenol	87-86-5	2.0	µg/L		<2.0	<2.0	<2.0	<2.0	<2.0
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons									
Naphthalene	91-20-3	1.0	µg/L		<1.0	<1.0	<1.0	<1.0	<1.0
Acenaphthylene	208-96-8	1.0	µg/L		<1.0	<1.0	<1.0	<1.0	<1.0
Acenaphthene	83-32-9	1.0	µg/L		<1.0	<1.0	<1.0	<1.0	<1.0
Fluorene	86-73-7	1.0	µg/L		<1.0	<1.0	<1.0	<1.0	<1.0
Phenanthrene	85-01-8	1.0	µg/L		<1.0	<1.0	<1.0	<1.0	<1.0
Anthracene	120-12-7	1.0	µg/L		<1.0	<1.0	<1.0	<1.0	<1.0
Fluoranthene	206-44-0	1.0	µg/L		<1.0	<1.0	<1.0	<1.0	<1.0
Pyrene	129-00-0	1.0	µg/L		<1.0	<1.0	<1.0	<1.0	<1.0
Benz(a)anthracene	56-55-3	1.0	µg/L		<1.0	<1.0	<1.0	<1.0	<1.0
Chrysene	218-01-9	1.0	µg/L		<1.0	<1.0	<1.0	<1.0	<1.0
Benzo(b+j)fluoranthene	205-99-2 205-82-3	1.0	µg/L		<1.0	<1.0	<1.0	<1.0	<1.0
Benzo(k)fluoranthene	207-08-9	1.0	µg/L		<1.0	<1.0	<1.0	<1.0	<1.0
Benzo(a)pyrene	50-32-8	0.5	µg/L		<0.5	<0.5	<0.5	<0.5	<0.5
Indeno(1.2.3.cd)pyrene	193-39-5	1.0	µg/L		<1.0	<1.0	<1.0	<1.0	<1.0
Dibenz(a.h)anthracene	53-70-3	1.0	µg/L		<1.0	<1.0	<1.0	<1.0	<1.0
Benzo(g.h.i)perylene	191-24-2	1.0	µg/L		<1.0	<1.0	<1.0	<1.0	<1.0
^ Sum of polycyclic aromatic hydrocarbons	----	0.5	µg/L		<0.5	<0.5	<0.5	<0.5	<0.5
^ Benzo(a)pyrene TEQ (zero)	----	0.5	µg/L		<0.5	<0.5	<0.5	<0.5	<0.5
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		<100	<100	<100	<100	<100
C29 - C36 Fraction	----	50	µg/L		<50	<50	<50	<50	<50
^ C10 - C36 Fraction (sum)	----	50	µg/L		<50	<50	<50	<50	<50
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions									
C6 - C10 Fraction	C6_C10	20	µg/L		<20	<20	<20	<20	<20
^ C6 - C10 Fraction minus BTEX (F1)	C6_C10-BTEX	20	µg/L		<20	<20	<20	<20	<20
>C10 - C16 Fraction	----	100	µg/L		<100	<100	<100	<100	<100
>C16 - C34 Fraction	----	100	µg/L		<100	<100	<100	<100	<100

Analytical Results

Sub-Matrix: WATER (Matrix: WATER)				Client sample ID	LNGP-GW21	LNGP-GW22	LNGP-GW23	LNGP-GW24	LNGP-QC1
				Client sampling date / time	02-Dec-2019 10:55	02-Dec-2019 09:34	02-Dec-2019 11:16	02-Dec-2019 10:14	02-Dec-2019 09:34
Compound	CAS Number	LOR	Unit		EB1932832-011	EB1932832-012	EB1932832-013	EB1932832-014	EB1932832-015
					Result	Result	Result	Result	Result
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions - Continued									
>C34 - C40 Fraction	----	100	µg/L		<100	<100	<100	<100	<100
^ >C10 - C40 Fraction (sum)	----	100	µg/L		<100	<100	<100	<100	<100
^ >C10 - C16 Fraction minus Naphthalene (F2)	----	100	µg/L		<100	<100	<100	<100	<100
EP080: BTEXN									
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
ortho-Xylene	95-47-6	2	µg/L		<2	<2	<2	<2	<2
^ Total Xylenes	----	2	µg/L		<2	<2	<2	<2	<2
^ Sum of BTEX	----	1	µg/L		<1	<1	<1	<1	<1
Naphthalene	91-20-3	5	µg/L		<5	<5	<5	<5	<5
EP075(SIM)S: Phenolic Compound Surrogates									
Phenol-d6	13127-88-3	1.0	%		**33.9**	**37.7**	**2.14**	**27.2**	**34.2**
2-Chlorophenol-D4	93951-73-6	1.0	%		**81.0**	**81.9**	**42.2**	**74.9**	**76.7**
2.4.6-Tribromophenol	118-79-6	1.0	%		**89.8**	**79.5**	**70.5**	**81.5**	**78.9**
EP075(SIM)T: PAH Surrogates									
2-Fluorobiphenyl	321-60-8	1.0	%		**78.1**	**74.0**	**77.6**	**70.5**	**70.3**
Anthracene-d10	1719-06-8	1.0	%		**83.1**	**79.8**	**78.4**	**83.9**	**76.0**
4-Terphenyl-d14	1718-51-0	1.0	%		**93.5**	**93.0**	**95.4**	**96.2**	**88.2**
EP080S: TPH(V)/BTEX Surrogates									
1.2-Dichloroethane-D4	17060-07-0	2	%		**79.9**	**109**	**107**	**105**	**112**
Toluene-D8	2037-26-5	2	%		**93.1**	**95.9**	**99.1**	**95.6**	**97.4**
4-Bromofluorobenzene	460-00-4	2	%		**105**	**104**	**102**	**102**	**104**

Analytical Results

Sub-Matrix: WATER (Matrix: WATER)			Client sample ID	LNGP-QC2	LNGP-QC3	LNGP-QC4	----	----
			Client sampling date / time	02-Dec-2019 11:33	02-Dec-2019 07:46	02-Dec-2019 11:16	----	----
Compound	CAS Number	LOR	Unit	EB1932832-016	EB1932832-017	EB1932832-018	--------	--------
				Result	Result	Result	----	----
EA015: Total Dissolved Solids dried at 180 ± 5 °C								
Total Dissolved Solids @180°C	----	10	mg/L	**6030**	<10	<10	----	----
EA045: Turbidity								
Turbidity	----	0.1	NTU	**0.7**	**0.1**	**0.1**	----	----
ED037P: Alkalinity by PC Titrator								
Hydroxide Alkalinity as CaCO3	DMO-210-001	1	mg/L	<1	<1	<1	----	----
Carbonate Alkalinity as CaCO3	3812-32-6	1	mg/L	<1	<1	<1	----	----
Bicarbonate Alkalinity as CaCO3	71-52-3	1	mg/L	**435**	**4**	**4**	----	----
Total Alkalinity as CaCO3	----	1	mg/L	**435**	**4**	**4**	----	----
ED041G: Sulfate (Turbidimetric) as SO4 2- by DA								
Sulfate as SO4 - Turbidimetric	14808-79-8	1	mg/L	**2180**	<1	<1	----	----
ED045G: Chloride by Discrete Analyser								
Chloride	16887-00-6	1	mg/L	**1290**	<1	<1	----	----
ED093F: Dissolved Major Cations								
Calcium	7440-70-2	1	mg/L	**480**	<1	<1	----	----
Magnesium	7439-95-4	1	mg/L	**201**	<1	<1	----	----
Sodium	7440-23-5	1	mg/L	**1210**	<1	<1	----	----
Potassium	7440-09-7	1	mg/L	**11**	<1	<1	----	----
EG020F: Dissolved Metals by ICP-MS								
Arsenic	7440-38-2	0.001	mg/L	<0.001	<0.001	<0.001	----	----
Barium	7440-39-3	0.001	mg/L	**0.123**	<0.001	<0.001	----	----
Cadmium	7440-43-9	0.0001	mg/L	<0.0001	<0.0001	<0.0001	----	----
Cobalt	7440-48-4	0.001	mg/L	**0.002**	<0.001	<0.001	----	----
Copper	7440-50-8	0.001	mg/L	<0.001	<0.001	<0.001	----	----
Lead	7439-92-1	0.001	mg/L	<0.001	<0.001	<0.001	----	----
Manganese	7439-96-5	0.001	mg/L	**0.190**	<0.001	<0.001	----	----
Nickel	7440-02-0	0.001	mg/L	<0.001	<0.001	<0.001	----	----
Selenium	7782-49-2	0.01	mg/L	**0.17**	<0.01	<0.01	----	----
Silver	7440-22-4	0.001	mg/L	<0.001	<0.001	<0.001	----	----
Tin	7440-31-5	0.001	mg/L	<0.001	<0.001	<0.001	----	----
Zinc	7440-66-6	0.005	mg/L	<0.005	<0.005	<0.005	----	----
Boron	7440-42-8	0.05	mg/L	**0.61**	<0.05	<0.05	----	----
Iron	7439-89-6	0.05	mg/L	<0.05	<0.05	<0.05	----	----
EG035F: Dissolved Mercury by FIMS								
Mercury	7439-97-6	0.0001	mg/L	<0.0001	<0.0001	<0.0001	----	----

Analytical Results

Sub-Matrix: WATER (Matrix: WATER)			Client sample ID	LNGP-QC2	LNGP-QC3	LNGP-QC4	----	----
			Client sampling date / time	02-Dec-2019 11:33	02-Dec-2019 07:46	02-Dec-2019 11:16	----	----
Compound	CAS Number	LOR	Unit	EB1932832-016	EB1932832-017	EB1932832-018	--------	--------
				Result	Result	Result	----	----
EG050G: Hexavalent Chromium by Discrete Analyser								
Hexavalent Chromium	18540-29-9	0.01	mg/L	<0.01	<0.01	<0.01	----	----
EK055G: Ammonia as N by Discrete Analyser								
Ammonia as N	7664-41-7	0.01	mg/L	**0.04**	<0.01	<0.01	----	----
EK057G: Nitrite as N by Discrete Analyser								
Nitrite as N	14797-65-0	0.01	mg/L	**0.02**	<0.01	<0.01	----	----
EK058G: Nitrate as N by Discrete Analyser								
Nitrate as N	14797-55-8	0.01	mg/L	**0.99**	<0.01	<0.01	----	----
EK059G: Nitrite plus Nitrate as N (NOx) by Discrete Analyser								
Nitrite + Nitrate as N	----	0.01	mg/L	**1.01**	<0.01	<0.01	----	----
EK061G: Total Kjeldahl Nitrogen By Discrete Analyser								
Total Kjeldahl Nitrogen as N	----	0.1	mg/L	**0.2**	<0.1	<0.1	----	----
EK062G: Total Nitrogen as N (TKN + NOx) by Discrete Analyser								
^ Total Nitrogen as N	----	0.1	mg/L	**1.2**	<0.1	<0.1	----	----
EK067G: Total Phosphorus as P by Discrete Analyser								
Total Phosphorus as P	----	0.01	mg/L	<0.01	<0.01	<0.01	----	----
EK071G: Reactive Phosphorus as P by discrete analyser								
Reactive Phosphorus as P	14265-44-2	0.01	mg/L	<0.01	<0.01	<0.01	----	----
EN055: Ionic Balance								
ø Total Anions	----	0.01	meq/L	**90.5**	**0.08**	**0.08**	----	----
ø Total Cations	----	0.01	meq/L	**93.4**	<0.01	<0.01	----	----
ø Ionic Balance	----	0.01	%	**1.60**	----	----	----	----
EP026SP: Chemical Oxygen Demand (Spectrophotometric)								
Chemical Oxygen Demand	----	10	mg/L	<50	<10	<10	----	----
EP075(SIM)A: Phenolic Compounds								
Phenol	108-95-2	1.0	µg/L	<1.0	<1.0	<1.0	----	----
2-Chlorophenol	95-57-8	1.0	µg/L	<1.0	<1.0	<1.0	----	----
2-Methylphenol	95-48-7	1.0	µg/L	<1.0	<1.0	<1.0	----	----
3- & 4-Methylphenol	1319-77-3	2.0	µg/L	<2.0	<2.0	<2.0	----	----
2-Nitrophenol	88-75-5	1.0	µg/L	<1.0	<1.0	<1.0	----	----
2.4-Dimethylphenol	105-67-9	1.0	µg/L	<1.0	<1.0	<1.0	----	----
2.4-Dichlorophenol	120-83-2	1.0	µg/L	<1.0	<1.0	<1.0	----	----
2.6-Dichlorophenol	87-65-0	1.0	µg/L	<1.0	<1.0	<1.0	----	----
4-Chloro-3-methylphenol	59-50-7	1.0	µg/L	<1.0	<1.0	<1.0	----	----

Analytical Results

Sub-Matrix: WATER (Matrix: WATER)				Client sample ID	LNGP-QC2	LNGP-QC3	LNGP-QC4	----	----
				Client sampling date / time	02-Dec-2019 11:33	02-Dec-2019 07:46	02-Dec-2019 11:16	----	----
Compound	CAS Number	LOR	Unit		EB1932832-016	EB1932832-017	EB1932832-018	--------	--------
					Result	Result	Result	----	----
EP075(SIM)A: Phenolic Compounds - Continued									
2.4.6-Trichlorophenol	88-06-2	1.0	µg/L		<1.0	<1.0	<1.0	----	----
2.4.5-Trichlorophenol	95-95-4	1.0	µg/L		<1.0	<1.0	<1.0	----	----
Pentachlorophenol	87-86-5	2.0	µg/L		<2.0	<2.0	<2.0	----	----
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons									
Naphthalene	91-20-3	1.0	µg/L		<1.0	<1.0	<1.0	----	----
Acenaphthylene	208-96-8	1.0	µg/L		<1.0	<1.0	<1.0	----	----
Acenaphthene	83-32-9	1.0	µg/L		<1.0	<1.0	<1.0	----	----
Fluorene	86-73-7	1.0	µg/L		<1.0	<1.0	<1.0	----	----
Phenanthrene	85-01-8	1.0	µg/L		<1.0	<1.0	<1.0	----	----
Anthracene	120-12-7	1.0	µg/L		<1.0	<1.0	<1.0	----	----
Fluoranthene	206-44-0	1.0	µg/L		<1.0	<1.0	<1.0	----	----
Pyrene	129-00-0	1.0	µg/L		<1.0	<1.0	<1.0	----	----
Benz(a)anthracene	56-55-3	1.0	µg/L		<1.0	<1.0	<1.0	----	----
Chrysene	218-01-9	1.0	µg/L		<1.0	<1.0	<1.0	----	----
Benzo(b+j)fluoranthene	205-99-2 205-82-3	1.0	µg/L		<1.0	<1.0	<1.0	----	----
Benzo(k)fluoranthene	207-08-9	1.0	µg/L		<1.0	<1.0	<1.0	----	----
Benzo(a)pyrene	50-32-8	0.5	µg/L		<0.5	<0.5	<0.5	----	----
Indeno(1.2.3.cd)pyrene	193-39-5	1.0	µg/L		<1.0	<1.0	<1.0	----	----
Dibenz(a.h)anthracene	53-70-3	1.0	µg/L		<1.0	<1.0	<1.0	----	----
Benzo(g.h.i)perylene	191-24-2	1.0	µg/L		<1.0	<1.0	<1.0	----	----
^ Sum of polycyclic aromatic hydrocarbons	----	0.5	µg/L		<0.5	<0.5	<0.5	----	----
^ Benzo(a)pyrene TEQ (zero)	----	0.5	µg/L		<0.5	<0.5	<0.5	----	----
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	<100	<100	----	----
C29 - C36 Fraction	----	50	µg/L		<50	<50	<50	----	----
^ C10 - C36 Fraction (sum)	----	50	µg/L		<50	<50	<50	----	----
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions									
C6 - C10 Fraction	C6_C10	20	µg/L		<20	<20	<20	----	----
^ C6 - C10 Fraction minus BTEX (F1)	C6_C10-BTEX	20	µg/L		<20	<20	<20	----	----
>C10 - C16 Fraction	----	100	µg/L		<100	<100	<100	----	----
>C16 - C34 Fraction	----	100	µg/L		<100	<100	<100	----	----

Analytical Results

Sub-Matrix: WATER (Matrix: WATER)				Client sample ID	LNGP-QC2	LNGP-QC3	LNGP-QC4	----	----
				Client sampling date / time	02-Dec-2019 11:33	02-Dec-2019 07:46	02-Dec-2019 11:16	----	----
Compound	CAS Number	LOR	Unit		EB1932832-016	EB1932832-017	EB1932832-018	--------	--------
					Result	Result	Result	----	----
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions - Continued									
>C34 - C40 Fraction	----	100	µg/L		<100	<100	<100	----	----
^ **>C10 - C40 Fraction (sum)**	----	100	µg/L		<100	<100	<100	----	----
^ **>C10 - C16 Fraction minus Naphthalene (F2)**	----	100	µg/L		<100	<100	<100	----	----
EP080: BTEXN									
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	----	----
ortho-Xylene	95-47-6	2	µg/L		<2	<2	<2	----	----
^ **Total Xylenes**	----	2	µg/L		<2	<2	<2	----	----
^ **Sum of BTEX**	----	1	µg/L		<1	<1	<1	----	----
Naphthalene	91-20-3	5	µg/L		<5	<5	<5	----	----
EP075(SIM)S: Phenolic Compound Surrogates									
Phenol-d6	13127-88-3	1.0	%		**27.1**	**24.3**	**21.2**	----	----
2-Chlorophenol-D4	93951-73-6	1.0	%		**76.0**	**72.4**	**68.0**	----	----
2.4.6-Tribromophenol	118-79-6	1.0	%		**64.7**	**62.3**	**61.9**	----	----
EP075(SIM)T: PAH Surrogates									
2-Fluorobiphenyl	321-60-8	1.0	%		**77.0**	**73.6**	**72.8**	----	----
Anthracene-d10	1719-06-8	1.0	%		**83.0**	**70.5**	**73.7**	----	----
4-Terphenyl-d14	1718-51-0	1.0	%		**99.4**	**87.0**	**91.4**	----	----
EP080S: TPH(V)/BTEX Surrogates									
1.2-Dichloroethane-D4	17060-07-0	2	%		**80.2**	**103**	**105**	----	----
Toluene-D8	2037-26-5	2	%		**93.0**	**95.3**	**96.4**	----	----
4-Bromofluorobenzene	460-00-4	2	%		**102**	**102**	**100**	----	----

Surrogate Control Limits

Sub-Matrix: **WATER**

Compound	CAS Number	Recovery Limits (%) Low	Recovery Limits (%) High
EP075(SIM)S: Phenolic Compound Surrogates			
Phenol-d6	13127-88-3	10	72
2-Chlorophenol-D4	93951-73-6	27	130
2.4.6-Tribromophenol	118-79-6	19	181
EP075(SIM)T: PAH Surrogates			
2-Fluorobiphenyl	321-60-8	14	146
Anthracene-d10	1719-06-8	35	137
4-Terphenyl-d14	1718-51-0	36	154
EP080S: TPH(V)/BTEX Surrogates			
1.2-Dichloroethane-D4	17060-07-0	66	138
Toluene-D8	2037-26-5	79	120
4-Bromofluorobenzene	460-00-4	74	118

ALS Environmental

QUALITY CONTROL REPORT

Work Order	: **EB1932832**	Page	: 1 of 10
Client	: **EXXONMOBIL PNG LTD**	Laboratory	: Environmental Division Brisbane
Contact	: MS MELANIE BOK	Contact	: David Buckley
Address	: PO BOX 118 PORT MORESBY PAPUA NEW GUINEA NDC 121	Address	: 2 Byth Street Stafford QLD Australia 4053
Telephone	: +61 03 9270 3727	Telephone	: +61-7-3243 7222
Project	: PNG LNG - LNGP	Date Samples Received	: 05-Dec-2019
Order number	: 4501315165	Date Analysis Commenced	: 06-Dec-2019
C-O-C number	: ----	Issue Date	: 16-Dec-2019
Sampler	: B.SARI/F.ALYELE		
Site	: ----		
Quote number	: BN/046/19 V5		
No. of samples received	: 18		
No. of samples analysed	: 18		

Accreditation No. 825
Accredited for compliance with
ISO/IEC 17025 - Testing

This report supersedes any previous report(s) with this reference. Results apply to the sample(s) as submitted. This document shall not be reproduced, except in full.

