

Environment Protection Licence



Licence - 20358

Licence Details

Number:	20358
Anniversary Date:	06-August

Licensee

AGL UPSTREAM INVESTMENTS PTY LIMITED

LOCKED BAG 1837

ST LEONARDS NSW 2065

Premises

GLOUCESTER COAL SEAM GAS PROJECT

BUCKETTS WAY

GLOUCESTER NSW 2422

Scheduled Activity

Coal seam gas exploration, assessment and production

Fee Based Activity

Scale

Coal seam gas assessment/production	0-6 PJ produced
Coal seam gas exploration	Any capacity

Region

North - Hunter

Ground Floor, NSW Govt Offices, 117 Bull Street
NEWCASTLE WEST NSW 2302

Phone: (02) 4908 6800

Fax: (02) 4908 6810

PO Box 488G NEWCASTLE

NSW 2300

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Information about this licence

Dictionary

A definition of terms used in the licence can be found in the dictionary at the end of this licence.

Responsibilities of licensee

Separate to the requirements of this licence, general obligations of licensees are set out in the Protection of the Environment Operations Act 1997 ("the Act") and the Regulations made under the Act. These include obligations to:

- ensure persons associated with you comply with this licence, as set out in section 64 of the Act;
- control the pollution of waters and the pollution of air (see for example sections 120 - 132 of the Act);
- report incidents causing or threatening material environmental harm to the environment, as set out in Part 5.7 of the Act.

Variation of licence conditions

The licence holder can apply to vary the conditions of this licence. An application form for this purpose is available from the EPA.

The EPA may also vary the conditions of the licence at any time by written notice without an application being made.

Where a licence has been granted in relation to development which was assessed under the Environmental Planning and Assessment Act 1979 in accordance with the procedures applying to integrated development, the EPA may not impose conditions which are inconsistent with the development consent conditions until the licence is first reviewed under Part 3.6 of the Act.

Duration of licence

This licence will remain in force until the licence is surrendered by the licence holder or until it is suspended or revoked by the EPA or the Minister. A licence may only be surrendered with the written approval of the EPA.

Licence review

The Act requires that the EPA review your licence at least every 5 years after the issue of the licence, as set out in Part 3.6 and Schedule 5 of the Act. You will receive advance notice of the licence review.

Fees and annual return to be sent to the EPA

For each licence fee period you must pay:

- an administrative fee; and
- a load-based fee (if applicable).

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The EPA publication “A Guide to Licensing” contains information about how to calculate your licence fees. The licence requires that an Annual Return, comprising a Statement of Compliance and a summary of any monitoring required by the licence (including the recording of complaints), be submitted to the EPA. The Annual Return must be submitted within 60 days after the end of each reporting period. See condition R1 regarding the Annual Return reporting requirements.

Usually the licence fee period is the same as the reporting period.

Transfer of licence

The licence holder can apply to transfer the licence to another person. An application form for this purpose is available from the EPA.

Public register and access to monitoring data

Part 9.5 of the Act requires the EPA to keep a public register of details and decisions of the EPA in relation to, for example:

- licence applications;
- licence conditions and variations;
- statements of compliance;
- load based licensing information; and
- load reduction agreements.

Under s320 of the Act application can be made to the EPA for access to monitoring data which has been submitted to the EPA by licensees.

This licence is issued to:

AGL UPSTREAM INVESTMENTS PTY LIMITED

LOCKED BAG 1837

ST LEONARDS NSW 2065

subject to the conditions which follow.

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1 Administrative Conditions

A1 What the licence authorises and regulates

A1.1 This licence authorises the carrying out of the scheduled activities listed below at the premises specified in A2. The activities are listed according to their scheduled activity classification, fee-based activity classification and the scale of the operation.

Unless otherwise further restricted by a condition of this licence, the scale at which the activity is carried out must not exceed the maximum scale specified in this condition.

Scheduled Activity	Fee Based Activity	Scale
Coal seam gas exploration, assessment and production	Coal seam gas assessment/production	0 - 6 PJ produced
Coal seam gas exploration, assessment and production	Coal seam gas exploration	Any capacity

A1.2 This licence does not authorise the above scheduled activities where approval for these activities is also required under the *Environmental Planning and Assessment Act* or the *Petroleum (Onshore) Act*, and approval has not been granted.

A2 Premises or plant to which this licence applies

A2.1 The licence applies to the following premises:

Premises Details
GLOUCESTER COAL SEAM GAS PROJECT
BUCKETTS WAY
GLOUCESTER
NSW 2422

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PREMISES INCLUDES THE WELLS, HOLES, PIPES, PONDS AND INFRASTRUCTURE IDENTIFIED ON THE FOLLOWING MAPS AND ALSO INCLUDES THE ADDITIONAL AREAS IDENTIFIED IN CONDITION A2.2 AND A2.3:

"AGL GLOUCESTER GAS PROJECT - BASE MAP" DATED APRIL 2014 WITH EPA REFERENCE NUMBER DOC14/20564

"AGL GLOUCESTER GAS PROJECT - WAUKIVORY AREA" DATED JULY 2014 WITH EPA REFERENCE NUMBER DOC14/20568.

"AGL GLOUCESTER GAS PROJECT - STRATFORD AREA" DATED JULY 2014 WITH EPA REFERENCE NUMBER DOC14/20569.

"AGL GLOUCESTER GAS PROJECT - CRAVEN AREA" DATED APRIL 2014 WITH EPA REFERENCE NUMBER DOC14/20571.

"AGL GLOUCESTER GAS PROJECT - WEISMANTEL AREA" DATED APRIL 2014 WITH EPA REFERENCE NUMBER DOC14/20573.

"AGL GLOUCESTER GAS PROJECT - TIEDMAN IRRIGATION AREA" DATED JULY 2014 WITH EPA REFERENCE NUMBER DOC14/47946.

A2.2 In relation to A2.1 the premises includes the coreholes listed in the table below as well as a nominal area of 100m by 100m immediately surrounding that corehole:

Corehole ID	Easting	Northing	AMG Zone
PGSD1	402722	6448072	56
PGSD2	401885	6447121	56
PGSD4	403269	6448079	56
PGSD5	402317	6447047	56
PGSD8	402292	6448129	56

A2.3 In relation to A2.1 the premises includes the wells listed in the table below as well as a nominal area of 100m by 100m immediately surrounding each well:

Well ID - Status	Easting	Northing	AMG Zone
Craven 6 - assessment	400427	6444366	56
Waukivory 11 - assessment	402419	6452590	56
Waukivory 12 - assessment	402749	6452884	56
Waukivory 13 - assessment	402417	6452164	56
Waukivory 14 - assessment	402906	6452384	56
Stratford 1 - suspended	402891	6448192	56
Stratford 2 - suspended	403481	6448119	56
Stratford 3 - suspended	403023	6447780	56

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Stratford 4 - suspended	402520	6449419	56
Stratford 5A - suspended	403174	6449210	56
Stratford 6B - suspended	402789	6448498	56
Stratford 7 - suspended	404252	6448589	56
Stratford 8 - suspended	402215	6448494	56
Stratford 9 - suspended	402122	6449380	56
Stratford 10 - suspended	401340	6449379	56
Weismantel 3 - suspended	399313	6430480	56

- A2.4 This licence does not allow any activity other than planned maintenance at suspended wells listed in the table in Condition A2.3.
- A2.5 In relation to A2.1, the premises includes well sites, trunk lines, any associated water storages, water treatment facilities, utilisation areas, flares, temporary work areas and infrastructure associated with the gas gathering system, gas well and trunk lines that are associated with the wells shown on the maps listed in condition A2.1.
- A2.6 For the purpose of this licence, the premises also includes the immediate areas in a 10 metre radius of all infrastructure in connection to the operation of the gas wells as described in Condition A2.1. All well sites described in Condition A2.1 and A2.5 have a nominal area of 100m x 100m and are surrounded by fencing.
- A2.7 For the purpose of this licence, the premises also includes the additional 10m x 25m extension area located near Waukivory Well 13 (WK13), and is surrounded by fencing.
- A2.8 Any maps referred to in this section and included as part of this licence indicate the activity that is authorised by this licence to be undertaken at each well site.