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

Signatories

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

Signatories	*Position*	*Accreditation Category*
Diana Mesa	2IC Organic Chemist	Brisbane Organics, Stafford, QLD
Kim McCabe	Senior Inorganic Chemist	Brisbane Inorganics, Stafford, QLD

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

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 (%)*
EA015: Total Dissolved Solids dried at 180 ± 5 °C (QC Lot: 2750235)									
EB1932655-001	Anonymous	EA015H: Total Dissolved Solids @180°C	----	10	mg/L	7070	7050	0.255	0% - 20%
EB1932832-005	LNGP-GW13	EA015H: Total Dissolved Solids @180°C	----	10	mg/L	4100	4170	1.79	0% - 20%
EA015: Total Dissolved Solids dried at 180 ± 5 °C (QC Lot: 2750238)									
EB1932832-016	LNGP-QC2	EA015H: Total Dissolved Solids @180°C	----	10	mg/L	6030	6290	4.29	0% - 20%
EA045: Turbidity (QC Lot: 2750287)									
EB1931766-001	Anonymous	EA045: Turbidity	----	0.1	NTU	8.6	8.8	1.38	0% - 20%
EB1931766-021	Anonymous	EA045: Turbidity	----	0.1	NTU	3.5	3.6	0.00	0% - 20%
EA045: Turbidity (QC Lot: 2750288)									
EB1932832-005	LNGP-GW13	EA045: Turbidity	----	0.1	NTU	7.5	7.5	0.00	0% - 20%
EB1932832-015	LNGP-QC1	EA045: Turbidity	----	0.1	NTU	84.9	84.3	0.709	0% - 20%
ED037P: Alkalinity by PC Titrator (QC Lot: 2750301)									
EB1932802-010	Anonymous	ED037-P: Hydroxide Alkalinity as CaCO3	DMO-210-001	1	mg/L	<1	<1	0.00	No Limit
		ED037-P: Carbonate Alkalinity as CaCO3	3812-32-6	1	mg/L	<1	<1	0.00	No Limit
		ED037-P: Bicarbonate Alkalinity as CaCO3	71-52-3	1	mg/L	35	35	0.00	0% - 20%
		ED037-P: Total Alkalinity as CaCO3	----	1	mg/L	35	35	0.00	0% - 20%
EB1932832-007	LNGP-GW15	ED037-P: Hydroxide Alkalinity as CaCO3	DMO-210-001	1	mg/L	<1	<1	0.00	No Limit
		ED037-P: Carbonate Alkalinity as CaCO3	3812-32-6	1	mg/L	<1	<1	0.00	No Limit
		ED037-P: Bicarbonate Alkalinity as CaCO3	71-52-3	1	mg/L	260	255	1.67	0% - 20%
		ED037-P: Total Alkalinity as CaCO3	----	1	mg/L	260	255	1.67	0% - 20%
ED037P: Alkalinity by PC Titrator (QC Lot: 2750302)									
EB1932832-017	LNGP-QC3	ED037-P: Hydroxide Alkalinity as CaCO3	DMO-210-001	1	mg/L	<1	<1	0.00	No Limit
		ED037-P: Carbonate Alkalinity as CaCO3	3812-32-6	1	mg/L	<1	<1	0.00	No Limit
		ED037-P: Bicarbonate Alkalinity as CaCO3	71-52-3	1	mg/L	4	4	0.00	No Limit
		ED037-P: Total Alkalinity as CaCO3	----	1	mg/L	4	4	0.00	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 (%)*
ED037P: Alkalinity by PC Titrator (QC Lot: 2750302) - continued									
EB1932859-009	Anonymous	ED037-P: Hydroxide Alkalinity as CaCO3	DMO-210-001	1	mg/L	<1	<1	0.00	No Limit
		ED037-P: Carbonate Alkalinity as CaCO3	3812-32-6	1	mg/L	<1	<1	0.00	No Limit
		ED037-P: Bicarbonate Alkalinity as CaCO3	71-52-3	1	mg/L	108	108	0.00	0% - 20%
		ED037-P: Total Alkalinity as CaCO3	----	1	mg/L	108	108	0.00	0% - 20%
ED041G: Sulfate (Turbidimetric) as SO4 2- by DA (QC Lot: 2749383)									
EB1932832-001	LNGP-MW2	ED041G: Sulfate as SO4 - Turbidimetric	14808-79-8	1	mg/L	3010	3000	0.226	0% - 20%
EB1932832-011	LNGP-GW21	ED041G: Sulfate as SO4 - Turbidimetric	14808-79-8	1	mg/L	3080	3060	0.597	0% - 20%
ED045G: Chloride by Discrete Analyser (QC Lot: 2749380)									
EB1932832-001	LNGP-MW2	ED045G: Chloride	16887-00-6	1	mg/L	612	611	0.169	0% - 20%
EB1932832-011	LNGP-GW21	ED045G: Chloride	16887-00-6	1	mg/L	21800	21900	0.335	0% - 20%
ED093F: Dissolved Major Cations (QC Lot: 2750810)									
EB1932802-002	Anonymous	ED093F: Calcium	7440-70-2	1	mg/L	221	225	1.92	0% - 20%
		ED093F: Magnesium	7439-95-4	1	mg/L	37	38	0.00	0% - 20%
		ED093F: Sodium	7440-23-5	1	mg/L	86	86	0.00	0% - 20%
		ED093F: Potassium	7440-09-7	1	mg/L	7	7	0.00	No Limit
EB1932802-011	Anonymous	ED093F: Calcium	7440-70-2	1	mg/L	351	341	2.93	0% - 20%
		ED093F: Magnesium	7439-95-4	1	mg/L	108	107	1.00	0% - 20%
		ED093F: Sodium	7440-23-5	1	mg/L	13	12	0.00	0% - 50%
		ED093F: Potassium	7440-09-7	1	mg/L	8	8	0.00	No Limit
ED093F: Dissolved Major Cations (QC Lot: 2750816)									
EB1932832-017	LNGP-QC3	ED093F: Calcium	7440-70-2	1	mg/L	<1	<1	0.00	No Limit
		ED093F: Magnesium	7439-95-4	1	mg/L	<1	<1	0.00	No Limit
		ED093F: Sodium	7440-23-5	1	mg/L	<1	<1	0.00	No Limit
		ED093F: Potassium	7440-09-7	1	mg/L	<1	<1	0.00	No Limit
EB1932832-010	LNGP-GW20	ED093F: Calcium	7440-70-2	1	mg/L	489	487	0.350	0% - 20%
		ED093F: Magnesium	7439-95-4	1	mg/L	199	207	3.65	0% - 20%
		ED093F: Sodium	7440-23-5	1	mg/L	1230	1240	0.912	0% - 20%
		ED093F: Potassium	7440-09-7	1	mg/L	11	11	0.00	0% - 50%
EG020F: Dissolved Metals by ICP-MS (QC Lot: 2750814)									
EB1932832-001	LNGP-MW2	EG020A-F: Cadmium	7440-43-9	0.0001	mg/L	<0.0001	<0.0001	0.00	No Limit
		EG020A-F: Arsenic	7440-38-2	0.001	mg/L	<0.001	<0.001	0.00	No Limit
		EG020A-F: Barium	7440-39-3	0.001	mg/L	0.066	0.067	0.00	0% - 20%
		EG020A-F: Cobalt	7440-48-4	0.001	mg/L	<0.001	<0.001	0.00	No Limit
		EG020A-F: Copper	7440-50-8	0.001	mg/L	<0.001	<0.001	0.00	No Limit
		EG020A-F: Lead	7439-92-1	0.001	mg/L	<0.001	<0.001	0.00	No Limit
		EG020A-F: Manganese	7439-96-5	0.001	mg/L	0.693	0.700	0.989	0% - 20%
		EG020A-F: Nickel	7440-02-0	0.001	mg/L	0.001	0.001	0.00	No Limit
		EG020A-F: Tin	7440-31-5	0.001	mg/L	<0.001	<0.001	0.00	No Limit
		EG020A-F: Zinc	7440-66-6	0.005	mg/L	<0.005	<0.005	0.00	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 (%)*
EG020F: Dissolved Metals by ICP-MS (QC Lot: 2750814) - continued									
EB1932832-001	LNGP-MW2	EG020A-F: Selenium	7782-49-2	0.01	mg/L	<0.01	<0.01	0.00	No Limit
		EG020A-F: Boron	7440-42-8	0.05	mg/L	1.09	1.06	2.91	0% - 20%
		EG020A-F: Iron	7439-89-6	0.05	mg/L	<0.05	<0.05	0.00	No Limit
EB1932832-010	LNGP-GW20	EG020A-F: Cadmium	7440-43-9	0.0001	mg/L	<0.0001	<0.0001	0.00	No Limit
		EG020A-F: Arsenic	7440-38-2	0.001	mg/L	<0.001	<0.001	0.00	No Limit
		EG020A-F: Barium	7440-39-3	0.001	mg/L	0.117	0.121	3.15	0% - 20%
		EG020A-F: Cobalt	7440-48-4	0.001	mg/L	0.002	0.002	0.00	No Limit
		EG020A-F: Copper	7440-50-8	0.001	mg/L	<0.001	<0.001	0.00	No Limit
		EG020A-F: Lead	7439-92-1	0.001	mg/L	<0.001	<0.001	0.00	No Limit
		EG020A-F: Manganese	7439-96-5	0.001	mg/L	0.190	0.194	2.38	0% - 20%
		EG020A-F: Nickel	7440-02-0	0.001	mg/L	<0.001	<0.001	0.00	No Limit
		EG020A-F: Tin	7440-31-5	0.001	mg/L	<0.001	<0.001	0.00	No Limit
		EG020A-F: Zinc	7440-66-6	0.005	mg/L	<0.005	<0.005	0.00	No Limit
		EG020A-F: Selenium	7782-49-2	0.01	mg/L	0.17	0.17	0.00	0% - 50%
		EG020A-F: Boron	7440-42-8	0.05	mg/L	0.63	0.60	4.54	0% - 50%
		EG020A-F: Iron	7439-89-6	0.05	mg/L	<0.05	<0.05	0.00	No Limit
EG020F: Dissolved Metals by ICP-MS (QC Lot: 2750815)									
EB1932832-001	LNGP-MW2	EG020B-F: Silver	7440-22-4	0.001	mg/L	<0.001	<0.001	0.00	No Limit
EB1932832-010	LNGP-GW20	EG020B-F: Silver	7440-22-4	0.001	mg/L	<0.001	<0.001	0.00	No Limit
EG035F: Dissolved Mercury by FIMS (QC Lot: 2750813)									
EB1932813-001	Anonymous	EG035F: Mercury	7439-97-6	0.0001	mg/L	<0.0001	<0.0001	0.00	No Limit
EB1932832-003	LNGP-GW11	EG035F: Mercury	7439-97-6	0.0001	mg/L	<0.0001	<0.0001	0.00	No Limit
EG035F: Dissolved Mercury by FIMS (QC Lot: 2750817)									
EB1932832-013	LNGP-GW23	EG035F: Mercury	7439-97-6	0.0001	mg/L	<0.0001	<0.0001	0.00	No Limit
EG050G: Hexavalent Chromium by Discrete Analyser (QC Lot: 2750783)									
EB1932832-001	LNGP-MW2	EG050G: Hexavalent Chromium	18540-29-9	0.01	mg/L	<0.01	<0.01	0.00	No Limit
EB1932832-011	LNGP-GW21	EG050G: Hexavalent Chromium	18540-29-9	0.01	mg/L	<0.01	<0.01	0.00	No Limit
EK055G: Ammonia as N by Discrete Analyser (QC Lot: 2751784)									
EB1932832-001	LNGP-MW2	EK055G: Ammonia as N	7664-41-7	0.01	mg/L	0.02	0.02	0.00	No Limit
EB1932832-011	LNGP-GW21	EK055G: Ammonia as N	7664-41-7	0.01	mg/L	1.50	1.48	1.58	0% - 20%
EK057G: Nitrite as N by Discrete Analyser (QC Lot: 2749381)									
EB1932832-001	LNGP-MW2	EK057G: Nitrite as N	14797-65-0	0.01	mg/L	0.07	0.07	0.00	No Limit
EB1932832-011	LNGP-GW21	EK057G: Nitrite as N	14797-65-0	0.01	mg/L	<0.01	<0.01	0.00	No Limit
EK059G: Nitrite plus Nitrate as N (NOx) by Discrete Analyser (QC Lot: 2751785)									
EB1932832-001	LNGP-MW2	EK059G: Nitrite + Nitrate as N	----	0.01	mg/L	12.4	12.6	1.76	0% - 20%
EB1932832-011	LNGP-GW21	EK059G: Nitrite + Nitrate as N	----	0.01	mg/L	<0.01	<0.01	0.00	No Limit
EK061G: Total Kjeldahl Nitrogen By Discrete Analyser (QC Lot: 2753978)									
EB1932677-002	Anonymous	EK061G: Total Kjeldahl Nitrogen as N	----	0.1	mg/L	85.4	78.0	9.01	0% - 20%
EB1932832-010	LNGP-GW20	EK061G: Total Kjeldahl Nitrogen as N	----	0.1	mg/L	0.2	0.1	0.00	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 (%)*
EK067G: Total Phosphorus as P by Discrete Analyser (QC Lot: 2753979)									
EB1932677-002	Anonymous	EK067G: Total Phosphorus as P	----	0.01	mg/L	1.13	1.14	1.23	No Limit
EB1932832-010	LNGP-GW20	EK067G: Total Phosphorus as P	----	0.01	mg/L	<0.01	<0.01	0.00	No Limit
EK071G: Reactive Phosphorus as P by discrete analyser (QC Lot: 2749382)									
EB1932832-001	LNGP-MW2	EK071G: Reactive Phosphorus as P	14265-44-2	0.01	mg/L	<0.01	<0.01	0.00	No Limit
EB1932832-011	LNGP-GW21	EK071G: Reactive Phosphorus as P	14265-44-2	0.01	mg/L	<0.01	<0.01	0.00	No Limit
EP026SP: Chemical Oxygen Demand (Spectrophotometric) (QC Lot: 2754219)									
EB1932832-001	LNGP-MW2	EP026SP: Chemical Oxygen Demand	----	10	mg/L	12	11	0.00	No Limit
EB1932832-011	LNGP-GW21	EP026SP: Chemical Oxygen Demand	----	10	mg/L	432	430	0.580	No Limit
EP080/071: Total Petroleum Hydrocarbons (QC Lot: 2753896)									
EB1932832-001	LNGP-MW2	EP080: C6 - C9 Fraction	----	20	µg/L	<20	<20	0.00	No Limit
EB1932832-011	LNGP-GW21	EP080: C6 - C9 Fraction	----	20	µg/L	<20	<20	0.00	No Limit
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions (QC Lot: 2753896)									
EB1932832-001	LNGP-MW2	EP080: C6 - C10 Fraction	C6_C10	20	µg/L	<20	<20	0.00	No Limit
EB1932832-011	LNGP-GW21	EP080: C6 - C10 Fraction	C6_C10	20	µg/L	<20	<20	0.00	No Limit
EP080: BTEXN (QC Lot: 2753896)									
EB1932832-001	LNGP-MW2	EP080: Benzene	71-43-2	1	µg/L	<1	<1	0.00	No Limit
		EP080: Toluene	108-88-3	2	µg/L	<2	<2	0.00	No Limit
		EP080: Ethylbenzene	100-41-4	2	µg/L	<2	<2	0.00	No Limit
		EP080: meta- & para-Xylene	108-38-3 106-42-3	2	µg/L	<2	<2	0.00	No Limit
		EP080: ortho-Xylene	95-47-6	2	µg/L	<2	<2	0.00	No Limit
		EP080: Naphthalene	91-20-3	5	µg/L	<5	<5	0.00	No Limit
EB1932832-011	LNGP-GW21	EP080: Benzene	71-43-2	1	µg/L	<1	<1	0.00	No Limit
		EP080: Toluene	108-88-3	2	µg/L	<2	<2	0.00	No Limit
		EP080: Ethylbenzene	100-41-4	2	µg/L	<2	<2	0.00	No Limit
		EP080: meta- & para-Xylene	108-38-3 106-42-3	2	µg/L	<2	<2	0.00	No Limit
		EP080: ortho-Xylene	95-47-6	2	µg/L	<2	<2	0.00	No Limit
		EP080: Naphthalene	91-20-3	5	µg/L	<5	<5	0.00	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 Spike (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			
					Spike	Spike Recovery (%)	Recovery Limits (%)	
Method: Compound	CAS Number	LOR	Unit	Result	Concentration	LCS	Low	High
EA015: Total Dissolved Solids dried at 180 ± 5 °C (QCLot: 2750235)								
EA015H: Total Dissolved Solids @180°C	----	10	mg/L	<10	2460 mg/L	103	88.0	112
				<10	293 mg/L	103	88.0	112
				<10	2000 mg/L	99.8	80.9	118
EA015: Total Dissolved Solids dried at 180 ± 5 °C (QCLot: 2750238)								
EA015H: Total Dissolved Solids @180°C	----	10	mg/L	<10	2460 mg/L	105	88.0	112
				<10	293 mg/L	101	88.0	112
				<10	2000 mg/L	99.3	80.9	118
EA045: Turbidity (QCLot: 2750287)								
EA045: Turbidity	----	0.1	NTU	<0.1	4 NTU	99.2	87.0	113
				<0.1	40 NTU	99.0	95.0	105
				<0.1	400 NTU	99.2	97.0	103
EA045: Turbidity (QCLot: 2750288)								
EA045: Turbidity	----	0.1	NTU	<0.1	4 NTU	99.2	87.0	113
				<0.1	40 NTU	99.0	95.0	105
				<0.1	400 NTU	99.2	97.0	103
ED037P: Alkalinity by PC Titrator (QCLot: 2750301)								
ED037-P: Total Alkalinity as CaCO3	----	----	mg/L	----	200 mg/L	102	80.0	120
ED037P: Alkalinity by PC Titrator (QCLot: 2750302)								
ED037-P: Total Alkalinity as CaCO3	----	----	mg/L	----	50 mg/L	115	80.0	120
ED041G: Sulfate (Turbidimetric) as SO4 2- by DA (QCLot: 2749383)								
ED041G: Sulfate as SO4 - Turbidimetric	14808-79-8	1	mg/L	<1	25 mg/L	104	85.0	118
				<1	100 mg/L	95.5	85.0	118
ED045G: Chloride by Discrete Analyser (QCLot: 2749380)								
ED045G: Chloride	16887-00-6	1	mg/L	<1	10 mg/L	96.1	90.0	115
				<1	1000 mg/L	101	90.0	115
ED093F: Dissolved Major Cations (QCLot: 2750810)								
ED093F: Calcium	7440-70-2	1	mg/L	<1	50 mg/L	98.5	70.0	130
ED093F: Magnesium	7439-95-4	1	mg/L	<1	50 mg/L	97.7	70.0	130
ED093F: Sodium	7440-23-5	1	mg/L	<1	50 mg/L	101	70.0	130
ED093F: Potassium	7440-09-7	1	mg/L	<1	50 mg/L	98.4	70.0	130
ED093F: Dissolved Major Cations (QCLot: 2750816)								
ED093F: Calcium	7440-70-2	1	mg/L	<1	50 mg/L	99.2	70.0	130
ED093F: Magnesium	7439-95-4	1	mg/L	<1	50 mg/L	98.8	70.0	130
ED093F: Sodium	7440-23-5	1	mg/L	<1	50 mg/L	106	70.0	130

Sub-Matrix: **WATER**

Method: Compound	CAS Number	LOR	Unit	Method Blank (MB) Report	Laboratory Control Spike (LCS) Report			
					Spike	Spike Recovery (%)	Recovery Limits (%)	
				Result	Concentration	LCS	Low	High
ED093F: Dissolved Major Cations (QCLot: 2750816) - continued								
ED093F: Potassium	7440-09-7	1	mg/L	<1	50 mg/L	99.7	70.0	130
EG020F: Dissolved Metals by ICP-MS (QCLot: 2750814)								
EG020A-F: Arsenic	7440-38-2	0.001	mg/L	<0.001	0.1 mg/L	101	88.0	116
EG020A-F: Barium	7440-39-3	0.001	mg/L	<0.001	0.1 mg/L	96.7	70.0	130
EG020A-F: Cadmium	7440-43-9	0.0001	mg/L	<0.0001	0.1 mg/L	102	88.0	108
EG020A-F: Cobalt	7440-48-4	0.001	mg/L	<0.001	0.1 mg/L	94.8	86.0	112
EG020A-F: Copper	7440-50-8	0.001	mg/L	<0.001	0.1 mg/L	92.7	88.0	114
EG020A-F: Lead	7439-92-1	0.001	mg/L	<0.001	0.1 mg/L	96.4	89.0	110
EG020A-F: Manganese	7439-96-5	0.001	mg/L	<0.001	0.1 mg/L	97.2	89.0	120
EG020A-F: Nickel	7440-02-0	0.001	mg/L	<0.001	0.1 mg/L	92.2	89.0	113
EG020A-F: Selenium	7782-49-2	0.01	mg/L	<0.01	0.1 mg/L	89.3	83.0	112
EG020A-F: Tin	7440-31-5	0.001	mg/L	<0.001	0.1 mg/L	92.1	86.0	112
EG020A-F: Zinc	7440-66-6	0.005	mg/L	<0.005	0.1 mg/L	95.2	87.0	113
EG020A-F: Boron	7440-42-8	0.05	mg/L	<0.05	0.5 mg/L	82.2	81.0	125
EG020A-F: Iron	7439-89-6	0.05	mg/L	<0.05	0.5 mg/L	99.8	82.0	114
EG020F: Dissolved Metals by ICP-MS (QCLot: 2750815)								
EG020B-F: Silver	7440-22-4	0.001	mg/L	<0.001	0.1 mg/L	97.7	85.0	114
EG035F: Dissolved Mercury by FIMS (QCLot: 2750813)								
EG035F: Mercury	7439-97-6	0.0001	mg/L	<0.0001	0.01 mg/L	87.8	84.0	118
EG035F: Dissolved Mercury by FIMS (QCLot: 2750817)								
EG035F: Mercury	7439-97-6	0.0001	mg/L	<0.0001	0.01 mg/L	95.9	84.0	118
EG050G: Hexavalent Chromium by Discrete Analyser (QCLot: 2750783)								
EG050G: Hexavalent Chromium	18540-29-9	0.01	mg/L	<0.01	0.5 mg/L	98.7	85.0	120
EK055G: Ammonia as N by Discrete Analyser (QCLot: 2751784)								
EK055G: Ammonia as N	7664-41-7	0.01	mg/L	<0.01	0.5 mg/L	98.8	83.5	114
EK057G: Nitrite as N by Discrete Analyser (QCLot: 2749381)								
EK057G: Nitrite as N	14797-65-0	0.01	mg/L	<0.01	0.5 mg/L	101	90.0	110
EK059G: Nitrite plus Nitrate as N (NOx) by Discrete Analyser (QCLot: 2751785)								
EK059G: Nitrite + Nitrate as N	----	0.01	mg/L	<0.01	0.5 mg/L	98.0	85.7	111
EK061G: Total Kjeldahl Nitrogen By Discrete Analyser (QCLot: 2753978)								
EK061G: Total Kjeldahl Nitrogen as N	----	0.1	mg/L	<0.1	10 mg/L	90.7	70.1	108
EK067G: Total Phosphorus as P by Discrete Analyser (QCLot: 2753979)								
EK067G: Total Phosphorus as P	----	0.01	mg/L	<0.01	4.42 mg/L	95.2	79.2	105
EK071G: Reactive Phosphorus as P by discrete analyser (QCLot: 2749382)								
EK071G: Reactive Phosphorus as P	14265-44-2	0.01	mg/L	<0.01	0.5 mg/L	97.1	81.7	117
EP026SP: Chemical Oxygen Demand (Spectrophotometric) (QCLot: 2754219)								
EP026SP: Chemical Oxygen Demand	----	10	mg/L	<10	50 mg/L	96.0	86.0	112

Sub-Matrix: **WATER**

Method: Compound	CAS Number	LOR	Unit	Method Blank (MB) Report	Laboratory Control Spike (LCS) Report			
					Spike	Spike Recovery (%)	Recovery Limits (%)	
				Result	Concentration	LCS	Low	High
EP075(SIM)A: Phenolic Compounds (QCLot: 2749501)								
EP075(SIM): Phenol	108-95-2	1	µg/L	<1.0	10 µg/L	27.4	20.0	48.0
EP075(SIM): 2-Chlorophenol	95-57-8	1	µg/L	<1.0	10 µg/L	70.1	56.0	110
EP075(SIM): 2-Methylphenol	95-48-7	1	µg/L	<1.0	10 µg/L	63.4	48.0	99.0
EP075(SIM): 3- & 4-Methylphenol	1319-77-3	2	µg/L	<2.0	20 µg/L	57.2	43.0	93.0
EP075(SIM): 2-Nitrophenol	88-75-5	1	µg/L	<1.0	10 µg/L	69.0	37.0	130
EP075(SIM): 2.4-Dimethylphenol	105-67-9	1	µg/L	<1.0	10 µg/L	71.4	53.0	121
EP075(SIM): 2.4-Dichlorophenol	120-83-2	1	µg/L	<1.0	10 µg/L	72.3	56.0	120
EP075(SIM): 2.6-Dichlorophenol	87-65-0	1	µg/L	<1.0	10 µg/L	72.1	57.0	117
EP075(SIM): 4-Chloro-3-methylphenol	59-50-7	1	µg/L	<1.0	10 µg/L	76.0	48.0	116
EP075(SIM): 2.4.6-Trichlorophenol	88-06-2	1	µg/L	<1.0	10 µg/L	68.2	48.0	125
EP075(SIM): 2.4.5-Trichlorophenol	95-95-4	1	µg/L	<1.0	10 µg/L	66.3	45.0	123
EP075(SIM): Pentachlorophenol	87-86-5	2	µg/L	<2.0	20 µg/L	77.5	16.0	130
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons (QCLot: 2749501)								
EP075(SIM): Naphthalene	91-20-3	1	µg/L	<1.0	10 µg/L	72.5	50.0	110
EP075(SIM): Acenaphthylene	208-96-8	1	µg/L	<1.0	10 µg/L	75.9	49.0	124
EP075(SIM): Acenaphthene	83-32-9	1	µg/L	<1.0	10 µg/L	73.3	55.0	114
EP075(SIM): Fluorene	86-73-7	1	µg/L	<1.0	10 µg/L	71.8	55.0	119
EP075(SIM): Phenanthrene	85-01-8	1	µg/L	<1.0	10 µg/L	78.6	51.0	127
EP075(SIM): Anthracene	120-12-7	1	µg/L	<1.0	10 µg/L	79.7	55.0	127
EP075(SIM): Fluoranthene	206-44-0	1	µg/L	<1.0	10 µg/L	80.5	55.0	127
EP075(SIM): Pyrene	129-00-0	1	µg/L	<1.0	10 µg/L	78.8	54.0	126
EP075(SIM): Benz(a)anthracene	56-55-3	1	µg/L	<1.0	10 µg/L	68.9	47.0	136
EP075(SIM): Chrysene	218-01-9	1	µg/L	<1.0	10 µg/L	79.8	51.0	129
EP075(SIM): Benzo(b+j)fluoranthene	205-99-2 205-82-3	1	µg/L	<1.0	10 µg/L	67.6	55.0	132
EP075(SIM): Benzo(k)fluoranthene	207-08-9	1	µg/L	<1.0	10 µg/L	92.9	58.0	128
EP075(SIM): Benzo(a)pyrene	50-32-8	0.5	µg/L	<0.5	10 µg/L	78.9	55.0	131
EP075(SIM): Indeno(1.2.3.cd)pyrene	193-39-5	1	µg/L	<1.0	10 µg/L	64.4	52.0	133
EP075(SIM): Dibenz(a.h)anthracene	53-70-3	1	µg/L	<1.0	10 µg/L	58.8	48.0	137
EP075(SIM): Benzo(g.h.i)perylene	191-24-2	1	µg/L	<1.0	10 µg/L	67.2	53.0	131
EP080/071: Total Petroleum Hydrocarbons (QCLot: 2749502)								
EP071: C10 - C14 Fraction	----	50	µg/L	<50	1070 µg/L	113	65.0	135
EP071: C15 - C28 Fraction	----	100	µg/L	<100	1770 µg/L	118	62.0	138
EP071: C29 - C36 Fraction	----	50	µg/L	<50	----	----	----	----
EP080/071: Total Petroleum Hydrocarbons (QCLot: 2753896)								
EP080: C6 - C9 Fraction	----	20	µg/L	<20	180 µg/L	89.8	66.8	122
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions (QCLot: 2749502)								
EP071: >C10 - C16 Fraction	----	100	µg/L	<100	1560 µg/L	112	66.0	134

Sub-Matrix: **WATER**

Method: Compound	CAS Number	LOR	Unit	Method Blank (MB) Report: Result	Laboratory Control Spike (LCS) Report: Spike Concentration	Spike Recovery (%): LCS	Recovery Limits (%): Low	Recovery Limits (%): High
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions (QCLot: 2749502) - continued								
EP071: >C16 - C34 Fraction	----	100	µg/L	<100	1190 µg/L	122	61.0	139
EP071: >C34 - C40 Fraction	----	100	µg/L	<100	----	----	----	----
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions (QCLot: 2753896)								
EP080: C6 - C10 Fraction	C6_C10	20	µg/L	<20	225 µg/L	89.0	65.1	123
EP080: C6 - C10 Fraction minus BTEX (F1)	C6_C10-BTEX	20	µg/L	<20	----	----	----	----
EP080: BTEXN (QCLot: 2753896)								
EP080: Benzene	71-43-2	1	µg/L	<1	10 µg/L	97.8	79.8	115
EP080: Toluene	108-88-3	2	µg/L	<2	10 µg/L	93.5	78.6	116
EP080: Ethylbenzene	100-41-4	2	µg/L	<2	10 µg/L	91.0	77.3	115
EP080: meta- & para-Xylene	108-38-3 106-42-3	2	µg/L	<2	20 µg/L	91.9	75.8	120
EP080: ortho-Xylene	95-47-6	2	µg/L	<2	10 µg/L	97.2	80.9	115
EP080: Total Xylenes	----	2	µg/L	<2	----	----	----	----
EP080: Sum of BTEX	----	1	µg/L	<1	----	----	----	----
EP080: Naphthalene	91-20-3	5	µg/L	<5	10 µg/L	86.7	77.8	116

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	SpikeRecovery(%): MS	Recovery Limits (%): Low	Recovery Limits (%): High
ED041G: Sulfate (Turbidimetric) as SO4 2- by DA (QCLot: 2749383)							
EB1932832-002	LNGP-GW5	ED041G: Sulfate as SO4 - Turbidimetric	14808-79-8	20 mg/L	# Not Determined	70.0	130
ED045G: Chloride by Discrete Analyser (QCLot: 2749380)							
EB1932832-002	LNGP-GW5	ED045G: Chloride	16887-00-6	400 mg/L	# Not Determined	70.0	130
EG020F: Dissolved Metals by ICP-MS (QCLot: 2750814)							
EB1932832-002	LNGP-GW5	EG020A-F: Arsenic	7440-38-2	1 mg/L	99.1	70.0	130
		EG020A-F: Barium	7440-39-3	1 mg/L	105	70.0	130
		EG020A-F: Cadmium	7440-43-9	0.25 mg/L	102	70.0	130
		EG020A-F: Cobalt	7440-48-4	1 mg/L	94.4	70.0	130
		EG020A-F: Copper	7440-50-8	1 mg/L	92.3	70.0	130
		EG020A-F: Lead	7439-92-1	1 mg/L	96.4	70.0	130
		EG020A-F: Manganese	7439-96-5	1 mg/L	93.3	70.0	130

Sub-Matrix: **WATER**

				Matrix Spike (MS) Report			
				Spike	SpikeRecovery(%)	Recovery Limits (%)	
Laboratory sample ID	*Client sample ID*	*Method: Compound*	*CAS Number*	*Concentration*	*MS*	*Low*	*High*
EG020F: Dissolved Metals by ICP-MS (QCLot: 2750814) - continued							
EB1932832-002	LNGP-GW5	EG020A-F: Nickel	7440-02-0	1 mg/L	85.2	70.0	130
		EG020A-F: Zinc	7440-66-6	1 mg/L	90.3	70.0	130
EG035F: Dissolved Mercury by FIMS (QCLot: 2750813)							
EB1932813-002	Anonymous	EG035F: Mercury	7439-97-6	0.01 mg/L	88.4	70.0	130
EG035F: Dissolved Mercury by FIMS (QCLot: 2750817)							
EB1932832-014	LNGP-GW24	EG035F: Mercury	7439-97-6	0.01 mg/L	90.3	70.0	130
EG050G: Hexavalent Chromium by Discrete Analyser (QCLot: 2750783)							
EB1932832-002	LNGP-GW5	EG050G: Hexavalent Chromium	18540-29-9	0.4 mg/L	98.3	70.0	130
EK055G: Ammonia as N by Discrete Analyser (QCLot: 2751784)							
EB1932832-002	LNGP-GW5	EK055G: Ammonia as N	7664-41-7	0.4 mg/L	104	70.0	130
EK057G: Nitrite as N by Discrete Analyser (QCLot: 2749381)							
EB1932832-002	LNGP-GW5	EK057G: Nitrite as N	14797-65-0	0.4 mg/L	98.5	70.0	130
EK059G: Nitrite plus Nitrate as N (NOx) by Discrete Analyser (QCLot: 2751785)							
EB1932832-002	LNGP-GW5	EK059G: Nitrite + Nitrate as N	----	0.4 mg/L	93.4	70.0	130
EK061G: Total Kjeldahl Nitrogen By Discrete Analyser (QCLot: 2753978)							
EB1932832-001	LNGP-MW2	EK061G: Total Kjeldahl Nitrogen as N	----	25 mg/L	103	70.0	130
EK067G: Total Phosphorus as P by Discrete Analyser (QCLot: 2753979)							
EB1932832-001	LNGP-MW2	EK067G: Total Phosphorus as P	----	5 mg/L	118	70.0	130
EK071G: Reactive Phosphorus as P by discrete analyser (QCLot: 2749382)							
EB1932832-002	LNGP-GW5	EK071G: Reactive Phosphorus as P	14265-44-2	0.4 mg/L	94.1	70.0	130
EP026SP: Chemical Oxygen Demand (Spectrophotometric) (QCLot: 2754219)							
EB1932832-002	LNGP-GW5	EP026SP: Chemical Oxygen Demand	----	500 mg/L	106	70.0	130
EP080/071: Total Petroleum Hydrocarbons (QCLot: 2753896)							
EB1932832-002	LNGP-GW5	EP080: C6 - C9 Fraction	----	40 µg/L	73.5	70.0	130
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions (QCLot: 2753896)							
EB1932832-002	LNGP-GW5	EP080: C6 - C10 Fraction	C6_C10	40 µg/L	75.4	70.0	130
EP080: BTEXN (QCLot: 2753896)							
EB1932832-002	LNGP-GW5	EP080: Benzene	71-43-2	10 µg/L	95.9	70.0	130
		EP080: Toluene	108-88-3	10 µg/L	86.1	70.0	130

QA/QC Compliance Assessment to assist with Quality Review

Work Order	: **EB1932832**	Page	: 1 of 17
Client	: **EXXONMOBIL PNG LTD**	Laboratory	: Environmental Division Brisbane
Contact	: MS MELANIE BOK	Telephone	: +61-7-3243 7222
Project	: PNG LNG - LNGP	Date Samples Received	: 05-Dec-2019
Site	: ----	Issue Date	: 16-Dec-2019
Sampler	: B.SARI/F.ALYELE	No. of samples received	: 18
Order number	: 4501315165	No. of samples analysed	: 18

This report is automatically generated by the ALS LIMS through interpretation of the ALS Quality Control Report and several Quality Assurance parameters measured by ALS. This automated reporting highlights any non-conformances, facilitates faster and more accurate data validation and is designed to assist internal expert and external Auditor review. Many components of this report contribute to the overall DQO assessment and reporting for guideline compliance.

Brief method summaries and references are also provided to assist in traceability.

Summary of Outliers

Outliers : Quality Control Samples

This report highlights outliers flagged in the Quality Control (QC) Report.

- **NO Method Blank value outliers occur.**
- **NO Duplicate outliers occur.**
- **NO Laboratory Control outliers occur.**
- **Matrix Spike outliers exist - please see following pages for full details.**
- **Surrogate recovery outliers exist for all regular sample matrices - please see following pages for full details.**

Outliers : Analysis Holding Time Compliance

- **Analysis Holding Time Outliers exist - please see following pages for full details.**

Outliers : Frequency of Quality Control Samples

- **Quality Control Sample Frequency Outliers exist - please see following pages for full details.**

Outliers : Quality Control Samples

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
Matrix Spike (MS) Recoveries							
ED041G: Sulfate (Turbidimetric) as SO4 2- by DA	EB1932832--002	LNGP-GW5	**Sulfate as SO4 - Turbidimetric**	14808-79-8	Not Determined	----	**MS recovery not determined, background level greater than or equal to 4x spike level.**
ED045G: Chloride by Discrete Analyser	EB1932832--002	LNGP-GW5	**Chloride**	16887-00-6	Not Determined	----	**MS recovery not determined, background level greater than or equal to 4x spike level.**

Regular Sample Surrogates

Sub-Matrix: **WATER**

Compound Group Name	Laboratory Sample ID	Client Sample ID	Analyte	CAS Number	Data	Limits	Comment
Samples Submitted							
EP075(SIM)S: Phenolic Compound Surrogates	EB1932832-013	LNGP-GW23	**Phenol-d6**	13127-88-3	2.14 %	10.0-71.9 %	**Recovery less than lower data quality objective**

Outliers : Analysis Holding Time Compliance

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							
LNGP-MW2,	LNGP-GW5,	----	----	----	07-Dec-2019	04-Dec-2019	**3**
LNGP-GW11,	LNGP-GW12,						
LNGP-GW13,	LNGP-GW14,						
LNGP-GW15,	LNGP-GW17,						
LNGP-GW19,	LNGP-GW20,						
LNGP-GW21,	LNGP-GW22,						
LNGP-GW23,	LNGP-GW24,						
LNGP-QC1,	LNGP-QC2,						
LNGP-QC3,	LNGP-QC4						
EK057G: Nitrite as N by Discrete Analyser							
Clear Plastic Bottle - Natural							
LNGP-MW2,	LNGP-GW5,	----	----	----	06-Dec-2019	04-Dec-2019	**2**
LNGP-GW11,	LNGP-GW12,						
LNGP-GW13,	LNGP-GW14,						
LNGP-GW15,	LNGP-GW17,						
LNGP-GW19,	LNGP-GW20,						
LNGP-GW21,	LNGP-GW22,						
LNGP-GW23,	LNGP-GW24,						
LNGP-QC1,	LNGP-QC2,						
LNGP-QC3,	LNGP-QC4						

Matrix: **WATER**

Method / Container / Client Sample ID(s)		Extraction / Preparation: Date extracted	Extraction / Preparation: Due for extraction	Extraction / Preparation: Days overdue	Analysis: Date analysed	Analysis: Due for analysis	Analysis: Days overdue
EK071G: Reactive Phosphorus as P by discrete analyser							
Clear Plastic Bottle - Natural							
LNGP-MW2,	LNGP-GW5,	----	----	----	06-Dec-2019	04-Dec-2019	**2**
LNGP-GW11,	LNGP-GW12,						
LNGP-GW13,	LNGP-GW14,						
LNGP-GW15,	LNGP-GW17,						
LNGP-GW19,	LNGP-GW20,						
LNGP-GW21,	LNGP-GW22,						
LNGP-GW23,	LNGP-GW24,						
LNGP-QC1,	LNGP-QC2,						
LNGP-QC3,	LNGP-QC4						

Outliers : Frequency of Quality Control Samples

Matrix: **WATER**

Quality Control Sample Type / Method	Count: QC	Count: Regular	Rate (%): Actual	Rate (%): Expected	Quality Control Specification
Laboratory Duplicates (DUP)					
PAH/Phenols (GC/MS - SIM)	0	18	0.00	10.00	NEPM 2013 B3 & ALS QC Standard
TRH - Semivolatile Fraction	0	18	0.00	10.00	NEPM 2013 B3 & ALS QC Standard
Laboratory Control Samples (LCS)					
Chemical Oxygen Demand (COD) (Spectrophotometric)	1	18	5.56	10.00	NEPM 2013 B3 & ALS QC Standard
Matrix Spikes (MS)					
PAH/Phenols (GC/MS - SIM)	0	18	0.00	5.00	NEPM 2013 B3 & ALS QC Standard
TRH - Semivolatile Fraction	0	18	0.00	5.00	NEPM 2013 B3 & ALS QC Standard

Analysis Holding Time Compliance

If samples are identified below as having been analysed or extracted outside of recommended holding times, this should be taken into consideration when interpreting results.

This report summarizes extraction / preparation and analysis times and compares each with ALS recommended holding times (referencing USEPA SW 846, APHA, AS and NEPM) based on the sample container provided. Dates reported represent first date of extraction or analysis and preclude subsequent dilutions and reruns. A listing of breaches (if any) is provided herein.

Holding time for leachate methods (e.g. TCLP) vary according to the analytes reported. Assessment compares the leach date with the shortest analyte holding time for the equivalent soil method. These are: organics 14 days, mercury 28 days & other metals 180 days. A recorded breach does not guarantee a breach for all non-volatile parameters.

Holding times for ***VOC in soils*** vary according to analytes of interest. Vinyl Chloride and Styrene holding time is 7 days; others 14 days. A recorded breach does not guarantee a breach for all VOC analytes and should be verified in case the reported breach is a false positive or Vinyl Chloride and Styrene are not key analytes of interest/concern.

Matrix: **WATER**

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

Method / Container / Client Sample ID(s)	Sample Date	Extraction / Preparation: Date extracted	Extraction / Preparation: Due for extraction	Extraction / Preparation: Evaluation	Analysis: Date analysed	Analysis: Due for analysis	Analysis: Evaluation

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
EA015: Total Dissolved Solids dried at 180 ± 5 °C								
Clear Plastic Bottle - Natural (EA015H)								
LNGP-MW2,	LNGP-GW5,	**02-Dec-2019**	**----**	----	----	**07-Dec-2019**	09-Dec-2019	✓
LNGP-GW11,	LNGP-GW12,							
LNGP-GW13,	LNGP-GW14,							
LNGP-GW15,	LNGP-GW17,							
LNGP-GW19,	LNGP-GW20,							
LNGP-GW21,	LNGP-GW22,							
LNGP-GW23,	LNGP-GW24,							
LNGP-QC1,	LNGP-QC2,							
LNGP-QC3,	LNGP-QC4							
EA045: Turbidity								
Clear Plastic Bottle - Natural (EA045)								
LNGP-MW2,	LNGP-GW5,	**02-Dec-2019**	**----**	----	----	**07-Dec-2019**	04-Dec-2019	×
LNGP-GW11,	LNGP-GW12,							
LNGP-GW13,	LNGP-GW14,							
LNGP-GW15,	LNGP-GW17,							
LNGP-GW19,	LNGP-GW20,							
LNGP-GW21,	LNGP-GW22,							
LNGP-GW23,	LNGP-GW24,							
LNGP-QC1,	LNGP-QC2,							
LNGP-QC3,	LNGP-QC4							
ED037P: Alkalinity by PC Titrator								
Clear Plastic Bottle - Natural (ED037-P)								
LNGP-MW2,	LNGP-GW5,	**02-Dec-2019**	**----**	----	----	**07-Dec-2019**	16-Dec-2019	✓
LNGP-GW11,	LNGP-GW12,							
LNGP-GW13,	LNGP-GW14,							
LNGP-GW15,	LNGP-GW17,							
LNGP-GW19,	LNGP-GW20,							
LNGP-GW21,	LNGP-GW22,							
LNGP-GW23,	LNGP-GW24,							
LNGP-QC1,	LNGP-QC2,							
LNGP-QC3,	LNGP-QC4							

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
ED041G: Sulfate (Turbidimetric) as SO4 2- by DA								
Clear Plastic Bottle - Natural (ED041G)								
LNGP-MW2,	LNGP-GW5,	**02-Dec-2019**	**----**	----	----	**06-Dec-2019**	30-Dec-2019	✓
LNGP-GW11,	LNGP-GW12,							
LNGP-GW13,	LNGP-GW14,							
LNGP-GW15,	LNGP-GW17,							
LNGP-GW19,	LNGP-GW20,							
LNGP-GW21,	LNGP-GW22,							
LNGP-GW23,	LNGP-GW24,							
LNGP-QC1,	LNGP-QC2,							
LNGP-QC3,	LNGP-QC4							
ED045G: Chloride by Discrete Analyser								
Clear Plastic Bottle - Natural (ED045G)								
LNGP-MW2,	LNGP-GW5,	**02-Dec-2019**	**----**	----	----	**06-Dec-2019**	30-Dec-2019	✓
LNGP-GW11,	LNGP-GW12,							
LNGP-GW13,	LNGP-GW14,							
LNGP-GW15,	LNGP-GW17,							
LNGP-GW19,	LNGP-GW20,							
LNGP-GW21,	LNGP-GW22,							
LNGP-GW23,	LNGP-GW24,							
LNGP-QC1,	LNGP-QC2,							
LNGP-QC3,	LNGP-QC4							
ED093F: Dissolved Major Cations								
Clear Plastic Bottle - Filtered; Lab-acidified (ED093F)								
LNGP-MW2,	LNGP-GW5,	**02-Dec-2019**	**----**	----	----	**11-Dec-2019**	30-Dec-2019	✓
LNGP-GW11,	LNGP-GW12,							
LNGP-GW13,	LNGP-GW14,							
LNGP-GW15,	LNGP-GW17,							
LNGP-GW19,	LNGP-GW20,							
LNGP-GW21,	LNGP-GW22,							
LNGP-GW23,	LNGP-GW24,							
LNGP-QC1,	LNGP-QC2,							
LNGP-QC3,	LNGP-QC4							

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
EG020F: Dissolved Metals by ICP-MS								
Clear Plastic Bottle - Filtered; Lab-acidified (EG020B-F)								
LNGP-MW2,	LNGP-GW5,	**02-Dec-2019**	**----**	----	----	**11-Dec-2019**	30-May-2020	✓
LNGP-GW11,	LNGP-GW12,							
LNGP-GW13,	LNGP-GW14,							
LNGP-GW15,	LNGP-GW17,							
LNGP-GW19,	LNGP-GW20,							
LNGP-GW21,	LNGP-GW22,							
LNGP-GW23,	LNGP-GW24,							
LNGP-QC1,	LNGP-QC2,							
LNGP-QC3,	LNGP-QC4							
EG035F: Dissolved Mercury by FIMS								
Clear Plastic Bottle - Filtered; Lab-acidified (EG035F)								
LNGP-MW2,	LNGP-GW5,	**02-Dec-2019**	**----**	----	----	**11-Dec-2019**	30-Dec-2019	✓
LNGP-GW11,	LNGP-GW12,							
LNGP-GW13,	LNGP-GW14,							
LNGP-GW15,	LNGP-GW17,							
LNGP-GW19,	LNGP-GW20,							
LNGP-GW21,	LNGP-GW22,							
LNGP-GW23,	LNGP-GW24,							
LNGP-QC1,	LNGP-QC2,							
LNGP-QC3,	LNGP-QC4							
EG050G: Hexavalent Chromium by Discrete Analyser								
Clear Plastic Bottle - NaOH Filtered (EG050G)								
LNGP-MW2,	LNGP-GW5,	**02-Dec-2019**	**----**	----	----	**09-Dec-2019**	30-Dec-2019	✓
LNGP-GW11,	LNGP-GW12,							
LNGP-GW13,	LNGP-GW14,							
LNGP-GW15,	LNGP-GW17,							
LNGP-GW19,	LNGP-GW20,							
LNGP-GW21,	LNGP-GW22,							
LNGP-GW23,	LNGP-GW24,							
LNGP-QC1,	LNGP-QC2,							
LNGP-QC3,	LNGP-QC4							

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
EK055G: Ammonia as N by Discrete Analyser								
Clear Plastic Bottle - Sulfuric Acid (EK055G)								
LNGP-MW2,	LNGP-GW5,	**02-Dec-2019**	**----**	----	----	**09-Dec-2019**	30-Dec-2019	✓
LNGP-GW11,	LNGP-GW12,							
LNGP-GW13,	LNGP-GW14,							
LNGP-GW15,	LNGP-GW17,							
LNGP-GW19,	LNGP-GW20,							
LNGP-GW21,	LNGP-GW22,							
LNGP-GW23,	LNGP-GW24,							
LNGP-QC1,	LNGP-QC2,							
LNGP-QC3,	LNGP-QC4							
EK057G: Nitrite as N by Discrete Analyser								
Clear Plastic Bottle - Natural (EK057G)								
LNGP-MW2,	LNGP-GW5,	**02-Dec-2019**	**----**	----	----	**06-Dec-2019**	04-Dec-2019	×
LNGP-GW11,	LNGP-GW12,							
LNGP-GW13,	LNGP-GW14,							
LNGP-GW15,	LNGP-GW17,							
LNGP-GW19,	LNGP-GW20,							
LNGP-GW21,	LNGP-GW22,							
LNGP-GW23,	LNGP-GW24,							
LNGP-QC1,	LNGP-QC2,							
LNGP-QC3,	LNGP-QC4							
EK059G: Nitrite plus Nitrate as N (NOx) by Discrete Analyser								
Clear Plastic Bottle - Sulfuric Acid (EK059G)								
LNGP-MW2,	LNGP-GW5,	**02-Dec-2019**	**----**	----	----	**09-Dec-2019**	30-Dec-2019	✓
LNGP-GW11,	LNGP-GW12,							
LNGP-GW13,	LNGP-GW14,							
LNGP-GW15,	LNGP-GW17,							
LNGP-GW19,	LNGP-GW20,							
LNGP-GW21,	LNGP-GW22,							
LNGP-GW23,	LNGP-GW24,							
LNGP-QC1,	LNGP-QC2,							
LNGP-QC3,	LNGP-QC4							