A3 Other activities

- A3.1 This licence applies to all other activities carried on at the premises, including:

Ancillary Activity

Tiedman Irrigation Program (Stage 1A and Stage 1B areas only) - As approved till 30 April 2015

A4 Information supplied to the EPA

- A4.1 Works and activities must be carried out in accordance with the proposal contained in the licence application, except as expressly provided by a condition of this licence.

In this condition the reference to "the licence application" includes a reference to:

- the applications for any licences (including former pollution control approvals) which this licence replaces under the Protection of the Environment Operations (Savings and Transitional) Regulation 1998; and
- the licence information form provided by the licensee to the EPA to assist the EPA in connection with

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the issuing of this licence.

- A4.2 Except as expressly provided by these conditions, works and activities for the Waukivory Pilot Project must be carried out in accordance with the proposal contained in:
- The development application submitted to the Department of Trade and Investment, Regional Infrastructure and Services;
 - The "Waukivory Pilot Project - Review of Environmental Factors" (the REF) dated September 2013;
 - Document titled "Waukivory Pilot Project - Addendum to the Review of Environmental Factors - Preferred Activity Report", dated December 2014;
 - Document titled "Waukivory Pilot Project - Further Addendum to the Review of Environmental Factors", dated June 2014;
 - Document titled "Fracture Stimulation Management Plan Waukivory Pilot Project, Gloucester NSW" dated June 2014; and
 - Document titled "Trigger Action Response Plan Waukivory Pilot, Gloucester NSW" dated February 2014.

2 Discharges to Air and Water and Applications to Land

P1 Location of monitoring/discharge points and areas

- P1.1 The following points referred to in the table below are identified in this licence for the purposes of monitoring and/or the setting of limits for the emission of pollutants to the air from the point.

<i>Air</i>			
EPA identification no.	Type of Monitoring Point	Type of Discharge Point	Location Description
1		Craven 6 Flare - Discharge to Air (FC6)	Flare located adjacent to Craven 6 assessment well, shown as "FC6" on map titled "AGL Gloucester Gas Project - Craven Area" dated April 2014 with EPA reference number DOC14/20571.
26	Weather Monitoring Station (WS1)		Onsite weather monitoring station located on the Tiedman Property. Shown as "WS1" on map titled "AGL Gloucester Gas Project - Stratford Area" dated July 2014 with EPA reference number DOC14/20569.
82		Waukivory 13 Flare 1 - Discharge to air (FWK1)	Flare 1 located adjacent to Waukivory 13 assessment well, shown as "FWK1" on map titled "AGL Gloucester Gas Project - Waukivory Area" dated July 2014 with EPA reference number DOC14/20568.
83		Waukivory 13 Flare 2 - Discharge to air (FWK2)	Flare 2 located adjacent to Waukivory 13 assessment well, shown as "FWK2" on map titled "AGL Gloucester Gas Project - Waukivory Area" dated July 2014 with EPA reference number DOC14/20568.

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84	Waukivory 13 Flare 3 - Discharge to air (FWK3)	Flare 3 located adjacent to Waukivory 13 assessment well, shown as "FWK3" on map titled "AGL Gloucester Gas Project - Waukivory Area" dated July 2014 with EPA reference number DOC14/20568
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P1.2 The following points referred to in the table are identified in this licence for the purposes of the monitoring and/or the setting of limits for discharges of pollutants to water from the point.

P1.3 The following utilisation areas referred to in the table below are identified in this licence for the purposes of the monitoring and/or the setting of limits for any application of solids or liquids to the utilisation area.

Water and land

EPA Identification no.	Type of Monitoring Point	Type of Discharge Point	Location Description
7	Surface Water Quality Monitoring (WKSW03)		Avon River downstream surface water monitoring from Waukivory Pilot Project area. Shown as WKSW03 on map titled "AGL Gloucester Gas Project - Waukivory Area" dated July 2014 with EPA reference number DOC14/20568.
8	Surface Water Quality Monitoring (WKSW02)		Surface water monitoring at Waukivory Creek located to the south east of the Waukivory Pilot Project area. Shown as WKSW02 on map titled "AGL Gloucester Gas Project - Waukivory Area" dated July 2014 with EPA reference number DOC14/20568.
9	Surface Water Quality Monitoring (WKSW01)		Avon River upstream surface water monitoring from Waukivory Pilot Project area. Shown as WKSW01 on map titled "AGL Gloucester Gas Project - Waukivory Area" dated July 2014 with EPA reference number DOC14/20568.
10	Groundwater Quality Monitoring Bore (WKMB01)		Located to the west of Waukivory 11 Gas Well targeting the shallow rock sandstone. Shown as WKMB01 on map titled "AGL Gloucester Gas Project - Waukivory Area" dated July 2014 with EPA reference number DOC14/20568.

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11	Groundwater Quality Monitoring Bore (WKMB02)		Located to the east of Waukivory 11 Gas Well and west of the Avon River targeting shallow rock sandstone and silts. Shown as WKMB02 on map titled "AGL Gloucester Gas Project - Waukivory Area" dated July 2014 with EPA reference number DOC14/20568.
12	Groundwater Quality Monitoring Bore (WKMB03)		Located to the east of Waukivory 11 Gas Well and next to WKMB02, targeting the thrust fault. Shown as WKMB03 on map titled "AGL Gloucester Gas Project - Waukivory Area" dated July 2014 with EPA reference number DOC14/20568.
14	Groundwater Pressure Monitoring Bore (PL03)		Located west of Tiedmans Road. Vibrating Wire Piezometer (VWP) screened at 2 levels targeting both aquitard and coal seam. Shown as PL03 on map titled "AGL Gloucester Gas Project - Stratford Area" dated July 2014 with EPA reference number DOC14/20569
15	Groundwater Quality Monitoring Bore (RMB01)		Shallow rock monitoring bore located south of Craven 6 gas well. Shown as RMB01 on map titled "AGL Gloucester Gas Project - Craven Area" dated April 2014 with EPA reference number DOC14/20571.
16	Groundwater Quality Monitoring Bore (RMB02)		Shallow rock monitoring bore located south of Craven 6 gas well. Shown as RMB02 on map titled "AGL Gloucester Gas Project - Craven Area" dated April 2014 with EPA reference number DOC14/20571.
17	Groundwater Quality Monitoring - Gas Well (CR06)		Monitoring from within Craven 6 gas well. Shown as CR06 on map titled "AGL Gloucester Gas Project - Craven Area" dated April 2014 with EPA reference number DOC14/20571.
27	Produced Water Storage Dam 1 (TND)	Produced Water Storage Dam 1 (TND)	Produced Water Storage Dam 1 located on "Tiedman" property, known as Tiedman North Dam, labelled TND on map titled "AGL Gloucester Gas Project - Stratford Area" dated July 2014 with EPA reference number DOC14/20569.

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28	Produced Water Storage Dam 2 (TSD)	Produced Water Storage Dam 2 (TSD)	Produced Water Storage Dam 2 located on "Tiedman" property immediately south of TN1. Known as Tiedman South Dam, shown as TSD on map titled "AGL Gloucester Gas Project - Stratford Area" dated July 2014 with EPA reference number DOC14/20569.
29	Produced Water Storage Dam 3 (TED)	Produced Water Storage Dam 3 (TED)	Produced Water Storage Dam 3 located on "Tiedman" property east of TND and TSD. Known as Tiedman East Dam, shown as TED on map titled "AGL Gloucester Gas Project - Stratford Area" dated July 2014 with EPA reference number DOC14/20569.
30	Groundwater Quality Monitoring Bore (TMB04)		Shallow groundwater seepage monitoring bore located west of Tiedman Produced Water Dam North (TD1), shown as TMB04 on map titled "AGL Gloucester Gas Project - Stratford Area" dated July 2014 with EPA reference number DOC14/20569.
31	Groundwater Quality Monitoring Bore (TMB05)		Shallow groundwater seepage monitoring bore located south of Tiedman Produced Water Dam 2 (TS2) and 3 (TE3), shown as TMB05 on map titled "AGL Gloucester Gas Project - Stratford Area" dated July 2014 with EPA reference number DOC14/20569.
32	Tiedman Irrigation discharge point (TID)	Tiedman Irrigation discharge point (TID)	Discharge point of blended water from the Tiedman Produced Water Storage Dams to the Tiedman Irrigation area. Shown as TID on map titled "Gloucester Gas Project - Tiedman Irrigation Area" dated July 2014, EPA reference DOC14/47946.
33	Surface Water Quality Monitoring - Catch Dam 1 (CDE)	Surface Water Quality Monitoring - Catch Dam 1 (CDE)	Tiedman irrigation area surface water overflow catch dam located north east of Tiedman irrigation area Stage 1A. Shown as CDE on map titled "AGL Gloucester Gas Project - Tiedman Irrigation Area" dated July 2014, EPA reference DOC14/47946.