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
EK061G: Total Kjeldahl Nitrogen By Discrete Analyser								
Clear Plastic Bottle - Sulfuric Acid (EK061G)								
LNGP-MW2,	LNGP-GW5,	**02-Dec-2019**	**10-Dec-2019**	30-Dec-2019	✓	**10-Dec-2019**	30-Dec-2019	✓
LNGP-GW11,	LNGP-GW12,							
LNGP-GW13,	LNGP-GW14,							
LNGP-GW15,	LNGP-GW17,							
LNGP-GW19,	LNGP-GW20,							
LNGP-GW21,	LNGP-GW22,							
LNGP-GW23,	LNGP-GW24,							
LNGP-QC1,	LNGP-QC2,							
LNGP-QC3,	LNGP-QC4							
EK067G: Total Phosphorus as P by Discrete Analyser								
Clear Plastic Bottle - Sulfuric Acid (EK067G)								
LNGP-MW2,	LNGP-GW5,	**02-Dec-2019**	**10-Dec-2019**	30-Dec-2019	✓	**10-Dec-2019**	30-Dec-2019	✓
LNGP-GW11,	LNGP-GW12,							
LNGP-GW13,	LNGP-GW14,							
LNGP-GW15,	LNGP-GW17,							
LNGP-GW19,	LNGP-GW20,							
LNGP-GW21,	LNGP-GW22,							
LNGP-GW23,	LNGP-GW24,							
LNGP-QC1,	LNGP-QC2,							
LNGP-QC3,	LNGP-QC4							
EK071G: Reactive Phosphorus as P by discrete analyser								
Clear Plastic Bottle - Natural (EK071G)								
LNGP-MW2,	LNGP-GW5,	**02-Dec-2019**	**----**	----	----	**06-Dec-2019**	04-Dec-2019	×
LNGP-GW11,	LNGP-GW12,							
LNGP-GW13,	LNGP-GW14,							
LNGP-GW15,	LNGP-GW17,							
LNGP-GW19,	LNGP-GW20,							
LNGP-GW21,	LNGP-GW22,							
LNGP-GW23,	LNGP-GW24,							
LNGP-QC1,	LNGP-QC2,							
LNGP-QC3,	LNGP-QC4							

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
EP026SP: Chemical Oxygen Demand (Spectrophotometric)								
Clear Plastic Bottle - Sulfuric Acid (EP026SP)								
LNGP-MW2,	LNGP-GW5,	**02-Dec-2019**	**----**	----	----	**10-Dec-2019**	30-Dec-2019	✓
LNGP-GW11,	LNGP-GW12,							
LNGP-GW13,	LNGP-GW14,							
LNGP-GW15,	LNGP-GW17,							
LNGP-GW19,	LNGP-GW20,							
LNGP-GW21,	LNGP-GW22,							
LNGP-GW23,	LNGP-GW24,							
LNGP-QC1,	LNGP-QC2,							
LNGP-QC3,	LNGP-QC4							
EP075(SIM)A: Phenolic Compounds								
Amber Glass Bottle - Unpreserved (EP075(SIM))								
LNGP-MW2,	LNGP-GW5,	**02-Dec-2019**	**09-Dec-2019**	09-Dec-2019	✓	**11-Dec-2019**	18-Jan-2020	✓
LNGP-GW11,	LNGP-GW12,							
LNGP-GW13,	LNGP-GW14,							
LNGP-GW15,	LNGP-GW17,							
LNGP-GW19,	LNGP-GW20,							
LNGP-GW21,	LNGP-GW22,							
LNGP-GW23,	LNGP-GW24,							
LNGP-QC1,	LNGP-QC2,							
LNGP-QC3,	LNGP-QC4							
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons								
Amber Glass Bottle - Unpreserved (EP075(SIM))								
LNGP-MW2,	LNGP-GW5,	**02-Dec-2019**	**09-Dec-2019**	09-Dec-2019	✓	**11-Dec-2019**	18-Jan-2020	✓
LNGP-GW11,	LNGP-GW12,							
LNGP-GW13,	LNGP-GW14,							
LNGP-GW15,	LNGP-GW17,							
LNGP-GW19,	LNGP-GW20,							
LNGP-GW21,	LNGP-GW22,							
LNGP-GW23,	LNGP-GW24,							
LNGP-QC1,	LNGP-QC2,							
LNGP-QC3,	LNGP-QC4							

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
EP080/071: Total Petroleum Hydrocarbons							
Amber Glass Bottle - Unpreserved (EP071)							
LNGP-MW2, LNGP-GW5, LNGP-GW11, LNGP-GW12, LNGP-GW13, LNGP-GW14, LNGP-GW15, LNGP-GW17, LNGP-GW19, LNGP-GW20, LNGP-GW21, LNGP-GW22, LNGP-GW23, LNGP-GW24, LNGP-QC1, LNGP-QC2, LNGP-QC3, LNGP-QC4	**02-Dec-2019**	**09-Dec-2019**	09-Dec-2019	✓	**11-Dec-2019**	18-Jan-2020	✓
Amber VOC Vial - Sulfuric Acid (EP080)							
LNGP-MW2, LNGP-GW5, LNGP-GW11, LNGP-GW12, LNGP-GW13, LNGP-GW14, LNGP-GW15, LNGP-GW17, LNGP-GW19, LNGP-GW20, LNGP-GW21, LNGP-GW22, LNGP-GW23, LNGP-GW24, LNGP-QC1, LNGP-QC2, LNGP-QC3, LNGP-QC4	**02-Dec-2019**	**11-Dec-2019**	16-Dec-2019	✓	**11-Dec-2019**	16-Dec-2019	✓
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions							
Amber Glass Bottle - Unpreserved (EP071)							
LNGP-MW2, LNGP-GW5, LNGP-GW11, LNGP-GW12, LNGP-GW13, LNGP-GW14, LNGP-GW15, LNGP-GW17, LNGP-GW19, LNGP-GW20, LNGP-GW21, LNGP-GW22, LNGP-GW23, LNGP-GW24, LNGP-QC1, LNGP-QC2, LNGP-QC3, LNGP-QC4	**02-Dec-2019**	**09-Dec-2019**	09-Dec-2019	✓	**11-Dec-2019**	18-Jan-2020	✓
Amber VOC Vial - Sulfuric Acid (EP080)							
LNGP-MW2, LNGP-GW5, LNGP-GW11, LNGP-GW12, LNGP-GW13, LNGP-GW14, LNGP-GW15, LNGP-GW17, LNGP-GW19, LNGP-GW20, LNGP-GW21, LNGP-GW22, LNGP-GW23, LNGP-GW24, LNGP-QC1, LNGP-QC2, LNGP-QC3, LNGP-QC4	**02-Dec-2019**	**11-Dec-2019**	16-Dec-2019	✓	**11-Dec-2019**	16-Dec-2019	✓

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
EP080: BTEXN							
Amber VOC Vial - Sulfuric Acid (EP080)							
LNGP-MW2, LNGP-GW5, LNGP-GW11, LNGP-GW12, LNGP-GW13, LNGP-GW14, LNGP-GW15, LNGP-GW17, LNGP-GW19, LNGP-GW20, LNGP-GW21, LNGP-GW22, LNGP-GW23, LNGP-GW24, LNGP-QC1, LNGP-QC2, LNGP-QC3, LNGP-QC4	**02-Dec-2019**	**11-Dec-2019**	16-Dec-2019	✓	**11-Dec-2019**	16-Dec-2019	✓

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(were) 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		Count		Rate (%)			Quality Control Specification
Analytical Methods	*Method*	*QC*	*Regular*	***Actual***	***Expected***	*Evaluation*	
Laboratory Duplicates (DUP)							
Alkalinity by PC Titrator	ED037-P	4	36	**11.11**	**10.00**	✓	NEPM 2013 B3 & ALS QC Standard
Ammonia as N by Discrete analyser	EK055G	2	20	**10.00**	**10.00**	✓	NEPM 2013 B3 & ALS QC Standard
Chemical Oxygen Demand (COD) (Spectrophotometric)	EP026SP	2	18	**11.11**	**10.00**	✓	NEPM 2013 B3 & ALS QC Standard
Chloride by Discrete Analyser	ED045G	2	18	**11.11**	**10.00**	✓	NEPM 2013 B3 & ALS QC Standard
Dissolved Mercury by FIMS	EG035F	3	26	**11.54**	**10.00**	✓	NEPM 2013 B3 & ALS QC Standard
Dissolved Metals by ICP-MS - Suite A	EG020A-F	2	18	**11.11**	**10.00**	✓	NEPM 2013 B3 & ALS QC Standard
Dissolved Metals by ICP-MS - Suite B	EG020B-F	2	18	**11.11**	**10.00**	✓	NEPM 2013 B3 & ALS QC Standard
Hexavalent Chromium by Discrete Analyser	EG050G	2	18	**11.11**	**10.00**	✓	NEPM 2013 B3 & ALS QC Standard
Major Cations - Dissolved	ED093F	4	31	**12.90**	**10.00**	✓	NEPM 2013 B3 & ALS QC Standard
Nitrite and Nitrate as N (NOx) by Discrete Analyser	EK059G	2	18	**11.11**	**10.00**	✓	NEPM 2013 B3 & ALS QC Standard
Nitrite as N by Discrete Analyser	EK057G	2	18	**11.11**	**10.00**	✓	NEPM 2013 B3 & ALS QC Standard
PAH/Phenols (GC/MS - SIM)	EP075(SIM)	0	18	**0.00**	**10.00**	×	NEPM 2013 B3 & ALS QC Standard
Reactive Phosphorus as P-By Discrete Analyser	EK071G	2	18	**11.11**	**10.00**	✓	NEPM 2013 B3 & ALS QC Standard
Sulfate (Turbidimetric) as SO4 2- by Discrete Analyser	ED041G	2	18	**11.11**	**10.00**	✓	NEPM 2013 B3 & ALS QC Standard
Total Dissolved Solids (High Level)	EA015H	3	23	**13.04**	**10.00**	✓	NEPM 2013 B3 & ALS QC Standard
Total Kjeldahl Nitrogen as N By Discrete Analyser	EK061G	2	20	**10.00**	**10.00**	✓	NEPM 2013 B3 & ALS QC Standard
Total Phosphorus as P By Discrete Analyser	EK067G	2	20	**10.00**	**10.00**	✓	NEPM 2013 B3 & ALS QC Standard
TRH - Semivolatile Fraction	EP071	0	18	**0.00**	**10.00**	×	NEPM 2013 B3 & ALS QC Standard
TRH Volatiles/BTEX	EP080	2	18	**11.11**	**10.00**	✓	NEPM 2013 B3 & ALS QC Standard
Turbidity	EA045	4	40	**10.00**	**10.00**	✓	NEPM 2013 B3 & ALS QC Standard
Laboratory Control Samples (LCS)							
Alkalinity by PC Titrator	ED037-P	2	36	**5.56**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Ammonia as N by Discrete analyser	EK055G	1	20	**5.00**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Chemical Oxygen Demand (COD) (Spectrophotometric)	EP026SP	1	18	**5.56**	**10.00**	×	NEPM 2013 B3 & ALS QC Standard
Chloride by Discrete Analyser	ED045G	2	18	**11.11**	**10.00**	✓	NEPM 2013 B3 & ALS QC Standard
Dissolved Mercury by FIMS	EG035F	2	26	**7.69**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Dissolved Metals by ICP-MS - Suite A	EG020A-F	1	18	**5.56**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Dissolved Metals by ICP-MS - Suite B	EG020B-F	1	18	**5.56**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Hexavalent Chromium by Discrete Analyser	EG050G	1	18	**5.56**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Major Cations - Dissolved	ED093F	2	31	**6.45**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Nitrite and Nitrate as N (NOx) by Discrete Analyser	EK059G	1	18	**5.56**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Nitrite as N by Discrete Analyser	EK057G	1	18	**5.56**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
PAH/Phenols (GC/MS - SIM)	EP075(SIM)	1	18	**5.56**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Reactive Phosphorus as P-By Discrete Analyser	EK071G	1	18	**5.56**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Sulfate (Turbidimetric) as SO4 2- by Discrete Analyser	ED041G	2	18	**11.11**	**10.00**	✓	NEPM 2013 B3 & ALS QC Standard
Total Dissolved Solids (High Level)	EA015H	6	23	**26.09**	**15.00**	✓	NEPM 2013 B3 & ALS QC Standard

Matrix: **WATER**

Evaluation: × = Quality Control frequency not within specification ; ✓ = Quality Control frequency within specification.

Quality Control Sample Type		Count		Rate (%)			Quality Control Specification
Analytical Methods	*Method*	*QC*	*Regular*	***Actual***	***Expected***	*Evaluation*	
Laboratory Control Samples (LCS) - Continued							
Total Kjeldahl Nitrogen as N By Discrete Analyser	EK061G	1	20	**5.00**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Total Phosphorus as P By Discrete Analyser	EK067G	1	20	**5.00**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
TRH - Semivolatile Fraction	EP071	1	18	**5.56**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
TRH Volatiles/BTEX	EP080	1	18	**5.56**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Turbidity	EA045	6	40	**15.00**	**15.00**	✓	NEPM 2013 B3 & ALS QC Standard
Method Blanks (MB)							
Ammonia as N by Discrete analyser	EK055G	1	20	**5.00**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Chemical Oxygen Demand (COD) (Spectrophotometric)	EP026SP	1	18	**5.56**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Chloride by Discrete Analyser	ED045G	1	18	**5.56**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Dissolved Mercury by FIMS	EG035F	2	26	**7.69**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Dissolved Metals by ICP-MS - Suite A	EG020A-F	1	18	**5.56**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Dissolved Metals by ICP-MS - Suite B	EG020B-F	1	18	**5.56**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Hexavalent Chromium by Discrete Analyser	EG050G	1	18	**5.56**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Major Cations - Dissolved	ED093F	2	31	**6.45**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Nitrite and Nitrate as N (NOx) by Discrete Analyser	EK059G	1	18	**5.56**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Nitrite as N by Discrete Analyser	EK057G	1	18	**5.56**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
PAH/Phenols (GC/MS - SIM)	EP075(SIM)	1	18	**5.56**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Reactive Phosphorus as P-By Discrete Analyser	EK071G	1	18	**5.56**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Sulfate (Turbidimetric) as SO4 2- by Discrete Analyser	ED041G	1	18	**5.56**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Total Dissolved Solids (High Level)	EA015H	2	23	**8.70**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Total Kjeldahl Nitrogen as N By Discrete Analyser	EK061G	1	20	**5.00**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Total Phosphorus as P By Discrete Analyser	EK067G	1	20	**5.00**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
TRH - Semivolatile Fraction	EP071	1	18	**5.56**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
TRH Volatiles/BTEX	EP080	1	18	**5.56**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Turbidity	EA045	2	40	**5.00**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Matrix Spikes (MS)							
Ammonia as N by Discrete analyser	EK055G	1	20	**5.00**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Chemical Oxygen Demand (COD) (Spectrophotometric)	EP026SP	1	18	**5.56**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Chloride by Discrete Analyser	ED045G	1	18	**5.56**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Dissolved Mercury by FIMS	EG035F	2	26	**7.69**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Dissolved Metals by ICP-MS - Suite A	EG020A-F	1	18	**5.56**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Hexavalent Chromium by Discrete Analyser	EG050G	1	18	**5.56**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Nitrite and Nitrate as N (NOx) by Discrete Analyser	EK059G	1	18	**5.56**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Nitrite as N by Discrete Analyser	EK057G	1	18	**5.56**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
PAH/Phenols (GC/MS - SIM)	EP075(SIM)	0	18	**0.00**	**5.00**	×	NEPM 2013 B3 & ALS QC Standard
Reactive Phosphorus as P-By Discrete Analyser	EK071G	1	18	**5.56**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Sulfate (Turbidimetric) as SO4 2- by Discrete Analyser	ED041G	1	18	**5.56**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Total Kjeldahl Nitrogen as N By Discrete Analyser	EK061G	1	20	**5.00**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Total Phosphorus as P By Discrete Analyser	EK067G	1	20	**5.00**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
TRH - Semivolatile Fraction	EP071	0	18	**0.00**	**5.00**	×	NEPM 2013 B3 & ALS QC Standard

Matrix: **WATER**

Evaluation: × = Quality Control frequency not within specification ; ✓ = Quality Control frequency within specification.

Quality Control Sample Type		Count		Rate (%)			Quality Control Specification
Analytical Methods	*Method*	*QC*	*Regular*	***Actual***	***Expected***	*Evaluation*	
Matrix Spikes (MS) - Continued							
TRH Volatiles/BTEX	EP080	1	18	**5.56**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard

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
Total Dissolved Solids (High Level)	EA015H	WATER	In house: Referenced to APHA 2540C. A gravimetric procedure that determines the amount of `filterable` residue in an aqueous sample. A well-mixed sample is filtered through a glass fibre filter (1.2um). The filtrate is evaporated to dryness and dried to constant weight at 180+/-5C. This method is compliant with NEPM (2013) Schedule B(3)
Turbidity	EA045	WATER	In house: Referenced to APHA 2130 B. This method is compliant with NEPM (2013) Schedule B(3)
Alkalinity by PC Titrator	ED037-P	WATER	In house: Referenced to APHA 2320 B This procedure determines alkalinity by automated measurement (e.g. PC Titrate) using pH 4.5 for indicating the total alkalinity end-point. This method is compliant with NEPM (2013) Schedule B(3)
Sulfate (Turbidimetric) as SO4 2- by Discrete Analyser	ED041G	WATER	In house: Referenced to APHA 4500-SO4. Dissolved sulfate is determined in a 0.45um filtered sample. Sulfate ions are converted to a barium sulfate suspension in an acetic acid medium with barium chloride. Light absorbance of the BaSO4 suspension is measured by a photometer and the SO4-2 concentration is determined by comparison of the reading with a standard curve. This method is compliant with NEPM (2013) Schedule B(3)
Chloride by Discrete Analyser	ED045G	WATER	In house: Referenced to APHA 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	In house: Referenced to APHA 3120 and 3125; USEPA SW 846 - 6010 and 6020; Cations are determined by either ICP-AES or ICP-MS techniques. This method is compliant with NEPM (2013) Schedule B(3) Sodium Adsorption Ratio is calculated from Ca, Mg and Na which determined by ALS in house method QWI-EN/ED093F. This method is compliant with NEPM (2013) Schedule B(3) Hardness parameters are calculated based on APHA 2340 B. This method is compliant with NEPM (2013) Schedule B(3)
Dissolved Metals by ICP-MS - Suite A	EG020A-F	WATER	In house: Referenced to APHA 3125; USEPA SW846 - 6020, ALS QWI-EN/EG020. Samples are 0.45µm filtered prior to analysis. The ICPMS technique utilizes a highly efficient argon plasma to ionize selected elements. Ions are then passed into a high vacuum mass spectrometer, which separates the analytes based on their distinct mass to charge ratios prior to their measurement by a discrete dynode ion detector.
Dissolved Metals by ICP-MS - Suite B	EG020B-F	WATER	In house: Referenced to APHA 3125; USEPA SW846 - 6020, ALS QWI-EN/EG020. Samples are 0.45µm filtered prior to analysis. The ICPMS technique utilizes a highly efficient argon plasma to ionize selected elements. Ions are then passed into a high vacuum mass spectrometer, which separates the analytes based on their distinct mass to charge ratios prior to their measurement by a discrete dynode ion detector.

Analytical Methods	Method	Matrix	Method Descriptions
Dissolved Mercury by FIMS	EG035F	WATER	In house: Referenced to AS 3550, APHA 3112 Hg - B (Flow-injection (SnCl2)(Cold Vapour generation) AAS) Samples are 0.45µm 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 (2013) Schedule B(3)
Hexavalent Chromium by Discrete Analyser	EG050G	WATER	In house: Referenced to APHA 3500 Cr-A & B. Hexavalent chromium is determined directly on water sample by Discrete Analyser as received by pH adjustment and colour development using diphenylcarbazide. Each run of samples is measured against a five-point calibration curve. This method is compliant with NEPM (2013) Schedule B(3)
Ammonia as N by Discrete analyser	EK055G	WATER	In house: Referenced to APHA 4500-NH3 G Ammonia is determined by direct colorimetry by Discrete Analyser. This method is compliant with NEPM (2013) Schedule B(3)
Nitrite as N by Discrete Analyser	EK057G	WATER	In house: Referenced to APHA 4500-NO2- B. Nitrite is determined by direct colourimetry by Discrete Analyser. This method is compliant with NEPM (2013) Schedule B(3)
Nitrate as N by Discrete Analyser	EK058G	WATER	In house: Referenced to APHA 4500-NO3- F. Nitrate is reduced to nitrite by way of a chemical reduction 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 (2013) Schedule B(3)
Nitrite and Nitrate as N (NOx) by Discrete Analyser	EK059G	WATER	In house: Referenced to APHA 4500-NO3- F. Combined oxidised Nitrogen (NO2+NO3) is determined by Chemical Reduction and direct colourimetry by Discrete Analyser. This method is compliant with NEPM (2013) Schedule B(3)
Total Kjeldahl Nitrogen as N By Discrete Analyser	EK061G	WATER	In house: Referenced to APHA 4500-Norg D (In house). An aliquot of sample is digested using a high temperature Kjeldahl digestion to convert nitrogenous compounds to ammonia. Ammonia is determined colorimetrically by discrete analyser. This method is compliant with NEPM (2013) Schedule B(3)
Total Nitrogen as N (TKN + Nox) By Discrete Analyser	EK062G	WATER	In house: Referenced to APHA 4500-Norg / 4500-NO3-. This method is compliant with NEPM (2013) Schedule B(3)
Total Phosphorus as P By Discrete Analyser	EK067G	WATER	In house: Referenced to APHA 4500-P H, Jirka et al (1976), Zhang et al (2006). This procedure involves sulphuric acid digestion of a sample aliquot to break phosphorus down to orthophosphate. The orthophosphate reacts with ammonium molybdate and antimony potassium tartrate to form a complex which is then reduced and its concentration measured at 880nm using discrete analyser. This method is compliant with NEPM (2013) Schedule B(3)
Reactive Phosphorus as P-By Discrete Analyser	EK071G	WATER	In house: Referenced to APHA 4500-P F Ammonium molybdate and potassium antimonyl tartrate reacts in acid medium with othophosphate to form a heteropoly acid -phosphomolybdic acid - which is reduced to intensely coloured molybdenum blue by ascorbic acid. Quantification is by Discrete Analyser. This method is compliant with NEPM (2013) Schedule B(3)
Ionic Balance by PCT DA and Turbi SO4 DA	* EN055 - PG	WATER	In house: Referenced to APHA 1030F. This method is compliant with NEPM (2013) Schedule B(3)
Chemical Oxygen Demand (COD) (Spectrophotometric)	EP026SP	WATER	In house: Referenced to APHA 5220 D. Samples are digested with a known excess of an acidic potassium dichromate solution using silver sulfate as a catalyst. The chromium is reduced from the Cr (VI) oxidation state to the Cr (III) state by the oxygen present in the organic material. Both of these chromium species are coloued and absorb in the visible region of (400nm & 600nm) the spectrum. The oxidisable organic matter can be calculated in terms of oxygen equivalents.

Analytical Methods	Method	Matrix	Method Descriptions
TRH - Semivolatile Fraction	EP071	WATER	In house: Referenced to 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 the QC requirements of NEPM (2013) Schedule B(3)
PAH/Phenols (GC/MS - SIM)	EP075(SIM)	WATER	In house: Referenced to 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 (2013) Schedule B(3)
TRH Volatiles/BTEX	EP080	WATER	In house: Referenced to 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 the QC requirements of NEPM (2013) Schedule B(3)

Preparation Methods	Method	Matrix	Method Descriptions
TKN/TP Digestion	EK061/EK067	WATER	In house: Referenced to APHA 4500 Norg - D; APHA 4500 P - H. This method is compliant with NEPM (2013) Schedule B(3)
Separatory Funnel Extraction of Liquids	ORG14	WATER	In house: Referenced to USEPA SW 846 - 3510B 100 mL to 1L of sample is transferred to a separatory funnel and serially extracted three times using DCM for each extract. The resultant extracts are combined, dehydrated and concentrated for analysis. This method is compliant with NEPM (2013) Schedule B(3) . ALS default excludes sediment which may be resident in the container.
Volatiles Water Preparation	ORG16-W	WATER	A 5 mL aliquot or 5 mL of a diluted sample is added to a 40 mL VOC vial for sparging.

CHAIN OF CUSTODY

Lab: ***SGS Laboratory***
Address: C/-Telikom Depo, 2 Mile, Port Moresby, NCD: Section :387, Lot: 1
Phone: 675 3250433 / 3256274

PGO 4429

CLIENT: ExxonMobil PNG Limited (Environment and Regulator Group)	**TURNAROUND REQUIREMENTS :** (Standard TAT may be longer for some tests e.g., Ultra Trace Organics)	☒ Standard TAT (List due date):	**FOR LABORATORY USE ONLY (Circle)**
OFFICE: Accounts Payable PO Box 118, Port Moresby, PNG.		☐ Non Standard or urgent TAT (List due date):	Custody Seal Intact? Yes No
PROJECT: PNG LNG - LNGP	**SGS QUOTE NO.:** PG-OGC-Q-15-020	**COC SEQUENCE NUMBER (Circle)**	Free ice / frozen ice bricks present upon receipt? Yes No
ORDER NUMBER: 4501452296	**SGS Contact:** Brendon Wurr (675) 325 6274 / 7200 5502	COC: 1 2 3 4 5 6 7	Random Sample Temperature on Receipt: °C
PROJECT MANAGER: Melanie Bok	**CONTACT PH:** :+675 309 7213	OF: 1 2 3 4 5 6 7	Other comment:

SAMPLER: B.Sari/F.Aiyele	**SAMPLER MOBILE:** (675) 304 2127 / 304 2048	**RELINQUISHED BY:**	**RECEIVED BY:**		**RECEIVED BY:**
COC emailed to SGS? (YES / NO)	**EDD FORMAT (or default):**	Vagi	Jane Mark		
Email Reports to (will default to PM if no other addresses are listed):	LNGP.Lab.Supervisor@exxonmobil.com; EMPNG-LNGP-ENVIRONMENT2@exxonmobil.com	DATE/TIME:	DATE/TIME:	DATE/TIME:	DATE/TIME:
Email Invoice to (will default to PM if no other addresses are listed):	luke.porosa@exxonmobil.com; EMPNG-LNGP-ENVIRONMENT2@exxonmobil.com	2 Dec 2019	02/12/19 @ 11:30am		

COMMENTS/SPECIAL HANDLING/STORAGE OR DISPOSAL: Please advise on date and time of testing condutcted

SGS USE	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 CONTAINERS	BOD								Comments on likely contaminant levels, dilutions, or samples requiring specific QC analysis etc.
	MV - 2	2-Dec-19	W	1xP	1	X								
	GW-5	2-Dec-19	W	1xP	1	X								
	GW-11	2-Dec-19	W	1xP	1	X								
	GW-12	2-Dec-19	W	1xP	1	X								
	GW-13	2-Dec-19	W	1xP	1	X						* (x 8) 250mL HDPE Bottles		
	GW-14	2-Dec-19	W	1xP	1	X						* (x 10) 500mL HDPE Bottles		
	GW-15	2-Dec-19	W	1xP	1	X								
	GW 17	2-Dec-19	W	1xP	1	X								
	GW 19	2-Dec-19	W	1xP	1	X								
	GW 20	2-Dec-19	W	1xP	1	X								
	GW 21	2-Dec-19	W	1xP	1	X								
	GW 22	2-Dec-19	W	1xP	1	X								
	GW 23	2-Dec-19	W	1xP	1	X								
	GW 24	2-Dec-19	W	1xP	1	X								
	QC1	2-Dec-19	W	1xP	1	X								
	QC2	2-Dec-19	W	1xP	1	X								
	QC3	2-Dec-19	W	1xP	1	X								
	QC4	2-Dec-19	W	1xP	1	X								
				TOTAL	18									

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 Plastic
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 = Sulfuric Preserved Plastic; F = Formaldehyde Preserved Glass;
Z = Zinc Acetate Preserved Bottle; E = EDTA Preserved Bottles; ST = Sterile Bottle; ASS = Plastic Bag for Acid Sulphate Soils; B = Unpreserved Bag.

LABORATORY REPORT COVER SHEET

Date: **16 December 2019**

To: **Exxon Mobil PNG Ltd**
P. O. Box 118
Jackson Parade, 7 Mile
NCD 121
Papua New Guinea

Attention: **Billy Sari**

YOUR REFERENCE: **MV-2 to QC4**
Date Sampled: 02/12/2019
Date Tested: 2/12/19

LABORATORY REPORT NUMBER: PG04429
NUMBER OF SAMPLES: 18 Waste Water

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.

BRENDON WURR

EHS PNG LAB MANAGER

SGS Australia Pty Ltd
ABN 44 000 964 278
Environment, Health and Safety
Middleton Square Section 2, Lot 8, Unit B1-3
8mile Port Moresby NCD Papua New Guinea
t +675 325 6274
f +675 323 1697
www.sgs.com.au
Member of the SGS Group

Client: Exxon Mobil PNG Ltd
Project: Waste Water Quality Monitoring

Date Received: 2/12/19
Report Date: 16/12/19

LABORATORY REPORT

C O N T E N T S

Client: Exxon Mobil PNG Ltd
Project: Waste Water Quality Monitoring

Date Received: 2/12/19
Report Date: 16/12/19

LABORATORY REPORT

Our Reference Your Reference Date Sampled	Units	PG04429-1 MV-2 2/12/2019	PG04429-2 GW-5 2/12/2019	PG04429-3 GW-11 2/12/2019	PG04429-4 GW-12 2/12/2019
Biochemical Oxygen Demand,BOD	mg/L	8.9	<5.0	7.2	8.0

Client: Exxon Mobil PNG Ltd
Project: Waste Water Quality Monitoring

Date Received: 2/12/19
Report Date: 16/12/19

LABORATORY REPORT

Our Reference Your Reference Date Sampled	Units	PG04429-5 GW-13 2/12/2019	PG04429-6 GW-14 2/12/2019	PG04429-7 GW-15 2/12/2019	PG04429-8 GW17 2/12/2019
Biochemical Oxygen Demand,BOD	mg/L	9.6	9.6	8.8	6.4

Client: Exxon Mobil PNG Ltd
Project: Waste Water Quality Monitoring

Date Received: 2/12/19
Report Date: 16/12/19

LABORATORY REPORT

Our Reference Your Reference Date Sampled	Units	PG04429-9 GW19 2/12/2019	PG04429-10 Gw20 2/12/2019	PG04429-11 GW21 2/12/2019	PG04429-12 Gw22 2/12/2019
Biochemical Oxygen Demand,BOD	mg/L	8.0	15	18	19

Client: Exxon Mobil PNG Ltd
Project: Waste Water Quality Monitoring

Date Received: 2/12/19
Report Date: 16/12/19

LABORATORY REPORT

Our Reference Your Reference Date Sampled	Units	PG04429-13 GW23 2/12/2019	PG04429-14 GW24 2/12/2019	PG04429-15 QC1 2/12/2019	PG04429-16 QC2 2/12/2019
Biochemical Oxygen Demand,BOD	mg/L	9.6	<5.0	22	16

Client: Exxon Mobil PNG Ltd
Project: Waste Water Quality Monitoring

Date Received: 2/12/19
Report Date: 16/12/19

LABORATORY REPORT

Our Reference Your Reference Date Sampled	Units	PG04429-17 QC3 2/12/2019	PG04429-18 QC4 2/12/2019
Biochemical Oxygen Demand,BOD	mg/L	15	<5.0

Client: Exxon Mobil PNG Ltd
Project: Waste Water Quality Monitoring

Date Received: 2/12/19
Report Date: 16/12/19

LABORATORY REPORT

QUALITY ASSURANCE / QUALITY CONTROL

Tests	Units	Blank	Laboratory Reference / Sample #	Replicate
Biochemical Oxygen Demand,BOD	mg/L	<5.0	PG04429-1	8.9 || 8.8 || RPD: 1

Tests	Units	Blank	Laboratory Reference / Sample #	Replicate
Biochemical Oxygen Demand,BOD	mg/L	<5.0	PG04429-11	18 || 19 || RPD: 5

Notes
Duplicates has to be within 15% RPD

Client: Exxon Mobil PNG Ltd
Project: Waste Water Quality Monitoring

Date Received: 2/12/19
Report Date: 16/12/19

LABORATORY REPORT

Tests	Units	LOR	Method
Biochemical Oxygen Demand,BOD	mg/L	5	AN 183

Client: Exxon Mobil PNG Ltd
Project: Waste Water Quality Monitoring

Date Received: 2/12/19
Report Date: 16/12/19

LABORATORY REPORT

NOTES

LOR - Limit of Reporting
† This test is not covered by our NATA accreditation.
^ Analyses at our Cairns Lab NATA Accrediation No 2562 (3146)
*Indicative data, theoretical holding time exceeded
OMR - Over Measuring Range

Unless it has been reported that sampling was performed by SGS, samples have been analysed as received.
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APPENDIX C: FIELD NOTES

Appendix 3: Groundwater Bore Field Monitoring Sheet

GROUNDWATER MONITORING FIELD DATA SHEET

Site Details	
Date: November 29, 2019	Location: Landfill
Well ID: LNGP-GW~~0~~11	Casing marker/ID:
Sample by:	Easting: Northing:

Well Details	
SWL (Start): (mBTOC)	Casing material:
Drill depth: 9.165 (m)	Screen length: (m)
Casing diameter: 50mm (m)	

Gauging 29/11 @ 0834 hrs

Well Condition: • Monument damaged ☐ Yes / ☑ No • Well ID clearly marked ☑ Yes / ☐ No • Cover Locked ☑ Yes / ☐ No • Casing cap in place ☑ Yes / ☐ No	Gauging reference point: • Monument top ☐ • Casing top ☐ • Ground level ☐ • Other defined point / mark: ☐ _____
Gauging method: ☑ Interface Probe ☐ Weighted Tape	NAPL presence indicated: ☐ Yes ☐ No
Gauge depth to Water: 4.93m (mm)	Gauge depth to NAPL: (mm)

Purging

Purge method: ☑ **Bailer** [Type: ☐PVC ☐SS ☑Teflon ☐Other_____]	☐ **Pump** [Type: ☐PVC ☐SS ☐Teflon ☐Other_____]
Casing diameter: 50 (mm)	Water column height: (m)
Minimum Purge Volume (calculated): 25 (L)	Actual volume purged: (L)
Time purging started: 1151 —	Time purging stopped:
Flow rate during purging: (L/min)	Pump depth (if used) set at: (m)

25L

Field Measurements and Stabilization (during Purging)

Time (mins)	SWL (mBTOC)	Vol (L)	Cond (mS)	pH	Temp °C	DO (ppm)	Redox (mV)	Turb (NTU)	Observations (Colour, odour, etc)
9		10L	2243	7.25	30.26	6.26	-102	72.6	

Sampling ☐ *Tick if same as purge method details*

Sampling method: ☐ **Bailer** [Type: ☐PVC ☐SS ☐Teflon ☐Other_____]	☐ **Pump** [Type: ☐PVC ☐SS ☐Teflon ☐Other_____]
Date sampled:	Sample by:
Time sampled:	Photos taken:

Notes

Gauging 29/11 @ 0834 hrs.
Purging 1/12 @ 1151 – Finish 1208 – 12.5L
Sampling at 0855

1151 – 1200 – 10L
1200 – 1208 – 2.5L

Appendix 3: Groundwater Bore Field Monitoring Sheet

GROUNDWATER MONITORING FIELD DATA SHEET

Site Details	
Date: November 29, 2019	Location: LNG Storage Tanks
Well ID: LNGP - GW# 21	Casing marker/ID:
Sample by:	Easting: Northing:

Well Details			
SWL (Start):	(mBTOC)	Casing material:	
Drill depth: 10.314	(m)	Screen length:	(m)
Casing diameter: 50mm	(m)		

Gauging 29/11 @ 0848

Well Condition: • Monument damaged ☐ Yes / ☑ No • Well ID clearly marked ☑ Yes / ☐ No • Cover Locked ☑ Yes / ☐ No • Casing cap in place ☑ Yes / ☐ No	Gauging reference point: • Monument top ☐ • Casing top ☐ • Ground level ☐ • Other defined point / mark: ☐ _____
Gauging method: ☑ Interface Probe ☐ Weighted Tape	NAPL presence indicated: ☐ Yes ☐ No
Gauge depth to Water: 1.90m (mm)	Gauge depth to NAPL: (mm)

Purging

Purge method: ☑ **Bailer**	☐ **Pump**
[Type: ☐PVC ☐SS ☑Teflon ☐Other_____]	[Type: ☐PVC ☐SS ☐Teflon ☐Other_____]
Casing diameter: 50 (mm)	Water column height: (m)
Minimum Purge Volume (calculated): 50 (L)	Actual volume purged: (L)
Time purging started: 1434 - 1448	Time purging stopped:
Flow rate during purging: (L/min)	Pump depth (if used) set at: (m)

50L

Field Measurements and Stabilization (during Purging)

Time (mins)	SWL (mBTOC)	Vol (L)	Cond (mS)	pH	Temp °C	DO (ppm)	Redox (mV)	Turb (NTU)	Observations (Colour, odour, etc)
9		10	38330	6.70	31.6	6.56	-12.1	158	dead Organic matter odor
4		4.6	38750	6.60	31.6	6.04	-17.9	424	

Sampling ☐ *Tick if same as purge method details*

Sampling method: ☐ **Bailer**	☐ **Pump**
[Type: ☐PVC ☐SS ☐Teflon ☐Other_____]	[Type: ☐PVC ☐SS ☐Teflon ☐Other_____]
Date sampled:	Sample by:
Time sampled:	Photos taken:

Notes

Gauging 29/11 @ 0848
Purging 1/12 @ 1434 hrs
Sampling 2/12 @ 1055

1434 - 1443 10L
1444 - 1448 4.6L

Appendix 3: Groundwater Bore Field Monitoring Sheet

GROUNDWATER MONITORING FIELD DATA SHEET

Site Details	New Site		
Date: November 29, 2019		Location: LNG Warehouse	
Well ID: LNGP – GW 23		Casing marker/ID:	
Sample by:		Easting:	Northing:
Well Details			
SWL (Start):	(mBTOC)	Casing material:	
Drill depth:	(m)	Screen length:	(m)
Casing diameter: 100mm	(m)		
Gauging	29/11 @ 0904		
Well Condition: • Monument damaged ☐ Yes / ☐ No • Well ID clearly marked ☐ Yes / ☐ No • Cover Locked ☐ Yes / ☐ No • Casing cap in place ☐ Yes / ☐ No		Gauging reference point: • Monument top ☐ • Casing top ☐ • Ground level ☐ • Other defined point / mark: ☐ _____	
Gauging method: ☑ Interface Probe ☐ Weighted Tape		NAPL presence indicated: ☐ Yes ☐ No	
Gauge depth to Water: 1.68m	(mm)	Gauge depth to NAPL:	(mm)
Purging			
Purge method: ☑ Bailer [Type: ☐PVC ☐SS ☑Teflon ☐Other_____]		☐ Pump [Type: ☐PVC ☐SS ☐Teflon ☐Other_____]	
Casing diameter: 100	(mm)	Water column height:	(m)
Minimum Purge Volume (calculated): 8.8	(L)	Actual volume purged:	(L)
Time purging started: 1520		Time purging stopped:	
Flow rate during purging:	(L/min)	Pump depth (if used) set at:	(m)

Field Measurements and Stabilization (during Purging)

Time (mins)	SWL (mBTOC)	Vol (L)	Cond (mS)	pH	Temp °C	DO (ppm)	Redox (mV)	Turb (NTU)	Observations (Colour, odour, etc)
8		9.8	16160	6.85	30.70	6.78	-206	16	

Sampling	☐ *Tick if same as purge method details*
Sampling method: ☐ Bailer [Type: ☐PVC ☐SS ☐Teflon ☐Other_____]	☐ Pump [Type: ☐PVC ☐SS ☐Teflon ☐Other_____]
Date sampled:	Sample by:
Time sampled:	Photos taken:

Notes

Gauging at 29/11 @ 0904 hrs
Purging at 1520 1/12 – 1528 ⇒ 9.8L
Sampling 2/12 @ 1116

1520 – 1528 : 9.8L

Field Blank : QC 4

Appendix 3: Groundwater Bore Field Monitoring Sheet

GROUNDWATER MONITORING FIELD DATA SHEET

Site Details	
Date: November 29, 2019	Location: LNG Maintenance W/Shop
Well ID: LNGP_GW 20	Casing marker/ID:
Sample by:	Easting: Northing:

Well Details			
SWL (Start):	(mBTOC)	Casing material:	
Drill depth: 11.850	(m)	Screen length:	(m)
Casing diameter: 50mm	(m)		

Gauging 29/11 @ 0911

Well Condition: • Monument damaged ☐ Yes / ☑ No • Well ID clearly marked ☑ Yes / ☐ No • Cover Locked ☑ Yes / ☐ No • Casing cap in place ☑ Yes / ☐ No	Gauging reference point: • Monument top ☐ • Casing top ☐ • Ground level ☐ • Other defined point / mark: ☐ _____
Gauging method: ☑ Interface Probe ☐ Weighted Tape	NAPL presence indicated: ☐ Yes ☐ No
Gauge depth to Water: 5.70m (mm)	Gauge depth to NAPL: (mm)

Purging

Purge method: ☑ **Bailer** [Type: ☐PVC ☐SS ☑Teflon ☐Other_____]	☐ **Pump** [Type: ☐PVC ☐SS ☐Teflon ☐Other_____]
Casing diameter: 50 (mm)	Water column height: (m)
Minimum Purge Volume (calculated): 37 (L)	Actual volume purged: (L)
Time purging started: 1400 – 1415	Time purging stopped:
Flow rate during purging: (L/min)	Pump depth (if used) set at: (m)

37L

Field Measurements and Stabilization (during Purging)

Time (mins)	SWL (mBTOC)	Vol (L)	Cond (mS)	pH	Temp °C	DO (ppm)	Redox (mV)	Turb (NTU)	Observations (Colour, odour, etc)
8		10	2640	7.61	30.10	7.31	-166	12.5	
6		48	6017	6.98	30.40	7.12	-44	134	

Sampling ☐ *Tick if same as purge method details*

Sampling method: ☐ **Bailer** [Type: ☐PVC ☐SS ☐Teflon ☐Other_____]	☐ **Pump** [Type: ☐PVC ☐SS ☐Teflon ☐Other_____]
Date sampled:	Sample by:
Time sampled:	Photos taken:

Notes

Gauging 29/11 @ 0911
Purging 1/12 @ 1400 - Finish 1415 @ 14.8L
Sampling 2/12 @ 1133

1400 - 1408 – 10L
1409 - 1415 – 14.8L

Duplicate QC#2

Appendix 3: Groundwater Bore Field Monitoring Sheet

GROUNDWATER MONITORING FIELD DATA SHEET

Site Details	
Date: November 29, 2019	Location: GW 19 (Camp A)
Well ID: LNGP- GW 19	Casing marker/ID:
Sample by:	Easting: Northing:

Well Details			
SWL (Start):	(mBTOC)	Casing material:	
Drill depth: ~~Fail~~ 13.180	(m)	Screen length:	(m)
Casing diameter: 50mm	(m)		

Gauging 29/11 @ 0648 hrs

Well Condition: • Monument damaged ☐ Yes / ☑ No • Well ID clearly marked ☑ Yes / ☐ No • Cover Locked ☑ Yes / ☐ No • Casing cap in place ☑ Yes / ☐ No	Gauging reference point: • Monument top ☑ • Casing top ☑ • Ground level ☑ • Other defined point / mark: ☐ _____
Gauging method: ☑ Interface Probe ☐ Weighted Tape	NAPL presence indicated: ☐ Yes ☐ No
Gauge depth to Water: ~~3.201~~ 3.71 (mm)	Gauge depth to NAPL: (mm)

Purging

Purge method: ☑ **Bailer** [Type: ☐PVC ☐SS ☑Teflon ☐Other_____]	☐ **Pump** [Type: ☐PVC ☐SS ☐Teflon ☐Other_____]
Casing diameter: 50m (mm)	Water column height: (m)
Minimum Purge Volume (calculated): 57 (L)	Actual volume purged: ~~19.6~~ (L)
Time purging started: 0643	Time purging stopped:
Flow rate during purging: (L/min)	Pump depth (if used) set at: (m)

57L

Field Measurements and Stabilization (during Purging)

Time (mins)	SWL (mBTOC)	Vol (L)	Cond (mS)	pH	Temp °C	DO (ppm)	Redox (mV)	Turb (NTU)	Observations (Colour, odour, etc)
		10	9139	7.00	30.20	7.28	405	16	

Sampling ☐ *Tick if same as purge method details*

Sampling method: ☐ **Bailer** [Type: ☐PVC ☐SS ☐Teflon ☐Other_____]	☐ **Pump** [Type: ☐PVC ☐SS ☐Teflon ☐Other_____]
Date sampled:	Sample by:
Time sampled:	Photos taken:

Notes

Gauging done 29/11 @ 0648 hrs
Purging 02/12 @ 0643 finish 0716 (19.6L - actual volume)
Sampled 02/12 @ 0640

Appendix 3: Groundwater Bore Field Monitoring Sheet

GROUNDWATER MONITORING FIELD DATA SHEET

Site Details	
Date: 29 November 2019	Location: Incinerator
Well ID: LNGP- GW~~##~~17	Casing marker/ID:
Sample by:	Easting: Northing:

Well Details	
SWL (Start): (mBTOC)	Casing material:
Drill depth: 11.356 (m)	Screen length: (m)
Casing diameter: 50mm (m)	

Gauging 29/11 @ 0703	
Well Condition: • Monument damaged ☐ Yes / ☑ No • Well ID clearly marked ☑ Yes / ☐ No • Cover Locked ☑ Yes / ☐ No • Casing cap in place ☑ Yes / ☐ No	Gauging reference point: • Monument top ☑ • Casing top ☐ • Ground level ☐ • Other defined point / mark: ☐ _____
Gauging method: ☑ Interface Probe ☐ Weighted Tape	NAPL presence indicated: ☐ Yes ☐ No
Gauge depth to Water: 5.67m (mm)	Gauge depth to NAPL: (mm)

Purging	
Purge method: ☑ Bailer [Type: ☐PVC ☐SS ☑Teflon ☐Other_____]	☐ Pump [Type: ☐PVC ☐SS ☐Teflon ☐Other_____]
Casing diameter: 50mm (mm)	Water column height: (m)
Minimum Purge Volume (calculated): 34 (L)	Actual volume purged: (L)
Time purging started: 0726 – 0800	Time purging stopped:
Flow rate during purging: (L/min)	Pump depth (if used) set at: (m)

342

Field Measurements and Stabilization (during Purging)

Time (mins)	SWL (mBTOC)	Vol (L)	Cond (mS)	pH	Temp °C	DO (ppm)	Redox (mV)	Turb (NTU)	Observations (Colour, odour, etc)
		10	2465	7.45	30.90	7.14	+33	213	