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34	Surface Water Quality Monitoring - Catch Dam 2 (CDW)	Surface Water Quality Monitoring - Catch Dam 2 (CDW)	Tiedman irrigation area surface water overflow catch dam located south-west of Tiedman irrigation area Stage 1A. Shown as CDW on map titled "AGL Gloucester Gas Project - Tiedman Irrigation Area" dated July 2014, EPA reference DOC14/47946.
35	Surface Water Quality Monitoring (FSW01)		Avon Farley stream gauge located downstream of the Tiedman irrigation area on the Farley property. Shown as FSW01 on map titled "AGL Gloucester Gas Project - Stratford Area" dated July 2014, EPA reference DOC14/20569.
36	Surface Water Quality Monitoring (ASW01)		Stream gauge located on the Avon River upstream from the Tiedman area. Shown as ASW01 on map titled "AGL Gloucester Gas Project - Stratford Area" dated July 2014, EPA reference DOC14/20569.
37	Surface Water Quality Monitoring (TSW01)		Stream gauge located on the Avon River downstream of the Tiedman irrigation areas Stage 1A and 1B. Shown as TSW01 on map titled "AGL Gloucester Gas Project - Tiedman Irrigation Area" dated July 2014, EPA reference DOC14/47946.
38	Surface Water Quality Monitoring (TSW02)		Stream gauge located on Dog Trap Creek upstream from the Tiedman irrigation area. Shown as TSW02 on map titled "AGL Gloucester Gas Project - Tiedman Irrigation Area" dated July 2014, EPA reference DOC14/47946.
39	Groundwater Quality Monitoring (TMB01)		Shallow alluvial aquifer water quality monitoring adjacent to Dog Trap Creek and Avon River on the Tiedman property. Shown as TMB01 on map titled "AGL Gloucester Gas Project - Stratford Area" dated July 2014, EPA reference DOC14/20569.
40	Groundwater Quality Monitoring (TMB02)		Targeting shallow alluvial aquifer adjacent to Dog Trap Creek and Avon River on the Tiedman property. Shown as TMB02 on map titled "AGL Gloucester Gas Project - Stratford Area" dated July 2014, EPA reference DOC14/20569.

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41	Groundwater Quality Monitoring (TMB03)	Targeting shallow alluvial aquifer between Dog Trap Creek and Tiedman Irrigation area Stage 1B on the Tiedman property. Shown as TMB03 on map titled "AGL Gloucester Gas Project - Stratford Area" dated July 2014, EPA reference DOC14/20569.
42	Groundwater Quality Monitoring (S4MB01)	Located north east corner of Stage 1A Tiedman Irrigation area targeting fractured bedrock aquifer. Shown as S4MB01 on map titled "AGL Gloucester Gas Project - Stratford Area" dated July 2014, EPA reference DOC14/20569.
43	Groundwater Quality Monitoring (TCMB01)	Located to the immediate west of TN1 and TS2 produced water storage dams on the Tiedman property. Shown as TCMB01 on map titled "AGL Gloucester Gas Project - Tiedman Irrigation Area" dated July 2014, EPA reference DOC14/47946.
44	Groundwater Quality Monitoring (TTMBO2)	Located to the east of S4MB01 on the Tiedman property. Shown as TTMBO2 on map titled "AGL Gloucester Gas Project - Tiedman Irrigation Area" dated July 2014, EPA reference DOC14/47946.
45	Groundwater Quality Monitoring (SP1B)	Perched water monitoring piezometer located in the north east corner of Stage 1A Tiedman irrigation area. Shown as SP1B on map titled "AGL Gloucester Gas Project - Tiedman Irrigation Area" dated July 2014, EPA reference DOC14/47946.
46	Groundwater Quality Monitoring (SP2B)	Perched water monitoring piezometer located near the south east corner of Stage 1A Tiedman irrigation area. Shown as SP2B on map titled "AGL Gloucester Gas Project - Tiedman Irrigation Area" dated July 2014, EPA reference DOC14/47946.
47	Groundwater Quality Monitoring (SP4B)	Perched water monitoring piezometer located on the southern boundary of the Stage 1A Tiedman irrigation area. Shown as SP4B on map titled "AGL Gloucester Gas Project-Tiedman Irrigation Area" dated July 2014, EPA ref:DOC14/47946.

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48	Groundwater Quality Monitoring (SP6B)	Perched water monitoring piezometer located at the south west end of the Stage 1A Tiedman irrigation area. Shown as SP6B on map titled "AGL Gloucester Gas Project-Tiedman Irrigation Area" dated July 2014, EPA ref:DOC14/47946.
49	Groundwater Quality Monitoring (SP7B)	Perched water monitoring piezometer located between SP8B and SP6B at the Stage 1A Tiedman irrigation area. Shown as SP7B on map titled "AGL Gloucester Gas Project - Tiedman Irrigation Area" dated July 2014, EPA reference DOC14/47946.
50	Groundwater Quality Monitoring (SP8B)	Perched water monitoring piezometer located near the north west corner boundary of the Stage 1A Tiedman irrigation area. Shown as SP8B on map titled "AGL Gloucester Gas Project - Tiedman Irrigation Area" dated July 2014, EPA reference DOC14/47946.
51	Groundwater Quality Monitoring (SP9B)	Perched water monitoring piezometer located along the northern boundary of the Stage 1B Tiedman irrigation area. Shown as SP9B on map titled "AGL Gloucester Gas Project - Tiedman Irrigation Area" dated July 2014, EPA reference DOC14/47946.
52	Groundwater Quality Monitoring (SP10B)	Perched water monitoring piezometer located south of SP9B in the Stage 1B Tiedman irrigation area. Shown as SP10B on map titled "AGL Gloucester Gas Project - Tiedman Irrigation Area" dated July 2014, EPA reference DOC14/47946.
53	Soil Quality Monitoring (CS1)	Soil quality monitoring at Tiedman Irrigation area Stage 1A. Shown as CS1 on map titled "Gloucester Gas Project - Tiedman Irrigation Area" dated July 2014, EPA reference DOC14/47946.
54	Soil Quality Monitoring (CS2)	Soil quality monitoring at Tiedman Irrigation area Stage 1A. Shown as CS2 on map titled "Gloucester Gas Project - Tiedman Irrigation Area" dated July 2014, EPA reference DOC14/47946.

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55	Soil Quality Monitoring (CS3)	Soil quality monitoring at Tiedman Irrigation area Stage 1A. Shown as CS3 on map titled "Gloucester Gas Project - Tiedman Irrigation Area" dated July 2014, EPA reference DOC14/47946.
56	Soil Quality Monitoring (CS4)	Soil quality monitoring at Tiedman Irrigation area Stage 1A. Shown as CS4 on map titled "Gloucester Gas Project - Tiedman Irrigation Area" dated July 2014, EPA reference DOC14/47946.
57	Soil Quality Monitoring (CS5)	Soil quality monitoring at Tiedman Irrigation area Stage 1A. Shown as CS5 on map titled "Gloucester Gas Project - Tiedman Irrigation Area" dated July 2014, EPA reference DOC14/47946.
58	Soil Quality Monitoring (CS6)	Soil quality monitoring at Tiedman Irrigation area Stage 1A. Shown as CS6 on map titled "Gloucester Gas Project - Tiedman Irrigation Area" dated July 2014, EPA reference DOC14/47946.
59	Soil Quality Monitoring (CS7)	Soil quality monitoring at Tiedman Irrigation area Stage 1A. Shown as CS7 on map titled "Gloucester Gas Project - Tiedman Irrigation Area" dated July 2014, EPA reference DOC14/47946.
60	Soil Quality Monitoring (CS8)	Soil quality monitoring at Tiedman Irrigation area Stage 1A. Shown as CS8 on map titled "Gloucester Gas Project - Tiedman Irrigation Area" dated July 2014, EPA reference DOC14/47946.
61	Soil Quality Monitoring (CS9)	Soil quality monitoring at Tiedman Irrigation area Stage 1A. Shown as CS9 on map titled "Gloucester Gas Project - Tiedman Irrigation Area" dated July 2014, EPA reference DOC14/47946.
62	Soil Quality Monitoring (CS10)	Soil quality monitoring at Tiedman Irrigation area Stage 1A. Shown as CS10 on map titled "Gloucester Gas Project - Tiedman Irrigation Area" dated July 2014, EPA reference DOC14/47946.
63	Soil Quality Monitoring (CS11)	Soil quality monitoring at Tiedman Irrigation area Stage 1A. Shown as CS11 on map titled "Gloucester Gas Project - Tiedman Irrigation Area" dated July 2014, EPA reference DOC14/47946.