Sampling ☐ *Tick if same as purge method details*	
Sampling method: ☐ Bailer [Type: ☐PVC ☐SS ☐Teflon ☐Other_____]	☐ Pump [Type: ☐PVC ☐SS ☐Teflon ☐Other_____]
Date sampled:	Sample by:
Time sampled:	Photos taken:

Notes

Gauging done 29/11 @ 0703
Purging started 1/12 @ 0726 - Finish 0800 - Actual volume: 35.2 L
Sampled 2/12 @ 0705

Appendix 3: Groundwater Bore Field Monitoring Sheet

GROUNDWATER MONITORING FIELD DATA SHEET

Site Details	
Date: November 29, 2019	Location: Gate #~~4~~2
Well ID: LNGP - ~~GMW5~~ MW 2	Casing marker/ID:
Sample by:	Easting: Northing:

Well Details			
SWL (Start):	(mBTOC)	Casing material:	
Drill depth: 17.10	(m)	Screen length:	(m)
Casing diameter: 50MM	(m)		

Gauging 29/4 @ 0710

Well Condition: • Monument damaged ☐ Yes / ☑ No • Well ID clearly marked ☐ Yes / ☑ No • Cover Locked ☑ Yes / ☐ No • Casing cap in place ☑ Yes / ☐ No	Gauging reference point: • Monument top ☐ • Casing top ☑ • Ground level ☐ • Other defined point / mark: ☐ _____
Gauging method: ☑ Interface Probe ☐ Weighted Tape	NAPL presence indicated: ☐ Yes ☐ No
Gauge depth to Water: 4.40 M (mm)	Gauge depth to NAPL: (mm)

Purging

Purge method: ☑ **Bailer** [Type: ☐PVC ☐SS ☑Teflon ☐Other_____]	☐ **Pump** [Type: ☐PVC ☐SS ☐Teflon ☐Other_____]
Casing diameter: 50mm (mm)	Water column height: (m)
Minimum Purge Volume (calculated): 76 (L)	Actual volume purged: (L)
Time purging started: 0807 – 0845	Time purging stopped:
Flow rate during purging: (L/min)	Pump depth (if used) set at: (m)

76L

Field Measurements and Stabilization (during Purging)

Time (mins)	SWL (mBTOC)	Vol (L)	Cond (mS)	pH	Temp °C	DO (ppm)	Redox (mV)	Turb (NTU)	Observations (Colour, odour, etc)
10		10	5333	6.96	30.55	6.85	+32	30.4	

Sampling ☐ *Tick if same as purge method details*

Sampling method: ☐ **Bailer** [Type: ☐PVC ☐SS ☐Teflon ☐Other_____]	☐ **Pump** [Type: ☐PVC ☐SS ☐Teflon ☐Other_____]
Date sampled:	Sample by:
Time sampled:	Photos taken:

Notes

Gauging @ 29/4 @ 0710
Purging 1/12/19 @ 0807 Finish 0845 hrs (28.4 L)
Sampling at 0715 hrs

Appendix 3: Groundwater Bore Field Monitoring Sheet

GROUNDWATER MONITORING FIELD DATA SHEET

Site Details

Date: November 29, 2019	Location: hard fill
Well ID: LNGP-GW14	Casing marker/ID:
Sample by:	Easting: Northing:

Well Details

SWL (Start): (mBTOC)	Casing material:
Drill depth: 11.989 (m)	Screen length: (m)
Casing diameter: 50mm (m)	

Gauging 29/11 @ 0730

Well Condition: • Monument damaged ☐ Yes / ☑ No • Well ID clearly marked ☑ Yes / ☐ No • Cover Locked ☑ Yes / ☐ No • Casing cap in place ☑ Yes / ☐ No	Gauging reference point: • Monument top ☑ • Casing top ☐ • Ground level ☐ • Other defined point / mark: ☐ _____
Gauging method: ☑ Interface Probe ☐ Weighted Tape	NAPL presence indicated: ☐ Yes ☐ No
Gauge depth to Water: 4.57m (mm)	Gauge depth to NAPL: (mm)

Purging

Purge method: ☑ Bailer	☐ Pump
[Type: ☐PVC ☐SS ☑Teflon ☐Other_____]	[Type: ☐PVC ☐SS ☐Teflon ☐Other_____]
Casing diameter: 50m (mm)	Water column height: (m)
Minimum Purge Volume (calculated): 44 (L)	Actual volume purged: (L)
Time purging started: ~~1013~~ 1052 1124	Time purging stopped:
Flow rate during purging: (L/min)	Pump depth (if used) set at: (m)

44L

Field Measurements and Stabilization (during Purging)

Time (mins)	SWL (mBTOC)	Vol (L)	Cond (mS)	pH	Temp °C	DO (ppm)	Redox (mV)	Turb (NTU)	Observations (Colour, odour, etc)
10		10	8225	6.79	30.58	~~6.29~~	22.6	236	
~~10~~		~~9.2~~	8227	6.74	~~32.80~~	6.01	-113	392	

Sampling ☐ *Tick if same as purge method details*

Sampling method: ☐ Bailer	☐ Pump
[Type: ☐PVC ☐SS ☐Teflon ☐Other_____]	[Type: ☐PVC ☐SS ☐Teflon ☐Other_____]
Date sampled:	Sample by:
Time sampled:	Photos taken:

Notes

Gauging 29/11 @ 0730
Purging 1013 ~~@ 1/12~~ 1052 @ 1124 – (19.2L)
Sampling: 2/12 @ 0826

1052 – 1058 – 10L
1059 – 1124 – 89.2

Appendix 3: Groundwater Bore Field Monitoring Sheet

GROUNDWATER MONITORING FIELD DATA SHEET

Site Details	
Date: November 29, 2019	Location: Landfill
Well ID: LNGP- GW05	Casing marker/ID:
Sample by:	Easting: Northing:

Well Details			
SWL (Start):	(mBTOC)	Casing material:	
Drill depth: 15.15	(m)	Screen length:	(m)
Casing diameter: 50mm	(m)		

Gauging 29/11 @ 0738

Well Condition: • Monument damaged ☐ Yes / ☑ No • Well ID clearly marked ☑ Yes / ☐ No • Cover Locked ☑ Yes / ☐ No • Casing cap in place ☑ Yes / ☐ No	Gauging reference point: • Monument top ☑ • Casing top ☐ • Ground level ☐ • Other defined point / mark: ☐ _____
Gauging method: ☑ Interface Probe ☐ Weighted Tape	NAPL presence indicated: ☐ Yes ☐ No
Gauge depth to Water: 3885M (mm)	Gauge depth to NAPL: (mm)

Purging

Purge method: ☑ **Bailer** [Type: ☐PVC ☐SS ☑Teflon ☐Other_____]	☐ **Pump** [Type: ☐PVC ☐SS ☐Teflon ☐Other_____]
Casing diameter: 50 (mm)	Water column height: (m)
Minimum Purge Volume (calculated): 68 (L)	Actual volume purged: (L)
Time purging started: 0858 - 0945	Time purging stopped:
Flow rate during purging: (L/min)	Pump depth (if used) set at: (m)

68L

Field Measurements and Stabilization (during Purging)

Time (mins)	SWL (mBTOC)	Vol (L)	Cond (mS)	pH	Temp °C	DO (ppm)	Redox (mV)	Turb (NTU)	Observations (Colour, odour, etc)
			8538	7.08	30.35	660	-04	23.5	

Sampling ☐ *Tick if same as purge method details*

Sampling method: ☐ **Bailer** [Type: ☐PVC ☐SS ☐Teflon ☐Other_____]	☐ **Pump** [Type: ☐PVC ☐SS ☐Teflon ☐Other_____]
Date sampled:	Sample by:
Time sampled:	Photos taken:

Notes

Gauging conducted 29/11 @ 0738
Purging 0858 1/12
Sampled 2/12 @ 0746

0858 - 0906 - 10L
0910 - 0931 - 10L
0933 - 0945 - 4.2L
Field Blank # QC3

Appendix 3: Groundwater Bore Field Monitoring Sheet

GROUNDWATER MONITORING FIELD DATA SHEET

Site Details	
Date: November 29, 2019	Location: Land fill
Well ID: LNGP-GW 12	Casing marker/ID:
Sample by:	Easting: Northing:

Well Details	
SWL (Start): (mBTOC)	Casing material:
Drill depth: 7.940 (m)	Screen length: (m)
Casing diameter: 50mm (m)	

Gauging 29/11 @ 0745 hrs

Well Condition: • Monument damaged ☑ Yes / ☑ No • Well ID clearly marked ☑ Yes / ☐ No • Cover Locked ☑ Yes / ☐ No • Casing cap in place ☑ Yes / ☐ No	Gauging reference point: • Monument top ☐ • Casing top ☐ • Ground level ☐ • Other defined point / mark: ☐ _____
Gauging method: ☑ Interface Probe ☐ Weighted Tape	NAPL presence indicated: ☐ Yes ☐ No
Gauge depth to Water: 3.97 m (mm)	Gauge depth to NAPL: (mm)

Purging

Purge method: ☑ **Bailer** [Type: ☐PVC ☐SS ☑Teflon ☐Other_____]	☐ **Pump** [Type: ☐PVC ☐SS ☐Teflon ☐Other_____]
Casing diameter: 50mm (mm)	Water column height: (m)
Minimum Purge Volume (calculated): 24 (L)	Actual volume purged: (L)
Time purging started: 0950 ~~1010~~	Time purging stopped:
Flow rate during purging: (L/min)	Pump depth (if used) set at: (m)

Field Measurements and Stabilization (during Purging)

Time (mins)	SWL (mBTOC)	Vol (L)	Cond (mS)	pH	Temp °C	DO (ppm)	Redox (mV)	Turb (NTU)	Observations (Colour, odour, etc)
16		10L	2559	7.48	30.58	6.85	+19	40	

Sampling ☐ *Tick if same as purge method details*

Sampling method: ☐ **Bailer** [Type: ☐PVC ☐SS ☐Teflon ☐Other_____]	☐ **Pump** [Type: ☐PVC ☐SS ☐Teflon ☐Other_____]
Date sampled:	Sample by:
Time sampled:	Photos taken:

Notes

Gauging 29/11 @ 0745 hrs
Purging 1/12 @ 0950 → 1010 - 10.2L
Sampling of 2/12 @ 0803

0950 - 0956 - 16L
1009 - 1010 -

~~24L~~ 24L

Appendix 3: Groundwater Bore Field Monitoring Sheet

GROUNDWATER MONITORING FIELD DATA SHEET

Site Details	
Date: November 29, 299	Location: Construction Pond
Well ID: LNGP- GW 22	Casing marker/ID:
Sample by:	Easting: Northing:

Well Details			
SWL (Start):	(mBTOC)	Casing material:	
Drill depth: 8.415	(m)	Screen length:	(m)
Casing diameter: 50MM	(m)		

Gauging 29/11 @ 0754 hrs

Well Condition: • Monument damaged ☐ Yes / ☑ No • Well ID clearly marked ☑ Yes / ☐ No • Cover Locked ☑ Yes / ☐ No • Casing cap in place ☑ Yes / ☐ No	Gauging reference point: • Monument top ☑ • Casing top ☐ • Ground level ☐ • Other defined point / mark: ☐ _____
Gauging method: ☑ Interface Probe ☐ Weighted Tape	NAPL presence indicated: ☐ Yes ☐ No
Gauge depth to Water: 2.50m (2.5) (mm)	Gauge depth to NAPL: (mm)

Purging

Purge method: ☑ **Bailer** [Type: ☐PVC ☐SS ☑Teflon ☐Other_____]	☐ **Pump** [Type: ☐PVC ☐SS ☐Teflon ☐Other_____]
Casing diameter: 50mm (mm)	Water column height: (m)
Minimum Purge Volume (calculated): 35 (L)	Actual volume purged: (L)
Time purging started: 1459	Time purging stopped:
Flow rate during purging: (L/min)	Pump depth (if used) set at: (m)

35L

Field Measurements and Stabilization (during Purging)

Time (mins)	SWL (mBTOC)	Vol (L)	Cond (mS)	pH	Temp °C	DO (ppm)	Redox (mV)	Turb (NTU)	Observations (Colour, odour, etc)
7		10	~~58110~~ 58110	6.90	30.10	5.93 ~~5.68~~	-11	31	
7		9.2	59170	6.88	30.2	5.86	-51	61	

Sampling ☐ *Tick if same as purge method details*

Sampling method: ☐ **Bailer** [Type: ☐PVC ☐SS ☐Teflon ☐Other_____]	☐ **Pump** [Type: ☐PVC ☐SS ☐Teflon ☐Other_____]
Date sampled:	Sample by:
Time sampled:	Photos taken:

Notes

- Gauging 29/11 @ 0754 hrs
- Casing at top not in good condition due to rust
- Purging ~~Date~~ 1/12 @ 1459 hrs Finish: 1515 : 19.2L
- Sampling 2/12 @ 0934

~~1459 - 1506~~

1459 - 1506 - 10 L

1508 - 1515 = 9.2L

* Duplicate QC

Appendix 3: Groundwater Bore Field Monitoring Sheet

GROUNDWATER MONITORING FIELD DATA SHEET

Site Details (New site)	
Date: November 29. 2019	Location: Jetty
Well ID: LNG P-GW ~~19~~ 24	Casing marker/ID:
Sample by:	Easting: Northing:
Well Details	
SWL (Start): (mBTOC)	Casing material:
Drill depth: (m)	Screen length: (m)
Casing diameter: 110MM (m)	
Gauging 29/11 @ 0803 hrs	
Well Condition: • Monument damaged ☐ Yes / ☐ No • Well ID clearly marked ☐ Yes / ☐ No • Cover Locked ☐ Yes / ☐ No • Casing cap in place ☐ Yes / ☐ No	Gauging reference point: • Monument top ☐ • Casing top ☐ • Ground level ☐ • Other defined point / mark: ☐ _____
Gauging method: ☑ Interface Probe ☐ Weighted Tape	NAPL presence indicated: ☐ Yes ☐ No
Gauge depth to Water: 4.70 m (mm)	Gauge depth to NAPL: (mm)
Purging	
Purge method: ☑ **Bailer**	☐ **Pump**
[Type: ☐PVC ☐SS ☑Teflon ☐Other_____]	[Type: ☐PVC ☐SS ☐Teflon ☐Other_____]
Casing diameter: 100m (mm)	Water column height: (m)
Minimum Purge Volume (calculated): 24 (L)	Actual volume purged: (L)
Time purging started: 1332 - 1352	Time purging stopped:
Flow rate during purging: (L/min)	Pump depth (if used) set at: (m)

Field Measurements and Stabilization (during Purging)

Time (mins)	SWL (mBTOC)	Vol (L)	Cond (mS)	pH	Temp °C	DO (ppm)	Redox (mV)	Turb (NTU)	Observations (Colour, odour, etc)
6		10L	7853	6.89	28.6	6.13	+53.1	16.7	
4		10L	7739	7.05	31.08	6.03	+5.4	46.6	
7		10L	7889	7.03	30.20	6.08	-36.5	28.1	

Sampling ☐ *Tick if same as purge method details*	
Sampling method: ☐ **Bailer** [Type: ☐PVC ☐SS ☐Teflon ☐Other_____]	☐ **Pump** [Type: ☐PVC ☐SS ☐Teflon ☐Other_____]
Date sampled:	Sample by:
Time sampled:	Photos taken:

Notes

- ~~New~~ site
- Gauging 29/11 @ 0803 hrs
- Purging 1/12 @ 1332 Finish 1352 - 43L
- Sampling 2/12 @ 1014

1332 – 1338 10
1338 - 1342 10
1343 – 1350 10
1351 - 1352 13

24L

Appendix 3: Groundwater Bore Field Monitoring Sheet

GROUNDWATER MONITORING FIELD DATA SHEET

Site Details	
Date: November 29, 2019	Location: hand field
Well ID: LHBP-GW 15	Casing marker/ID:
Sample by:	Easting: Northing:

Well Details			
SWL (Start):	(mBTOC)	Casing material:	
Drill depth: 10.695	(m)	Screen length:	(m)
Casing diameter: 50mm	(m)		

Gauging 29/11 @ ~~0822~~ 0824

Well Condition: • Monument damaged ☐ Yes / ☑ No • Well ID clearly marked ☑ Yes / ☐ No • Cover Locked ☑ Yes / ☐ No • Casing cap in place ☑ Yes / ☐ No	Gauging reference point: • Monument top ☑ • Casing top ☐ • Ground level ☐ • Other defined point / mark: ☐ _____
Gauging method: ☑ Interface Probe ☐ Weighted Tape	NAPL presence indicated: ☐ Yes ☐ No
Gauge depth to Water: 6.00m (mm)	Gauge depth to NAPL: (mm)

Purging

Purge method: ☑ **Bailer**	☐ **Pump**
[Type: ☐PVC ☐SS ☐Teflon ☐Other_____]	[Type: ☐PVC ☐SS ☐Teflon ☐Other_____]
Casing diameter: (mm)	Water column height: (m)
Minimum Purge Volume (calculated): 19L (L)	Actual volume purged: (L)
Time purging started: 1134	Time purging stopped:
Flow rate during purging: (L/min)	Pump depth (if used) set at: (m)

19L

Field Measurements and Stabilization (during Purging)

Time (mins)	SWL (mBTOC)	Vol (L)	Cond (mS)	pH	Temp °C	DO (ppm)	Redox (mV)	Turb (NTU)	Observations (Colour, odour, etc)
13		10	4502	7.05	30.18	6.01	-127	9.3	

Sampling ☐ *Tick if same as purge method details*

Sampling method: ☐ **Bailer**	☐ **Pump**
[Type: ☐PVC ☐SS ☐Teflon ☐Other_____]	[Type: ☐PVC ☐SS ☐Teflon ☐Other_____]
Date sampled:	Sample by:
Time sampled:	Photos taken:

Notes

Gauging 29/11 @ 0824
Purging 1/12 @ 1134
Sampling 2/12 @ 0843

1134 - 1147 : 7.2L

Appendix 3: Groundwater Bore Field Monitoring Sheet

GROUNDWATER MONITORING FIELD DATA SHEET

Site Details	
Date: November 29, 2019	Location: Land fill
Well ID: LNGP- ~~MW13~~ GW13	Casing marker/ID:
Sample by:	Easting: Northing:
Well Details	
SWL (Start): (mBTOC)	Casing material:
Drill depth: 8.270 (m)	Screen length: (m)
Casing diameter: 50mm (m)	
Gauging 29/11 @ 0831	
Well Condition: • Monument damaged ☐ Yes / ☑ No • Well ID clearly marked ☑ Yes / ☐ No • Cover Locked ☑ Yes / ☐ No • Casing cap in place ☑ Yes / ☐ No	Gauging reference point: • Monument top ☐ • Casing top ☐ • Ground level ☐ • Other defined point / mark: ☐ _____
Gauging method: ☑ Interface Probe ☐ Weighted Tape	NAPL presence indicated: ☐ Yes ☐ No
Gauge depth to Water: 4.70m (mm)	Gauge depth to NAPL: (mm)
Purging	
Purge method: ☑ **Bailer** [Type: ☐PVC ☐SS ☑Teflon ☐Other_____]	☐ **Pump** [Type: ☐PVC ☐SS ☐Teflon ☐Other_____]
Casing diameter: (mm)	Water column height: (m)
Minimum Purge Volume (calculated): (L)	Actual volume purged: (L)
Time purging started:	Time purging stopped:
Flow rate during purging: (L/min)	Pump depth (if used) set at: (m)

21L

Field Measurements and Stabilization (during Purging)

Time (mins)	SWL (mBTOC)	Vol (L)	Cond (mS)	pH	Temp °C	DO (ppm)	Redox (mV)	Turb (NTU)	Observations (Colour, odour, etc)
5		10L	4873	6.99	30.20	0.84	+32.7	841	
5		10L	5089	7.10	30.50	1.08	+35.0	899	

Sampling ☐ *Tick if same as purge method details*	
Sampling method: ☐ **Bailer** [Type: ☐PVC ☐SS ☐Teflon ☐Other_____]	☐ **Pump** [Type: ☐PVC ☐SS ☐Teflon ☐Other_____]
Date sampled:	Sample by:
Time sampled:	Photos taken:

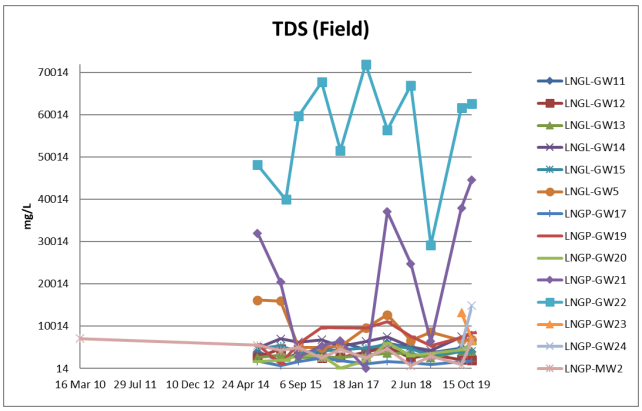
Notes

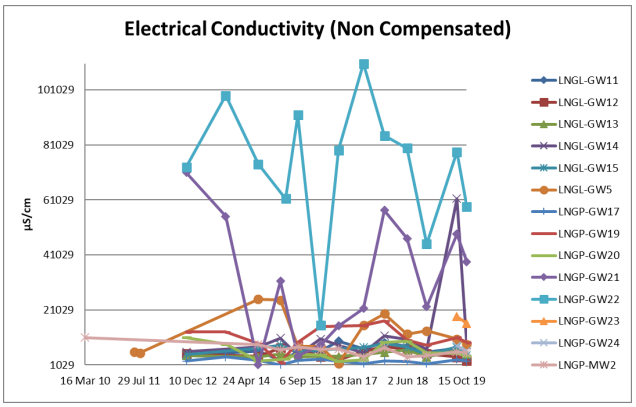
Gauging 29/11 @ 0831
Purging 1/12 @ 1213 @ 1232 → 7.2L
Sampling 2/12 0910

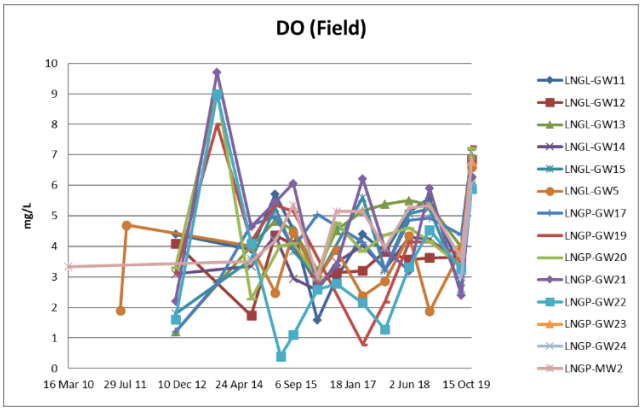
1213 – 1218 → 6L
1220 – 1225 – 10L
1226 – 1232 – 7.2L

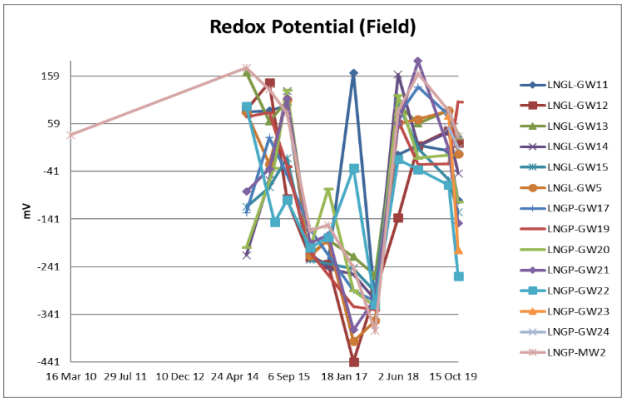
APPENDIX D: FIELD AND LABORATORY CHEMISTRY TRENDS

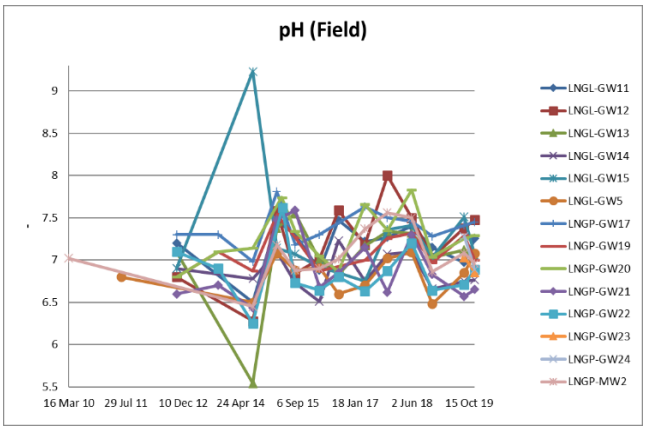
Field water quality parameters



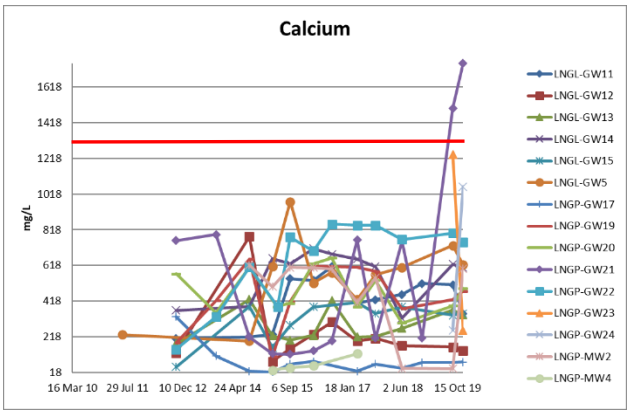


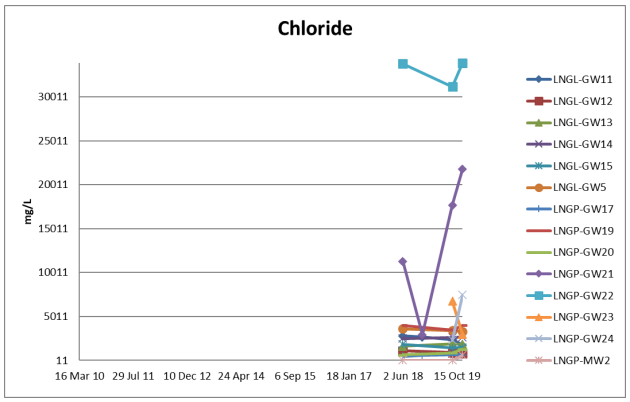


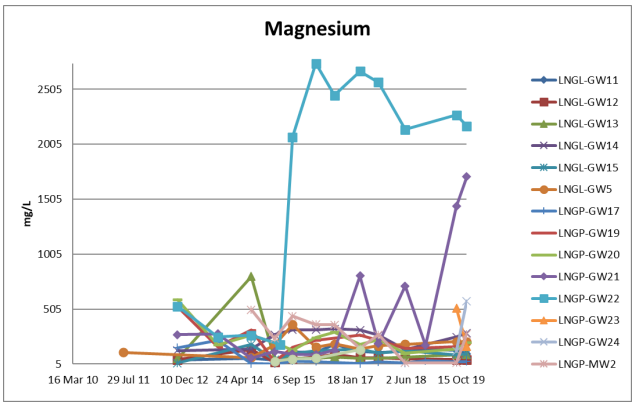


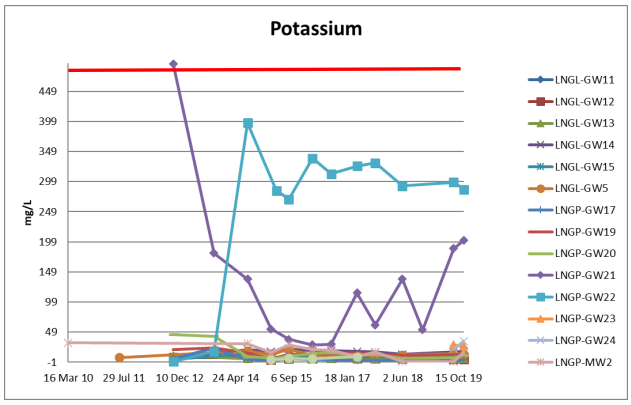


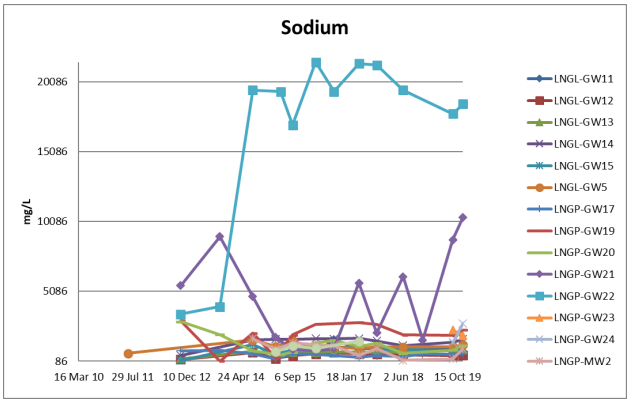
Anions and cations

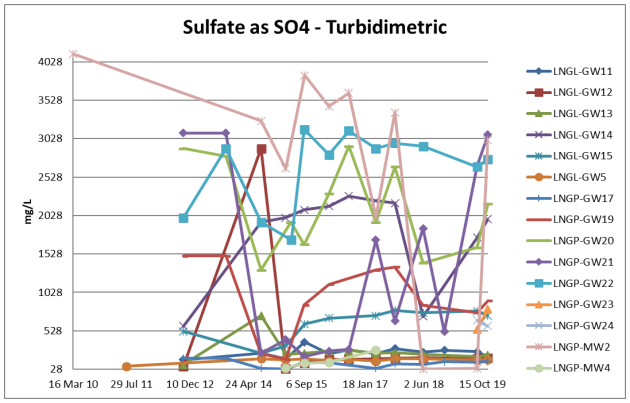






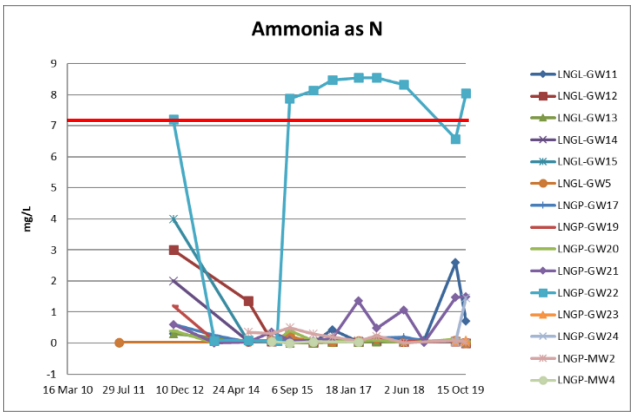


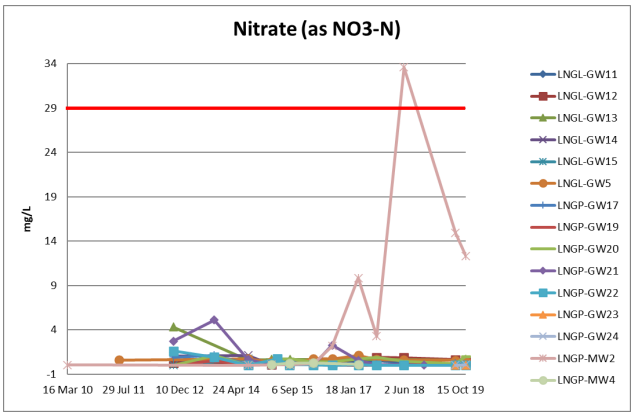


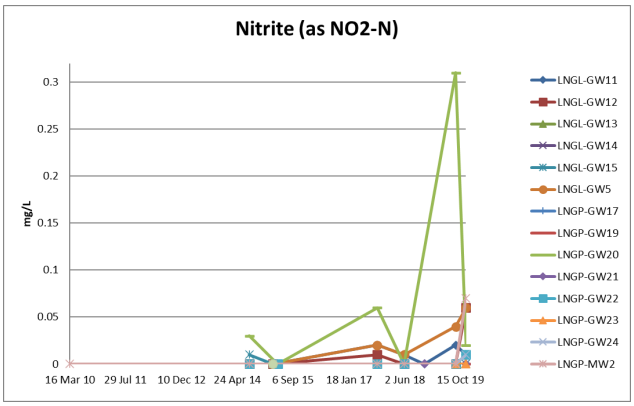


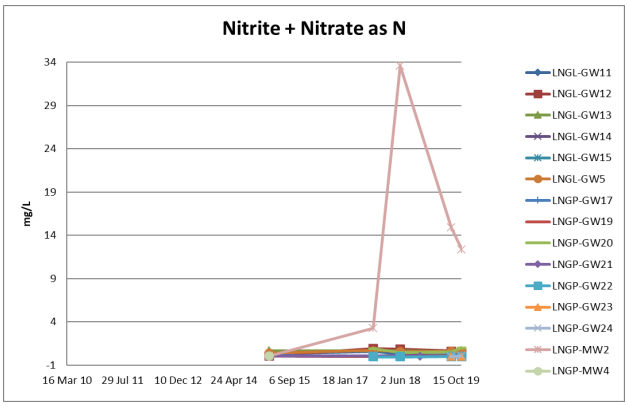
Red line shows permit criteria where relevant

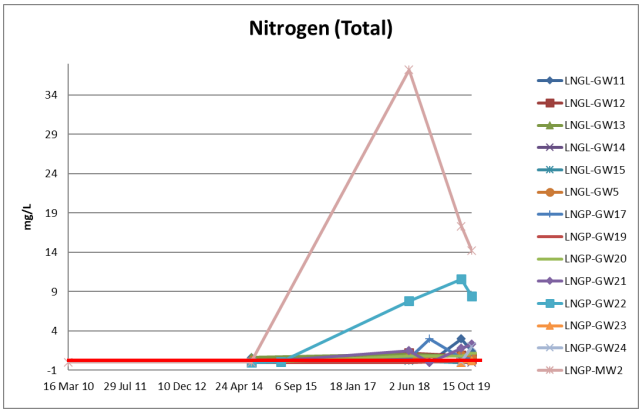
Nutrients

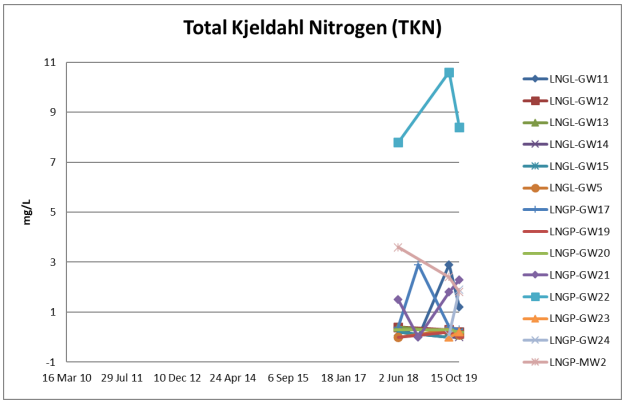






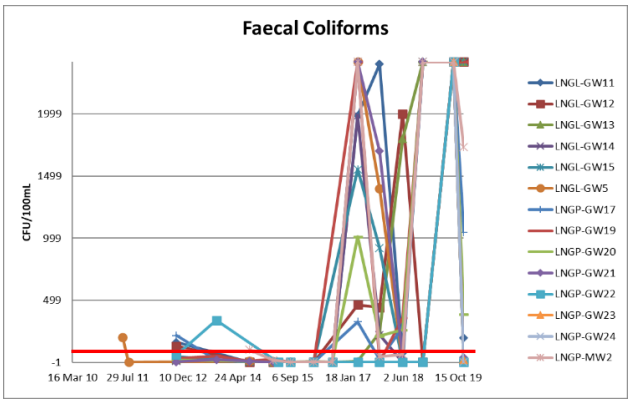


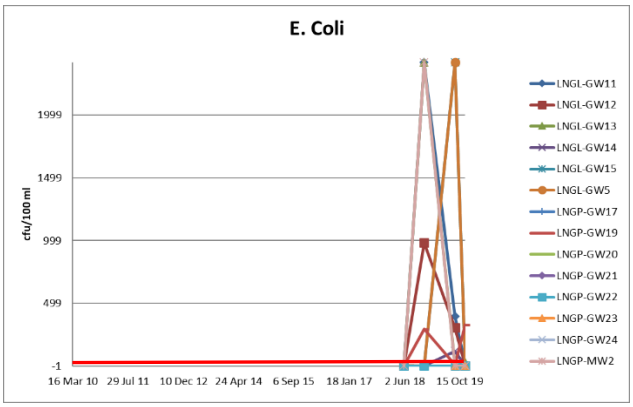


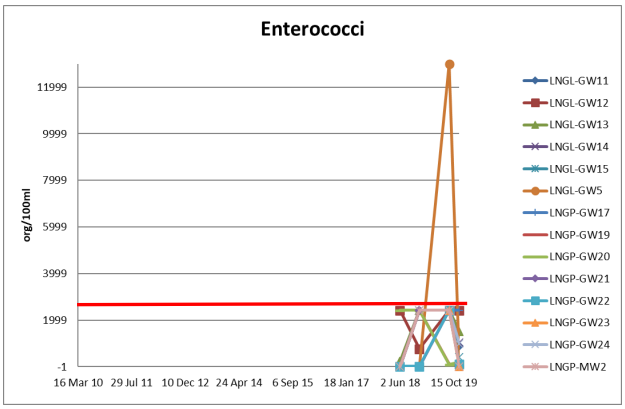


Red line shows permit criteria where relevant

Microbiological parameters

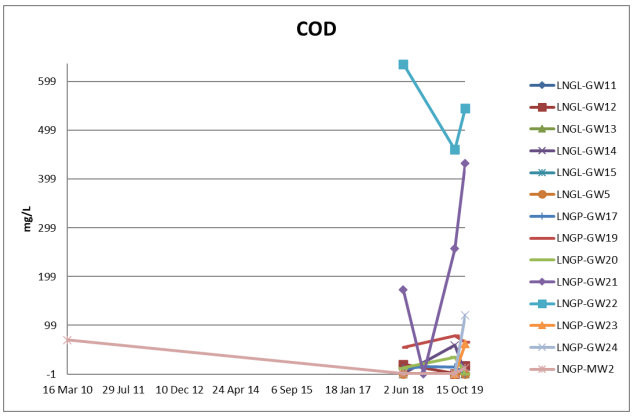


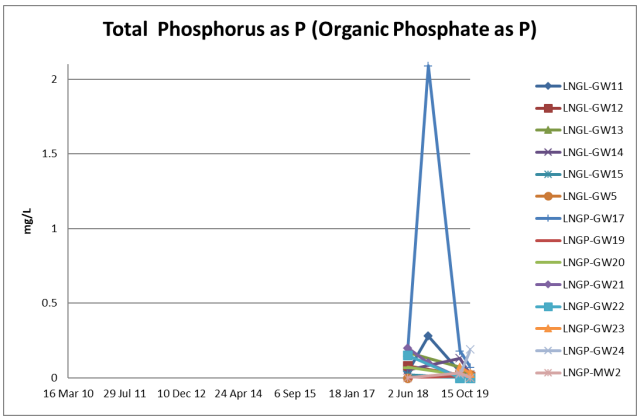


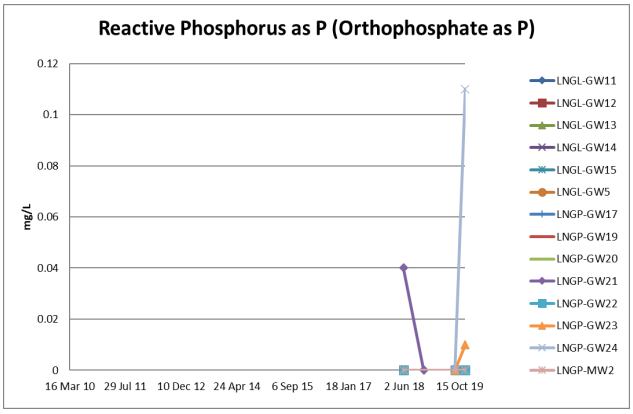


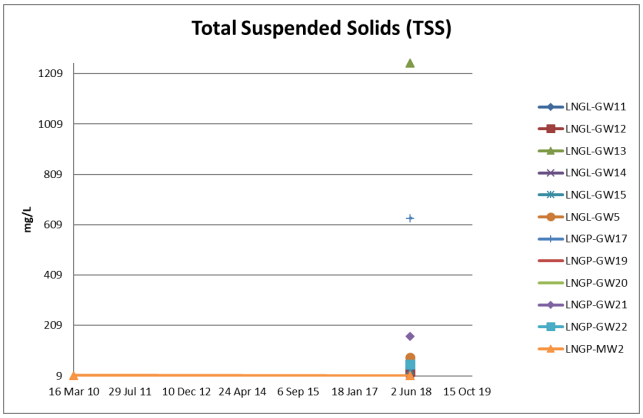
Red line shows permit criteria where relevant

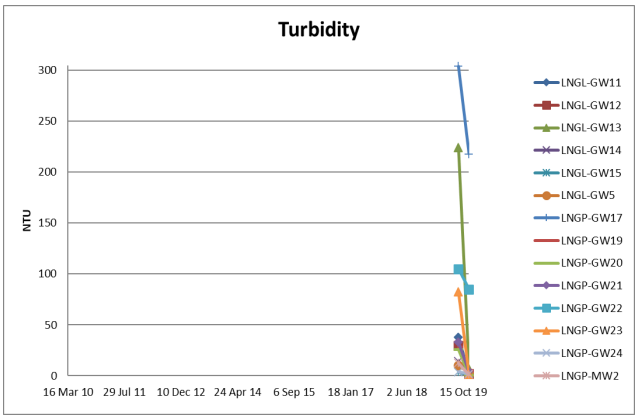
Inorganics


COD
mg/L
599
499
399
299
199
99
-1
16 Mar 10
29 Jul 11
10 Dec 12
24 Apr 14
6 Sep 15
18 Jan 17
2 Jun 18
15 Oct 19
LNGL-GW11
LNGL-GW12
LNGL-GW13
LNGL-GW14
LNGL-GW15
LNGL-GW5
LNGP-GW17
LNGP-GW19
LNGP-GW20
LNGP-GW21
LNGP-GW22
LNGP-GW23
LNGP-GW24
LNGP-MW2

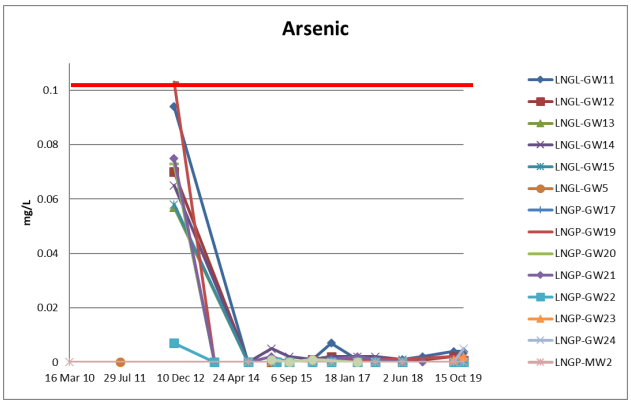

Total Phosphorus as P (Organic Phosphate as P)
mg/L
2
1.5
1
0.5
0
16 Mar 10
29 Jul 11
10 Dec 12
24 Apr 14
6 Sep 15
18 Jan 17
2 Jun 18
15 Oct 19
LNGL-GW11
LNGL-GW12
LNGL-GW13
LNGL-GW14
LNGL-GW15
LNGL-GW5
LNGP-GW17
LNGP-GW19
LNGP-GW20
LNGP-GW21
LNGP-GW22
LNGP-GW23
LNGP-GW24
LNGP-MW2

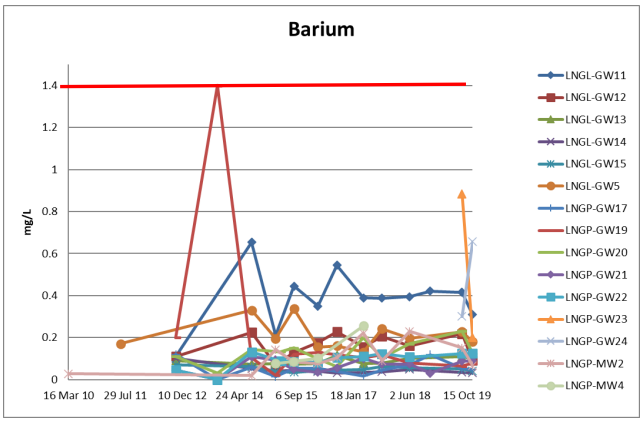

Reactive Phosphorus as P (Orthophosphate as P)
mg/L
0.12
0.1
0.08
0.06
0.04
0.02
0
16 Mar 10
29 Jul 11
10 Dec 12
24 Apr 14
6 Sep 15
18 Jan 17
2 Jun 18
15 Oct 19
LNGL-GW11
LNGL-GW12
LNGL-GW13
LNGL-GW14
LNGL-GW15
LNGL-GW5
LNGP-GW17
LNGP-GW19
LNGP-GW20
LNGP-GW21
LNGP-GW22
LNGP-GW23
LNGP-GW24
LNGP-MW2

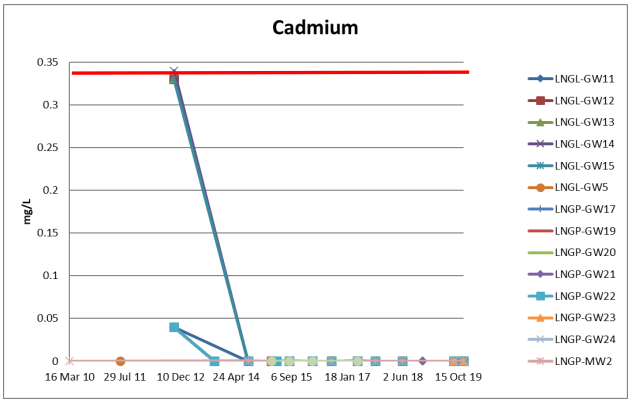

Total Suspended Solids (TSS)
mg/L
1209
1009
809
609
409
209
9
16 Mar 10
29 Jul 11
10 Dec 12
24 Apr 14
6 Sep 15
18 Jan 17
2 Jun 18
15 Oct 19
LNGL-GW11
LNGL-GW12
LNGL-GW13
LNGL-GW14
LNGL-GW15
LNGL-GW5
LNGP-GW17
LNGP-GW19
LNGP-GW20
LNGP-GW21
LNGP-GW22
LNGP-MW2