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64	Soil Quality Monitoring (CS12)	Soil quality monitoring at Tiedman Irrigation area Stage 1A. Shown as CS12 on map titled "Gloucester Gas Project - Tiedman Irrigation Area" dated July 2014, EPA reference DOC14/47946.
65	Soil Quality Monitoring (CS13)	Soil quality monitoring at Tiedman Irrigation area Stage 1A. Shown as CS13 on map titled "Gloucester Gas Project - Tiedman Irrigation Area" dated July 2014, EPA reference DOC14/47946.
66	Soil Quality Monitoring (CS14)	Soil quality monitoring at Tiedman Irrigation area Stage 1A. Shown as CS14 on map titled "Gloucester Gas Project - Tiedman Irrigation Area" dated July 2014, EPA reference DOC14/47946.
67	Soil Quality Monitoring (CS15)	Soil quality monitoring at Tiedman Irrigation area Stage 1A. Shown as CS15 on map titled "Gloucester Gas Project - Tiedman Irrigation Area" dated July 2014, EPA reference DOC14/47946.
68	Soil Quality Monitoring (CS16)	Soil quality monitoring at Tiedman Irrigation area Stage 1A. Shown as CS16 on map titled "Gloucester Gas Project - Tiedman Irrigation Area" dated July 2014, EPA reference DOC14/47946.
69	Soil Quality Monitoring (CS17)	Soil quality monitoring at Tiedman Irrigation area Stage 1B. Shown as CS17 on map titled "Gloucester Gas Project - Tiedman Irrigation Area" dated July 2014, EPA reference DOC14/47946.
70	Soil Quality Monitoring (CS18)	Soil quality monitoring at Tiedman Irrigation area Stage 1B. Shown as CS18 on map titled "Gloucester Gas Project - Tiedman Irrigation Area" dated July 2014, EPA reference DOC14/47946.
71	Soil Quality Monitoring (CS19)	Soil quality monitoring at Tiedman Irrigation area Stage 1B. Shown as CS19 on map titled "Gloucester Gas Project - Tiedman Irrigation Area" dated July 2014, EPA reference DOC14/47946.
72	Soil Quality Monitoring (CS20)	Soil quality monitoring at Tiedman Irrigation area Stage 1B. Shown as CS20 on map titled "Gloucester Gas Project - Tiedman Irrigation Area" dated July 2014, EPA reference DOC14/47946.

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73	Soil Quality Monitoring (CS21)	Soil quality monitoring at Tiedman Irrigation area Stage 1B. Shown as CS21 on map titled "Gloucester Gas Project - Tiedman Irrigation Area" dated July 2014, EPA reference DOC14/47946.
74	Soil Quality Monitoring (CS22)	Soil quality monitoring at Tiedman Irrigation area Stage 1B. Shown as CS22 on map titled "Gloucester Gas Project - Tiedman Irrigation Area" dated July 2014, EPA reference DOC14/47946.
75	Soil Quality Monitoring (CS23)	Soil quality monitoring at Tiedman Irrigation area Stage 1B. Shown as CS23 on map titled "Gloucester Gas Project - Tiedman Irrigation Area" dated July 2014, EPA reference DOC14/47946.
76	Soil Quality Monitoring (CS24)	Soil quality monitoring at Tiedman Irrigation area Stage 1B. Shown as CS24 on map titled "Gloucester Gas Project - Tiedman Irrigation Area" dated July 2014, EPA reference DOC14/47946.
77	Soil Quality Monitoring (CS25)	Soil quality monitoring at Tiedman Irrigation area Stage 1B. Shown as CS25 on map titled "Gloucester Gas Project - Tiedman Irrigation Area" dated July 2014, EPA reference DOC14/47946.
78	Soil Quality Monitoring (CS26)	Soil quality monitoring at Tiedman Irrigation area Stage 1B. Shown as CS26 on map titled "Gloucester Gas Project - Tiedman Irrigation Area" dated July 2014, EPA reference DOC14/47946.
79	Soil Quality Monitoring (CS27)	Soil quality monitoring at Tiedman Irrigation area Stage 1B. Shown as CS27 on map titled "Gloucester Gas Project - Tiedman Irrigation Area" dated July 2014, EPA reference DOC14/47946.
80	Soil Quality Monitoring (CS28)	Soil quality monitoring at Tiedman Irrigation area Stage 1B. Shown as CS28 on map titled "Gloucester Gas Project - Tiedman Irrigation Area" dated July 2014, EPA reference DOC14/47946.
81	Soil Quality Monitoring (CS29)	Soil quality monitoring at Tiedman Irrigation area Stage 1B. Shown as CS29 on map titled "Gloucester Gas Project - Tiedman Irrigation Area" dated July 2014, EPA reference DOC14/47946.

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85	Groundwater Pressure Monitoring Bore (WKMB05)	Located between the junction of the Avon River and Waukivory Creek. Packer and piezometer completion targeting local deep seam and interburden. Shown as WKMB05 on map titled "AGL Gloucester Gas Project - Waukivory Area" dated July 2014, DOC14/20568.
86	Groundwater Quality Monitoring - Gas Well (WK11)	Monitoring from within Waukivory 11 gas well. Shown as WK11 on map titled "AGL Gloucester Gas Project - Waukivory Area" dated July 2014, EPA reference DOC14/20568.
87	Groundwater Quality Monitoring - Gas Well (WK12)	Monitoring from within Waukivory 12 gas well. Shown as WK12 on map titled "AGL Gloucester Gas Project - Waukivory Area" dated July 2014, EPA reference DOC14/20568.
88	Groundwater Quality Monitoring - Gas Well (WK13)	Monitoring from within Waukivory 13 gas well. Shown as WK13 on map titled "AGL Gloucester Gas Project - Waukivory Area" dated July 2014, EPA reference DOC14/20568.
89	Groundwater Quality Monitoring - Gas Well (WK14)	Monitoring from within Waukivory 14 gas well. Shown as WK14 on map titled "AGL Gloucester Gas Project - Waukivory Area" dated July 2014, EPA reference DOC14/20568.
90	Groundwater Quality Monitoring Work (GW054940)	Private Bore - Shallow Rock (sandstone) located east of Fairbairns Road and west of Waukivory wells. Shown as GW054940 on map titled "AGL Gloucester Gas Project - Waukivory Area" dated July 2014, EPA reference DOC14/20568.
91	Groundwater Quality Monitoring Bore (GW080487)	Private Bore located on The Bucketts Way, north west of the Waukivory wells. Shown as GW080487 on map titled "AGL Gloucester Gas Project - Waukivory Area" dated July 2014, EPA reference DOC14/20568.

Note: The monitoring requirements may be modified by the EPA subject to ongoing review of licence conditions and monitoring results.

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3 Limit Conditions

L1 Pollution of waters

L1.1 Except as may be expressly provided in any other condition of this licence, the licensee must comply with section 120 of the Protection of the Environment Operations Act 1997.

L2 Load limits

L2.1 The actual load of an assessable pollutant discharged from the premises during the reporting period must not exceed the load limit specified for the assessable pollutant in the table below.

Note: An assessable pollutant is a pollutant which affects the licence fee payable for the licence.

L2.2 The actual load of an assessable pollutant must be calculated in accordance with the relevant load calculation protocol.

Assessable Pollutant	Load limit (kg)
Benzene (Air)	
Benzo(a)pyrene (equivalent) (Air)	
BOD (Enclosed Water)	
Fine Particulates (Air)	
Hydrogen Sulfide (Air)	
Nitrogen Oxides (Air)	
Oil and Grease (Enclosed Water)	
Salt (Enclosed Water)	
Sulfur Oxides (Air)	
Total PAHs (Enclosed Water)	
Total Phenolics (Enclosed Water)	
Total suspended solids (Enclosed Water)	
Volatile organic compounds (Air)	

L3 Concentration limits

L3.1 For each monitoring/discharge point or utilisation area specified in the table\ below (by a point number), the concentration of a pollutant discharged at that point, or applied to that area, must not exceed the concentration limits specified for that pollutant in the table.

L3.2 Where a pH quality limit is specified in the table, the specified percentage of samples must be within the specified ranges.

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L3.3 To avoid any doubt, this condition does not authorise the pollution of waters by any pollutant other than those specified in the table's.

L3.4 Water and/or Land Concentration Limits

POINT 10,11,12,90,91

Pollutant	Units of Measure	50 Percentile concentration limit	90 Percentile concentration limit	3DGM concentration limit	100 percentile concentration limit
Choline Chloride	milligrams per litre				not detectable
Monoethanol amine Borate	milligrams per litre				not detectable
Sodium Hypochlorite	milligrams per litre				not detectable
THPS (Phosphonium, Tetrakis(Hydroxymethyl)-Sulfate)	milligrams per litre				not detectable

POINT 33,34

Pollutant	Units of Measure	50 Percentile concentration limit	90 Percentile concentration limit	3DGM concentration limit	100 percentile concentration limit
Total suspended solids	milligrams per litre				50

L4 Volume and mass limits

L4.1 For each discharge point or utilisation area specified below (by a point number), the volume/mass of:
 a) liquids discharged to water; or;
 b) solids or liquids applied to the area;
 must not exceed the volume/mass limit specified for that discharge point or area.

Point	Unit of Measure	Volume/Mass Limit
32	megalitres	70ML produced water

L5 Waste

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- L5.1 The licensee must not cause, permit or allow any waste generated outside the premises to be received at the premises for storage, treatment, processing, reprocessing or disposal or any waste generated at the premises to be disposed of at the premises, except as expressly permitted by the licence.
- L5.2 This condition only applies to the storage, treatment, processing, reprocessing or disposal of waste at the premises if those activities require an environment protection licence.

L6 Noise limits

- L6.1 Noise generated at the premises must not exceed the noise limits in the table below:

Locality and Location	Day - LAeq(15 minute)	Evening - LAeq (15 minute)	Night - LAeq (15 Minute)	Night - LA1 (1 minute)
All privately owned residences not subject to a private negotiated agreement	35dB(A)	35dB(A)	35dB(A)	45dB(A)

- L6.2 For the purpose of Condition L6.1:
- Day is defined as the period from 7am to 6pm Monday to Saturday and 8am to 6pm Sundays and Public Holidays;
 - Evening is defined as the period 6pm to 10pm Monday to Sunday and Public Holidays; and
 - Night is defined as the period from 10pm to 7am Monday to Saturday and 10pm to 8am Sunday and Public Holidays.
- L6.3 The noise limits set out in the Noise Limits table under Condition L6.1 apply all meteorological conditions except for the following:
- Wind speeds greater than 3 metres/second at 10 metres above ground level; or
 - Stability category F temperature inversion conditions and wind speeds greater than 2 metres/second at 10 metres above ground level; or
 - Stability category G temperature inversion conditions.
- L6.4 For the purposes of condition L6.3:
- Data recorded by the meteorological station identified as EPA Identification Point 26 must be used to determine meteorological conditions; and
 - Temperature inversion conditions (stability category) are to be determined by the sigma-theta method referred to in Part E4 of Appendix E to the NSW Industrial Noise Policy.
- L6.5 To determine compliance:
- with the LAeq(15 minute) noise limits in condition L6.1, the noise measurement equipment must be located:
 - approximately on the property boundary, where any dwelling is situated 30m or less from the property boundary closest to the premises; or
 - within 30 metres of a dwelling facade, but not closer than 3 metres, where any dwelling on the property is situated more than 30 metres from the property boundary closest to the premises; or
 - where applicable, within approximately 50 metres of the boundary of a National Park or a Nature Reserve.

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b) with the LA1(1 minute) noise limits in condition L6.1, the noise measurement equipment must be located within 1 metre of a dwelling facade;

c) with the noise limits in condition L6.1, the noise measurements equipment must be located:

- at the most affected point at a location where there is no dwelling at the location; or
- at the most affected point within an area at a location prescribed by Condition L6.5(a) or L6.5(b).

L6.6 A non-compliance of condition L6.1 will still occur where noise generated from the premises in excess of the appropriate limit is measured:

- at a location other than an area prescribed by conditions L6.5(a) and L6.5(b); and/or
- at a point other than the most affected point at a location.

L6.7 For the purposes of determining the noise generated at the premises the modification factors in Section 4 of the NSW Industrial Noise Policy must be applied, as appropriate, to the noise levels measured by the noise monitoring equipment.

L6.8 The limits contained in Condition L6.1 do not apply to fracture stimulation, well workover or other planned maintenance activities undertaken during the following times:

- a) between 7:00 am and 6:00 pm Monday to Friday; or
- b) between 8:00 am and 1:00 pm Saturdays.
- c) At no time on Sundays or Public Holidays.

L7 Hours of operation

L7.1 Standard construction hours

Unless otherwise specified by any other condition of this licence, all construction activities are:

- a) restricted to between the hours of 7:00am and 6:00pm Monday to Friday;
- b) restricted to between the hours of 8:00am and 1:00pm Saturday; and
- c) not to be undertaken on Sundays or Public Holidays.

L7.2 Exceptions to standard construction hours

The following activities may be carried out outside of the hours permitted by Condition L7.1:

a) Construction work that causes $L_{Aeq(15\text{minute})}$ noise levels that are no more than 5dB above rating background level at any sensitive receptor not subject to a private negotiated agreement, in accordance with the *Interim Construction Noise Guideline* (DECC, 2009);

b) The delivery of plant, equipment and materials which is required to be delivered outside of the standard construction hours by Police and/or other authorised authorities; and

c) Emergency work to avoid loss of life, damage to property and/or environmental harm.

The licensee must on becoming aware of the need to undertake emergency work – notify the NSW Environment Protection Authority Environment Line on 131 555.

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L7.3 Works agreed outside of standard construction hours

The licensee may undertake works outside of standard construction hours if agreement between the licensee and potentially affected noise sensitive receivers, termed the nearest sensitive receptor has been reached. Any agreement(s) between the licensee and the nearest sensitive receptor must be recorded in writing and a copy of the agreement(s) kept on the premises by the licensee for the duration of the agreement.

L7.4 Planned maintenance activities at any of the wells must only be conducted between:

- (a) 7am and 6pm on weekdays;
- (b) 8am and 1pm on Saturdays; and
- (c) At no time on Sundays or Public Holidays.

L7.5 This condition does not apply to the delivery of material outside the hours of operation permitted by condition L7.4, if that delivery is required by police or other authorities for safety reasons; and/or the operation or personnel or equipment are endangered. In such circumstances, prior notification must be provided to the EPA and affected residents as soon as possible or within a reasonable period in the case of emergency.

L7.6 Fracture Stimulation hours

Unless otherwise specified by any other condition of this licence, all fracture stimulation activities are restricted to the following hours:

- a) between 7:00 am and 6:00 pm Monday to Friday; or
- b) between 8:00 am and 1:00 pm Saturdays.
- c) At no time on Sundays or Public Holidays.

L8 Potentially offensive odour

L8.1 No condition of this licence identifies a potentially offensive odour for the purposes of section 129 of the Protection of the Environment Operations Act 1997.

Note: Section 129 of the Protection of the Environment Operations Act 1997, provides that the licensee must not cause or permit the emission of any offensive odour from the premises but provides a defence if the emission is identified in the relevant environment protection licence as a potentially offensive odour and the odour was emitted in accordance with the conditions of a licence directed at minimising odour.

L9 Other limit conditions

L9.1 The licensee must not use chemicals that contain BTEX compounds (Benzene, Toluene, Ethyl Benzene and Xylene) in the fracturing fluid additives.