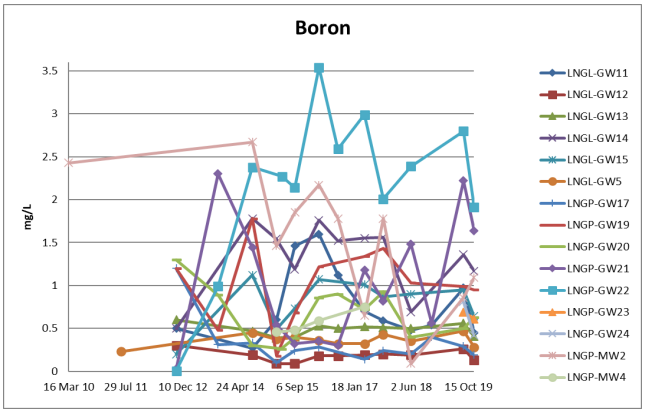

Turbidity
NTU
300
250
200
150
100
50
0
16 Mar 10
29 Jul 11
10 Dec 12
24 Apr 14
6 Sep 15
18 Jan 17
2 Jun 18
15 Oct 19
LNGL-GW11
LNGL-GW12
LNGL-GW13
LNGL-GW14
LNGL-GW15
LNGL-GW5
LNGP-GW17
LNGP-GW19
LNGP-GW20
LNGP-GW21
LNGP-GW22
LNGP-GW23
LNGP-GW24
LNGP-MW2

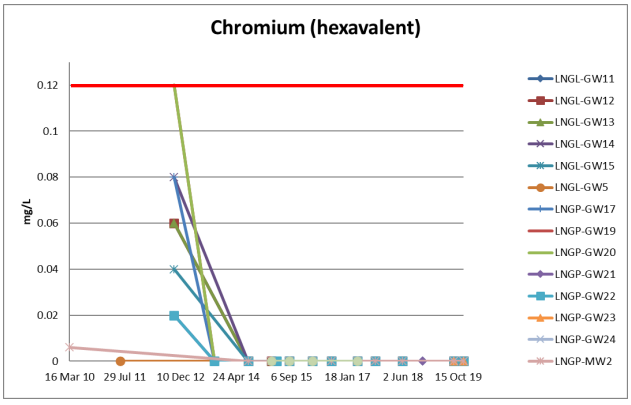
Dissolved metals

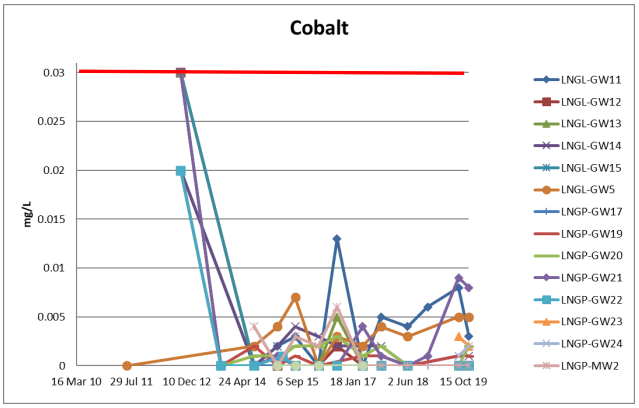


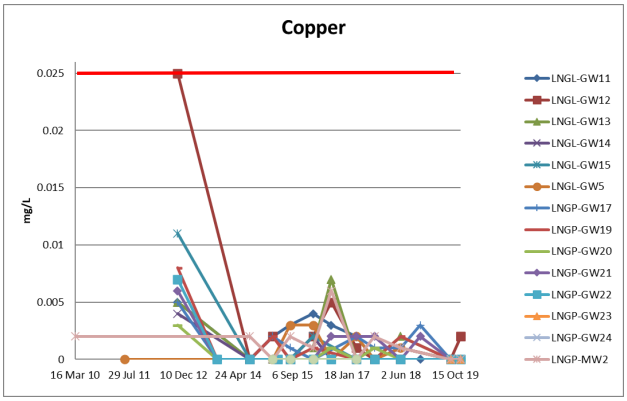


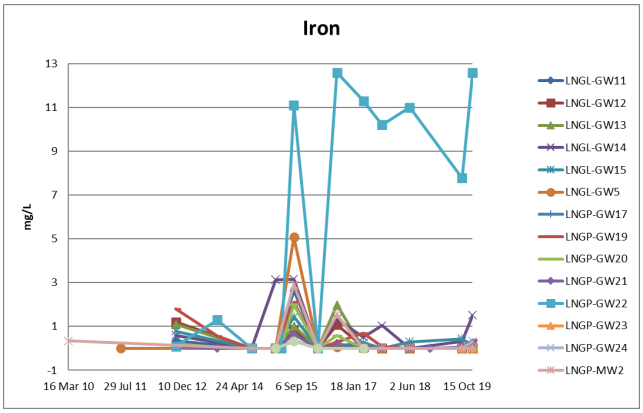






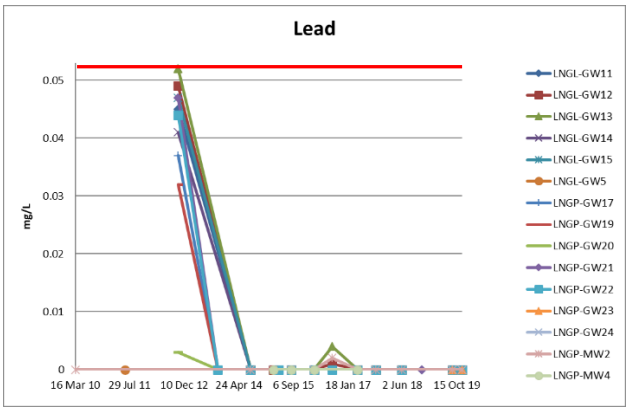


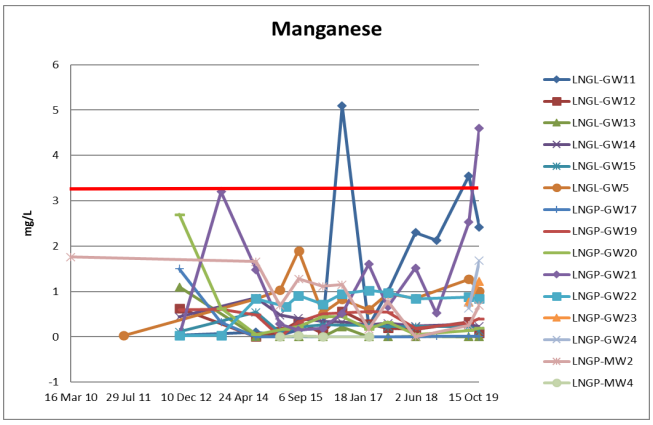


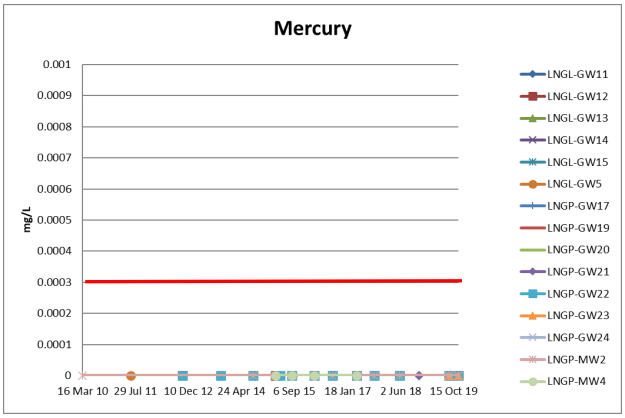


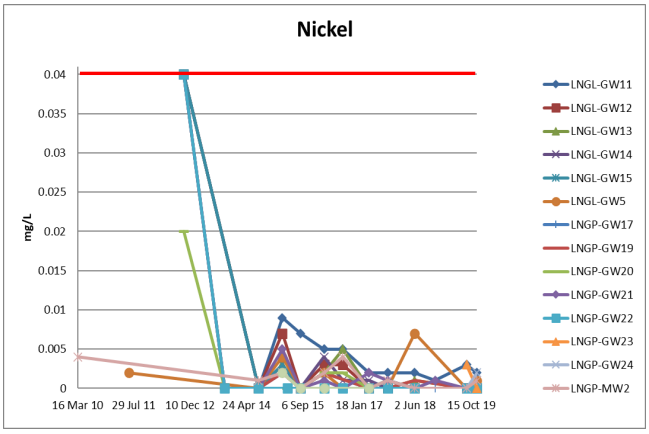
Red line shows permit criteria where relevant

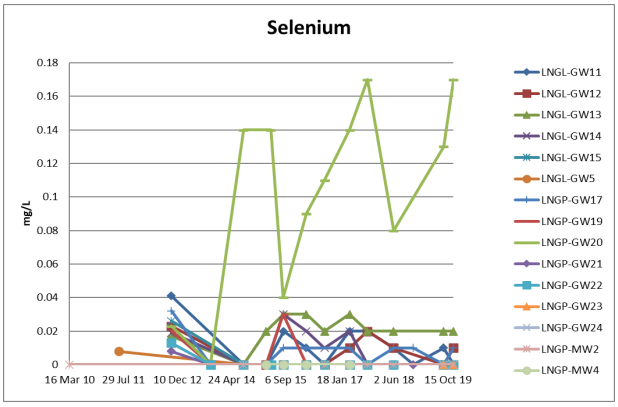
Dissolved metals (continued)

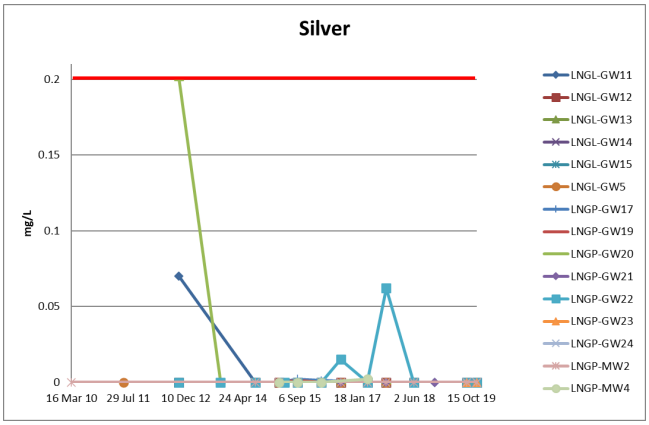


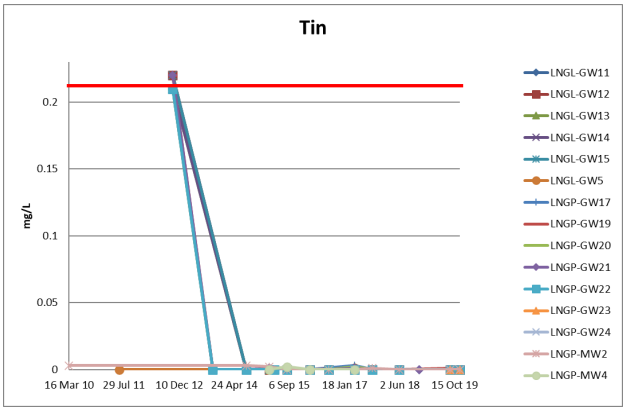


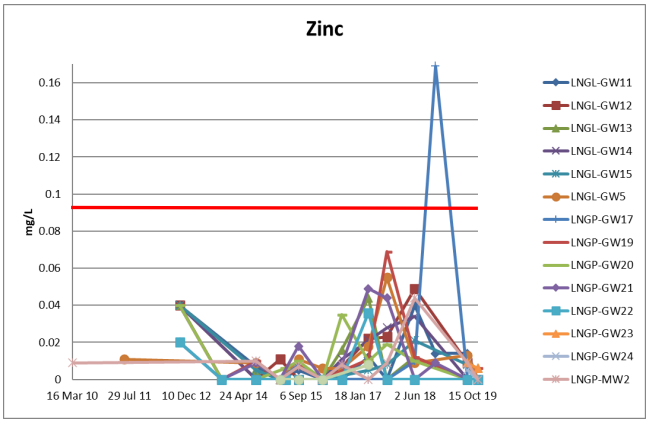






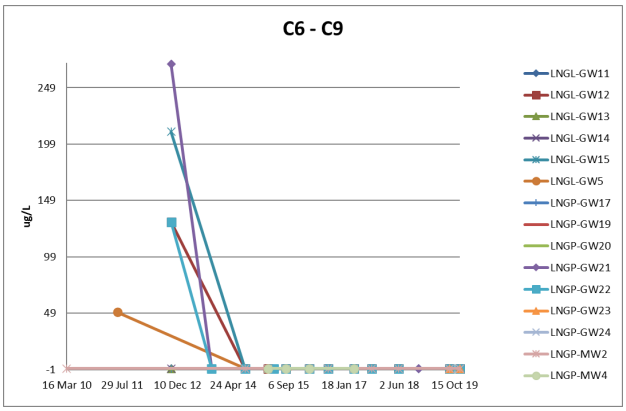


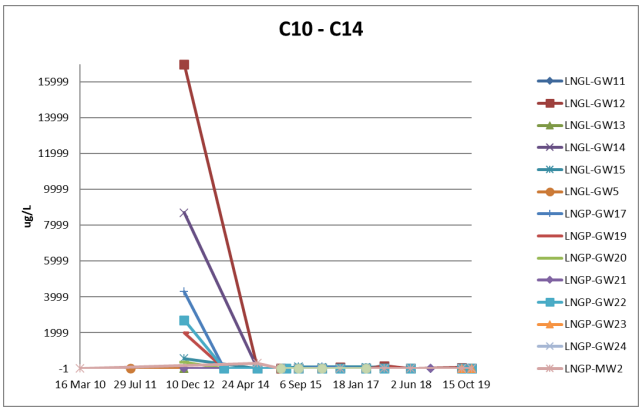


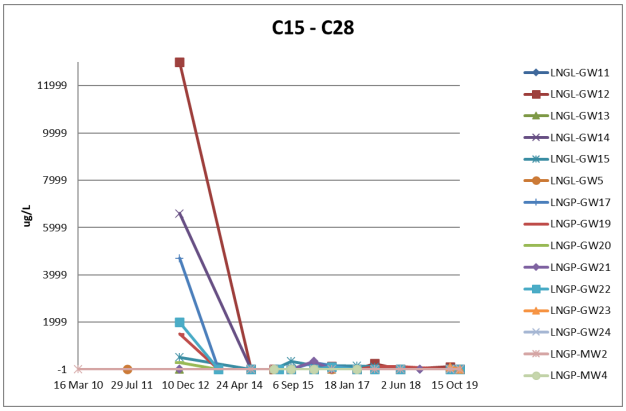


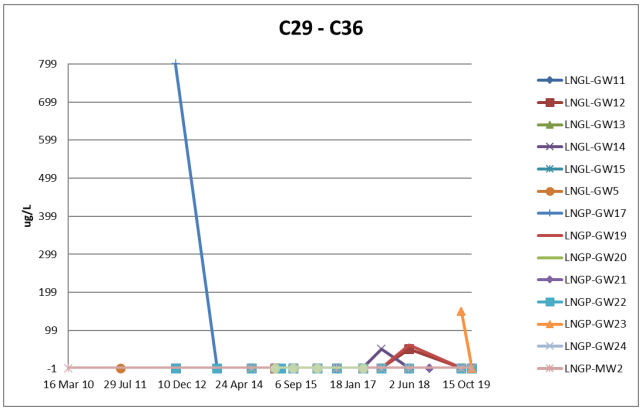
Red line shows permit criteria where relevant

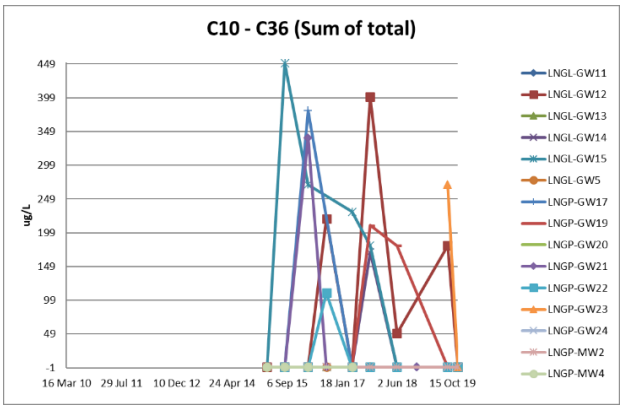
Total petroleum hydrocarbons

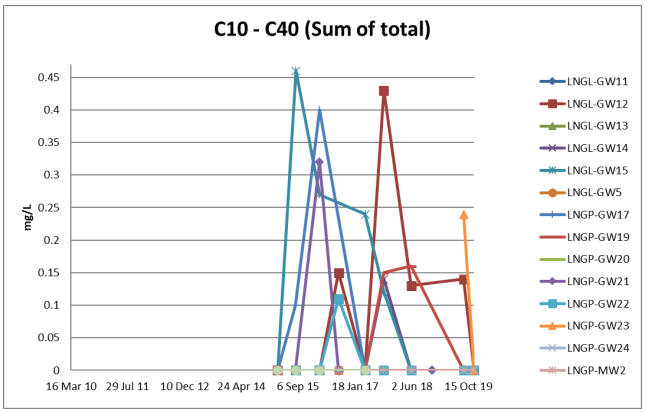




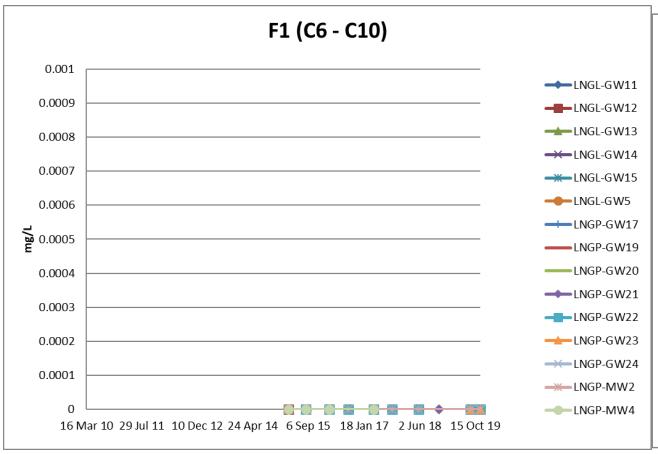


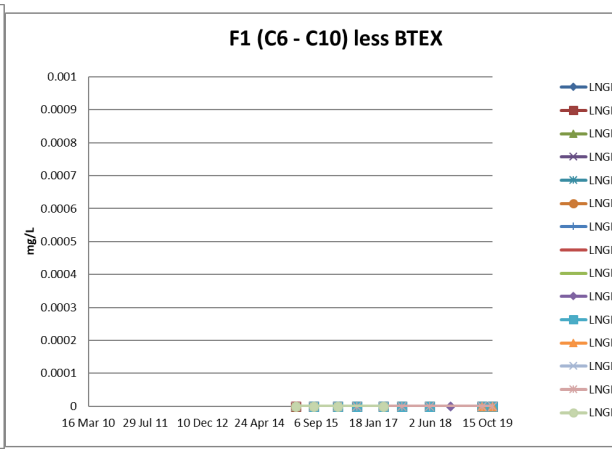


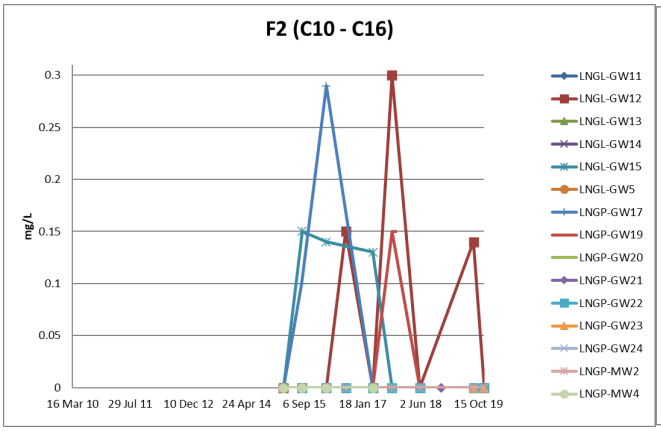


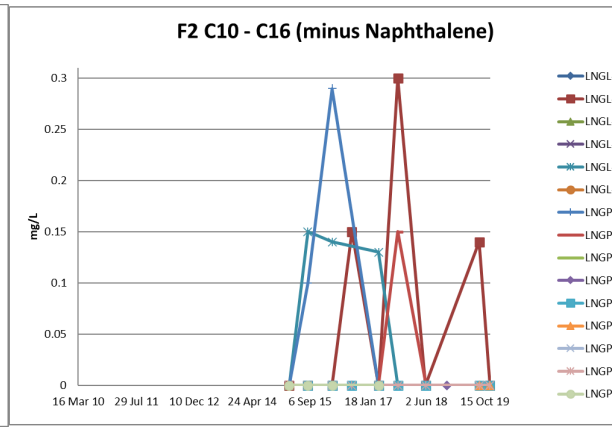


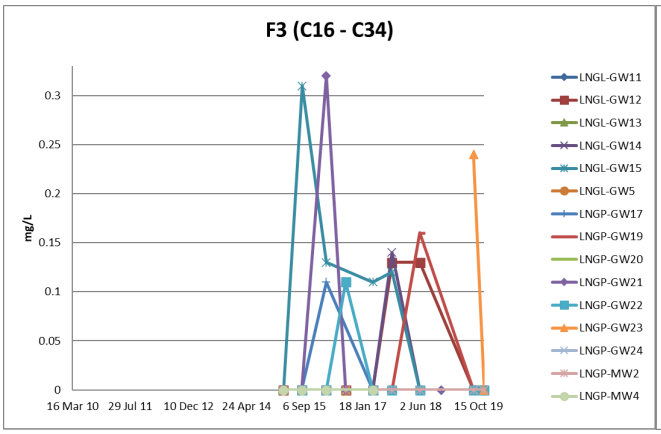
Total recoverable hydrocarbons

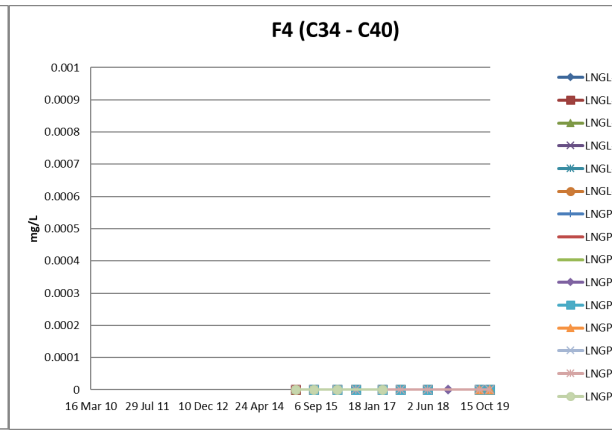




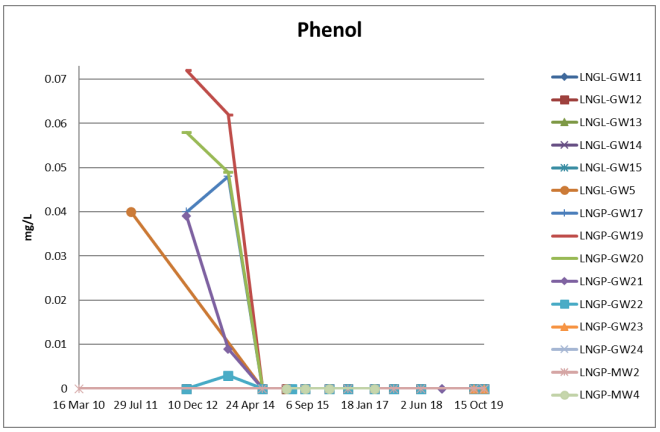








Phenols


Phenol
mg/L
0.07
0.06
0.05
0.04
0.03
0.02
0.01
0
16 Mar 10
29 Jul 11
10 Dec 12
24 Apr 14
6 Sep 15
18 Jan 17
2 Jun 18
15 Oct 19
LNGL-GW11
LNGL-GW12
LNGL-GW13
LNGL-GW14
LNGL-GW15
LNGL-GW5
LNGP-GW17
LNGP-GW19
LNGP-GW20
LNGP-GW21
LNGP-GW22
LNGP-GW23
LNGP-GW24
LNGP-MW2
LNGP-MW4