L9.2 Discharge of pollutants to waters from the overflow catch dams, identified as monitoring points 33 and 34, is only permitted when the discharge occurs solely as a result of rainfall that exceeds the minimum design

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criteria for sediment control measures in Managing Urban Stormwater: Soils and Construction - Volume 2E Mines and Quarries.

4 Operating Conditions

O1 Activities must be carried out in a competent manner

O1.1 Licensed activities must be carried out in a competent manner.

This includes:

- a) the processing, handling, movement and storage of materials and substances used to carry out the activity; and
- b) the treatment, storage, processing, reprocessing, transport and disposal of waste generated by the activity.

O2 Maintenance of plant and equipment

O2.1 All plant and equipment installed at the premises or used in connection with the licensed activity:

- a) must be maintained in a proper and efficient condition; and
- b) must be operated in a proper and efficient manner.

O3 Dust

O3.1 All areas in or on the premises must be maintained in a condition that prevents or minimises the emission into the air of dust.

O3.2 Any activity in or on the premises must be carried out by such practicable means as to prevent or minimise the emission into the air of dust.

O3.3 Any plant in or on the premises must be operated by such practicable means as to prevent or minimise the emission of dust into the air.

O4 Emergency response

O4.1 An Emergency Response Plan must be developed which documents the procedures to deal with all types of incidents (eg spill, explosions or fire) that may occur at the premises or outside of the premises (eg during transfer) which are likely to cause harm to the environment.

O5 Processes and management

O5.1 The licensee must ensure that any liquid and/or non liquid waste at the premises is assessed and classified in accordance with the DECC Waste Classification Guidelines as in force from time to time.

O5.2 The licensee must ensure that waste identified for recycling is stored separately from other waste.

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O5.3 All above ground tanks containing material that is likely to cause environmental harm must be bunded or have an alternative spill containment system in place.

O5.4 Bunds must:

- a) have walls and floors constructed of impervious materials;
- b) be of sufficient capacity to contain 110% of the volume of the tank (or 110% volume of the largest tank where a group of tanks are installed);
- c) have floors graded to a collection sump; and
- d) not have a drain valve incorporated in the bund structure,

or be constructed and operated in a manner that achieves the same environmental outcome.

O6 Other operating conditions

Operational Freeboard

O6.1 The licensee must ensure that an operational freeboard of 500mm is maintained within the:

- a) produced water storage dams located on the Tiedman property; and
- b) at the two 1.5 ML above ground tanks located at the 'Water Staging Point' at Waukivory 13 (WK13).

O6.2 The licensee must ensure that 20% freeboard is maintained at each of the following:

- c) all other open topped tanks and sumps.

Irrigation to land

O6.3 Irrigation application must not occur in a manner that causes surface runoff.

O6.4 Spray from irrigation application must not drift beyond the boundary of the premises.

O6.5 Livestock access to any irrigation application area must be denied during irrigation and until the applied liquid has dried.

O6.6 The licensee must retain the utilisation area.

At least 30 days prior to a utilisation area being offered for sale, being disposed of or otherwise rendered unavailable for use, the EPA must be advised in writing of this intention.

O6.7 The quantity of liquid applied to the utilisation area must not exceed the capacity of the area to effectively utilise the liquid.

For the purpose of this condition, 'effectively utilise' includes the use of the liquid for pasture or crop production, as well as the ability of the soil to absorb the nutrient, salt, hydraulic load and organic material.

Soil and Water Management Plan

O6.8 A Soil and Water Management Plan must be prepared and implemented in accordance with the

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requirements outlined in *Managing Urban Stormwater: Soils and Construction, Vol 1, 4th Edition* (Landcom, 2004) within 3 months from the issue date of this licence.

O6.9 The plan must include, but is not limited to, the following:

1. Erosion and sediment control procedures for progressive stages of the activity including construction, operation, and maintenance; and
2. Include measures taken to minimise soil erosion and the discharge of sediment and other pollutants to lands and/or waters for the duration of the licence.

5 Monitoring and Recording Conditions

M1 Monitoring records

M1.1 The results of any monitoring required to be conducted by this licence or a load calculation protocol must be recorded and retained as set out in this condition.

M1.2 All records required to be kept by this licence must be:

- a) in a legible form, or in a form that can readily be reduced to a legible form;
- b) kept for at least 4 years after the monitoring or event to which they relate took place; and
- c) produced in a legible form to any authorised officer of the EPA who asks to see them.

M1.3 The following records must be kept in respect of any samples required to be collected for the purposes of this licence:

- a) the date(s) on which the sample was taken;
- b) the time(s) at which the sample was collected;
- c) the point at which the sample was taken; and
- d) the name of the person who collected the sample.

M2 Requirement to monitor concentration of pollutants discharged

M2.1 For each monitoring/discharge point or utilisation area specified below (by a point number), the licensee must monitor (by sampling and obtaining results by analysis) the concentration of each pollutant specified in Column 1. The licensee must use the sampling method, units of measure, and sample at the frequency, specified opposite in the other columns:

M2.2 Water and/ or Land Monitoring Requirements

POINT 7,8,9

Pollutant	Units of measure	Frequency	Sampling Method
Aluminium	milligrams per litre	Special Frequency 5	Grab sample
Arsenic	milligrams per litre	Special Frequency 5	Grab sample
Barium	milligrams per litre	Special Frequency 5	Grab sample
Beryllium	milligrams per litre	Special Frequency 5	Grab sample

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Bicarbonate	milligrams per litre	Special Frequency 5	Grab sample
Boron	milligrams per litre	Special Frequency 5	Grab sample
Cadmium	milligrams per litre	Special Frequency 5	Grab sample
Calcium	milligrams per litre	Special Frequency 5	Grab sample
Carbonate	milligrams per litre	Special Frequency 5	Grab sample
Chloride	milligrams per litre	Special Frequency 5	Grab sample
Choline Chloride	milligrams per litre	Special Frequency 5	Method approved in writing by the Authority
Chromium	milligrams per litre	Special Frequency 5	Grab sample
Cobalt	milligrams per litre	Special Frequency 5	Grab sample
Copper	milligrams per litre	Special Frequency 5	Grab sample
Electrical conductivity	microsiemens per centimetre	Special Frequency 5	Grab sample
Fluoride	milligrams per litre	Special Frequency 5	Grab sample
Iron	milligrams per litre	Special Frequency 5	Grab sample
Lead	milligrams per litre	Special Frequency 5	Grab sample
Magnesium	milligrams per litre	Special Frequency 5	Grab sample
Manganese	milligrams per litre	Special Frequency 5	Grab sample
Mercury	milligrams per litre	Special Frequency 5	Grab sample
Molybdenum	milligrams per litre	Special Frequency 5	Grab sample
Monoethanolamine Borate	milligrams per litre	Special Frequency 5	Method approved in writing by the Authority
Nickel	milligrams per litre	Special Frequency 5	Grab sample
pH	pH	Special Frequency 5	Grab sample
Potassium	milligrams per litre	Special Frequency 5	Grab sample
Selenium	milligrams per litre	Special Frequency 5	Grab sample
Silica	milligrams per litre	Special Frequency 5	Grab sample
Sodium	milligrams per litre	Special Frequency 5	Grab sample
Sodium Hypochlorite	milligrams per litre	Special Frequency 5	Method approved in writing by the Authority
Strontium (dissolved)	milligrams per litre	Special Frequency 5	Grab sample
Sulfate	milligrams per litre	Special Frequency 5	Grab sample
THPS (Phosphonium, Tetra kis(Hydroxymethyl) -Sulfate)	milligrams per litre	Special Frequency 5	Method approved in writing by the Authority
Total dissolved solids	milligrams per litre	Special Frequency 5	Grab sample
Total organic carbon	milligrams per litre	Special Frequency 5	Grab sample
Uranium	milligrams per litre	Special Frequency 5	Grab sample
Vanadium	milligrams per litre	Special Frequency 5	Grab sample
Zinc	milligrams per litre	Special Frequency 5	Grab sample

POINT 10,11,12,90,91

Pollutant	Units of measure	Frequency	Sampling Method
Aluminium	milligrams per litre	Special Frequency 3	Grab sample

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Ammonia	milligrams per litre	Special Frequency 3	Grab sample
Arsenic	milligrams per litre	Special Frequency 3	Grab sample
Barium	milligrams per litre	Special Frequency 3	Grab sample
Beryllium	milligrams per litre	Special Frequency 3	Grab sample
Bicarbonate	milligrams per litre	Special Frequency 3	Grab sample
Boron	milligrams per litre	Special Frequency 3	Grab sample
Cadmium	milligrams per litre	Special Frequency 3	Grab sample
Calcium	milligrams per litre	Special Frequency 3	Grab sample
Carbonate	milligrams per litre	Special Frequency 3	Grab sample
Chloride	milligrams per litre	Special Frequency 3	Grab sample
Choline Chloride	milligrams per litre	Special Frequency 3	Method approved in writing by the Authority
Chromium	milligrams per litre	Special Frequency 3	Grab sample
Cobalt	milligrams per litre	Special Frequency 3	Grab sample
Copper	milligrams per litre	Special Frequency 3	Grab sample
Electrical conductivity	microsiemens per centimetre	Special Frequency 3	Grab sample
Fluoride	milligrams per litre	Special Frequency 3	Grab sample
Iron	milligrams per litre	Special Frequency 3	Grab sample
Lead	milligrams per litre	Special Frequency 3	Grab sample
Magnesium	milligrams per litre	Special Frequency 3	Grab sample
Manganese	milligrams per litre	Special Frequency 3	Grab sample
Mercury	milligrams per litre	Special Frequency 3	Grab sample
Methane	milligrams per litre	Special Frequency 3	Grab sample
Molybdenum	milligrams per litre	Special Frequency 3	Grab sample
Monoethanolamine Borate	milligrams per litre	Special Frequency 3	Method approved in writing by the Authority
Nickel	milligrams per litre	Special Frequency 3	Grab sample
Nitrate	milligrams per litre	Special Frequency 3	Grab sample
Nitrite	milligrams per litre	Special Frequency 3	Grab sample
pH	pH	Special Frequency 3	Grab sample
Phosphorus (total)	milligrams per litre	Special Frequency 3	Grab sample
Potassium	milligrams per litre	Special Frequency 3	Grab sample
Reactive Phosphorus	milligrams per litre	Special Frequency 3	Grab sample
Selenium	milligrams per litre	Special Frequency 3	Grab sample
Silica	milligrams per litre	Special Frequency 3	Grab sample
Sodium	milligrams per litre	Special Frequency 3	Grab sample
Sodium Hypochlorite	milligrams per litre	Special Frequency 3	Method approved in writing by the Authority

POINT 10,11,12

Pollutant	Units of measure	Frequency	Sampling Method
Standing Water Level	metres (Australian Height Datum)	Special Frequency 8	Level sensor and continuous logger

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POINT 10,11,12,90,91

Pollutant	Units of measure	Frequency	Sampling Method
Strontium (dissolved)	milligrams per litre	Special Frequency 3	Grab sample
Sulfate	milligrams per litre	Special Frequency 3	Grab sample
THPS (Phosphonium, Tetra kis(Hydroxymethyl) -Sulfate)	milligrams per litre	Special Frequency 3	Method approved in writing by the Authority
Total dissolved solids	milligrams per litre	Special Frequency 3	Grab sample
Total organic carbon	milligrams per litre	Special Frequency 3	Grab sample
Total suspended solids	milligrams per litre	Special Frequency 3	Grab sample
Uranium	milligrams per litre	Special Frequency 3	Grab sample
Vanadium	milligrams per litre	Special Frequency 3	Grab sample
Zinc	milligrams per litre	Special Frequency 3	Grab sample

POINT 14,85

Pollutant	Units of measure	Frequency	Sampling Method
Standing Water Level	metres (Australian Height Datum)	Special Frequency 8	Level sensor and continuous logger

POINT 15,16

Pollutant	Units of measure	Frequency	Sampling Method
Aluminium	milligrams per litre	Special Frequency 7	Grab sample
Ammonia	milligrams per litre	Special Frequency 7	Grab sample
Arsenic	milligrams per litre	Special Frequency 7	Grab sample
Barium	milligrams per litre	Special Frequency 7	Grab sample
Beryllium	milligrams per litre	Special Frequency 7	Grab sample
Bicarbonate	milligrams per litre	Special Frequency 7	Grab sample
Boron	milligrams per litre	Special Frequency 7	Grab sample
Cadmium	milligrams per litre	Special Frequency 7	Grab sample
Calcium	milligrams per litre	Special Frequency 7	Grab sample
Carbonate	milligrams per litre	Special Frequency 7	Grab sample
Chloride	milligrams per litre	Special Frequency 7	Grab sample
Chromium	milligrams per litre	Special Frequency 7	Grab sample
Cobalt	milligrams per litre	Special Frequency 7	Grab sample
Copper	milligrams per litre	Special Frequency 7	Grab sample
Electrical conductivity	microsiemens per centimetre	Special Frequency 7	Grab sample
Fluoride	milligrams per litre	Special Frequency 7	Grab sample
Iron	milligrams per litre	Special Frequency 7	Grab sample
Lead	milligrams per litre	Special Frequency 7	Grab sample
Magnesium	milligrams per litre	Special Frequency 7	Grab sample

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Manganese	milligrams per litre	Special Frequency 7	Grab sample
Mercury	milligrams per litre	Special Frequency 7	Grab sample
Methane	milligrams per litre	Special Frequency 7	Grab sample
Molybdenum	milligrams per litre	Special Frequency 7	Grab sample
Nickel	milligrams per litre	Special Frequency 7	Grab sample
Nitrate	milligrams per litre	Special Frequency 7	Grab sample
Nitrite	milligrams per litre	Special Frequency 7	Grab sample
pH	pH	Special Frequency 7	Grab sample
Phosphorus (total)	milligrams per litre	Special Frequency 7	Grab sample
Potassium	milligrams per litre	Special Frequency 7	Grab sample
Reactive Phosphorus	milligrams per litre	Special Frequency 7	Grab sample
Selenium	milligrams per litre	Special Frequency 7	Grab sample
Silica	milligrams per litre	Special Frequency 7	Grab sample
Sodium	milligrams per litre	Special Frequency 7	Grab sample
Standing Water Level	metres (Australian Height Datum)	Special Frequency 2	Level sensor and continuous logger
Strontium (dissolved)	milligrams per litre	Special Frequency 7	Grab sample
Sulfate	milligrams per litre	Special Frequency 7	Grab sample
Total dissolved solids	milligrams per litre	Special Frequency 7	Grab sample
Total organic carbon	milligrams per litre	Special Frequency 7	Grab sample
Total suspended solids	milligrams per litre	Special Frequency 7	Grab sample
Uranium	milligrams per litre	Special Frequency 7	Grab sample
Vanadium	milligrams per litre	Special Frequency 7	Grab sample
Zinc	milligrams per litre	Special Frequency 7	Grab sample

POINT 17

Pollutant	Units of measure	Frequency	Sampling Method
Aluminium	milligrams per litre	Every 2 months	Grab sample
Ammonia	milligrams per litre	Every 2 months	Grab sample
Arsenic	milligrams per litre	Every 2 months	Grab sample
Barium	milligrams per litre	Every 2 months	Grab sample
Beryllium	milligrams per litre	Every 2 months	Grab sample
Bicarbonate	milligrams per litre	Every 2 months	Grab sample
Boron	milligrams per litre	Every 2 months	Grab sample
Cadmium	milligrams per litre	Every 2 months	Grab sample
Calcium	milligrams per litre	Every 2 months	Grab sample
Carbonate	milligrams per litre	Every 2 months	Grab sample
Chloride	milligrams per litre	Every 2 months	Grab sample
Chromium	milligrams per litre	Every 2 months	Grab sample
Cobalt	milligrams per litre	Every 2 months	Grab sample
Copper	milligrams per litre	Every 2 months	Grab sample
Dissolved Oxygen	milligrams per litre	Every 2 months	Grab sample

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Electrical conductivity	microsiemens per centimetre	Every 2 months	Grab sample
Fluoride	milligrams per litre	Every 2 months	Grab sample
Iron	milligrams per litre	Every 2 months	Grab sample
Lead	milligrams per litre	Every 2 months	Grab sample
Magnesium	milligrams per litre	Every 2 months	Grab sample
Manganese	milligrams per litre	Every 2 months	Grab sample
Mercury	milligrams per litre	Every 2 months	Grab sample
Methane	milligrams per litre	Every 2 months	Grab sample
Molybdenum	milligrams per litre	Every 2 months	Grab sample
Nickel	milligrams per litre	Every 2 months	Grab sample
Nitrate	milligrams per litre	Every 2 months	Grab sample
Nitrite	milligrams per litre	Every 2 months	Grab sample
pH	pH	Every 2 months	Grab sample
Phosphorus (dissolved reactive)	milligrams per litre	Every 2 months	Grab sample
Phosphorus (total)	milligrams per litre	Every 2 months	Grab sample
Potassium	milligrams per litre	Every 2 months	Grab sample
Redox potential	milligrams per litre	Every 2 months	Grab sample
Selenium	milligrams per litre	Every 2 months	Grab sample
Silica	milligrams per litre	Every 2 months	Grab sample
Sodium	milligrams per litre	Every 2 months	Grab sample
Strontium (dissolved)	milligrams per litre	Every 2 months	Grab sample
Sulfate	milligrams per litre	Every 2 months	Grab sample
Total dissolved solids	milligrams per litre	Every 2 months	Grab sample
Total organic carbon	milligrams per litre	Every 2 months	Grab sample
Total suspended solids	milligrams per litre	Every 2 months	Grab sample
Uranium	milligrams per litre	Every 2 months	Grab sample
Vanadium	milligrams per litre	Every 2 months	Grab sample
Zinc	milligrams per litre	Every 2 months	Grab sample

POINT 27,28,29

Pollutant	Units of measure	Frequency	Sampling Method
Aluminium	milligrams per litre	Quarterly	Grab sample
Ammonia	milligrams per litre	Quarterly	Grab sample
Arsenic	milligrams per litre	Quarterly	Grab sample
Barium	milligrams per litre	Quarterly	Grab sample
Beryllium	milligrams per litre	Quarterly	Grab sample
Bicarbonate	milligrams per litre	Quarterly	Grab sample
Boron	milligrams per litre	Quarterly	Grab sample
Cadmium	milligrams per litre	Quarterly	Grab sample
Calcium	milligrams per litre	Quarterly	Grab sample
Chloride	milligrams per litre	Quarterly	Grab sample
Cobalt	milligrams per litre	Quarterly	Grab sample

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Copper	milligrams per litre	Quarterly	Grab sample
Dissolved Oxygen	milligrams per litre	Quarterly	Grab sample
Electrical conductivity	microsiemens per centimetre	Quarterly	Grab sample
Iron	milligrams per litre	Quarterly	Grab sample
Lead	milligrams per litre	Quarterly	Grab sample
Magnesium	milligrams per litre	Quarterly	Grab sample
Manganese	milligrams per litre	Quarterly	Grab sample
Molybdenum	milligrams per litre	Quarterly	Grab sample
Nickel	milligrams per litre	Quarterly	Grab sample
Nitrate	milligrams per litre	Quarterly	Grab sample
Nitrite	milligrams per litre	Quarterly	Grab sample
pH	pH	Quarterly	Grab sample
Phosphorus (total)	milligrams per litre	Quarterly	Grab sample
Potassium	milligrams per litre	Quarterly	Grab sample
Reactive Phosphorus	milligrams per litre	Quarterly	Grab sample
Redox potential	milligrams per litre	Quarterly	Grab sample
Selenium	milligrams per litre	Quarterly	Grab sample
Sodium	milligrams per litre	Quarterly	Grab sample
Strontium (dissolved)	milligrams per litre	Quarterly	Grab sample
Sulfate	milligrams per litre	Quarterly	Grab sample
Total dissolved solids	milligrams per litre	Quarterly	Grab sample
Total organic carbon	milligrams per litre	Quarterly	Grab sample
Uranium	milligrams per litre	Quarterly	Grab sample
Vanadium	milligrams per litre	Quarterly	Grab sample
Zinc	milligrams per litre	Quarterly	Grab sample

POINT 28

Pollutant	Units of measure	Frequency	Sampling Method
Sodium Adsorption Ratio	sodium adsorption ratio	Quarterly	Special Method 4

POINT 30,31

Pollutant	Units of measure	Frequency	Sampling Method
Aluminium	milligrams per litre	Special Frequency 1	Grab sample
Ammonia	milligrams per litre	Special Frequency 1	Grab sample
Arsenic	milligrams per litre	Special Frequency 1	Grab sample
Barium	milligrams per litre	Special Frequency 1	Grab sample
Beryllium	milligrams per litre	Special Frequency 1	Grab sample
Bicarbonate	milligrams per litre	Special Frequency 1	Grab sample
Boron	milligrams per litre	Special Frequency 1	Grab sample
Cadmium	milligrams per litre	Special Frequency 1	Grab sample

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Calcium	milligrams per litre	Special Frequency 1	Grab sample
Chloride	milligrams per litre	Special Frequency 1	Grab sample
Cobalt	milligrams per litre	Special Frequency 1	Grab sample
Copper	milligrams per litre	Special Frequency 1	Grab sample
Dissolved Oxygen	milligrams per litre	Special Frequency 1	Grab sample
Electrical conductivity	microsiemens per centimetre	Special Frequency 1	Grab sample
Iron	milligrams per litre	Special Frequency 1	Grab sample
Lead	milligrams per litre	Special Frequency 1	Grab sample
Magnesium	milligrams per litre	Special Frequency 1	Grab sample
Manganese	milligrams per litre	Special Frequency 1	Grab sample
Molybdenum	milligrams per litre	Special Frequency 1	Grab sample
Nickel	milligrams per litre	Special Frequency 1	Grab sample
Nitrate	milligrams per litre	Special Frequency 1	Grab sample
Nitrite	milligrams per litre	Special Frequency 1	Grab sample
pH	pH	Special Frequency 1	Grab sample
Phosphorus (total)	milligrams per litre	Special Frequency 1	Grab sample
Potassium	milligrams per litre	Special Frequency 1	Grab sample
Reactive Phosphorus	milligrams per litre	Special Frequency 1	Grab sample
Redox potential	milligrams per litre	Special Frequency 1	Grab sample
Selenium	milligrams per litre	Special Frequency 1	Grab sample
Sodium	milligrams per litre	Special Frequency 1	Grab sample
Standing Water Level	metres (Australian Height Datum)	Special Frequency 1	Special Method 1
Strontium (dissolved)	milligrams per litre	Special Frequency 1	Grab sample
Sulfate	milligrams per litre	Special Frequency 1	Grab sample
Total dissolved solids	milligrams per litre	Special Frequency 1	Grab sample
Total organic carbon	milligrams per litre	Special Frequency 1	Grab sample
Uranium	milligrams per litre	Special Frequency 1	Grab sample
Vanadium	milligrams per litre	Special Frequency 1	Grab sample
Zinc	milligrams per litre	Special Frequency 1	Grab sample

POINT 33,34

Pollutant	Units of measure	Frequency	Sampling Method
Aluminium	milligrams per litre	Each overflow event	Grab sample
Ammonia	milligrams per litre	Each overflow event	Grab sample
Arsenic	milligrams per litre	Each overflow event	Grab sample
Barium	milligrams per litre	Each overflow event	Grab sample
Beryllium	milligrams per litre	Each overflow event	Grab sample
Boron	milligrams per litre	Each overflow event	Grab sample
Cadmium	milligrams per litre	Each overflow event	Grab sample
Calcium	milligrams per litre	Each overflow event	Grab sample
Chromium	milligrams per litre	Each overflow event	Grab sample
Cobalt	milligrams per litre	Each overflow event	Grab sample

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Copper	milligrams per litre	Each overflow event	Grab sample
Dissolved Oxygen	milligrams per litre	Each overflow event	Grab sample
Electrical conductivity	microsiemens per centimetre	Daily	Continuously
Iron	milligrams per litre	Each overflow event	Grab sample
Lead	milligrams per litre	Each overflow event	Grab sample
Magnesium	milligrams per litre	Each overflow event	Grab sample
Manganese	milligrams per litre	Each overflow event	Grab sample
Mercury	milligrams per litre	Each overflow event	Grab sample
Molybdenum	milligrams per litre	Each overflow event	Grab sample
Nickel	milligrams per litre	Each overflow event	Grab sample
Nitrate	milligrams per litre	Each overflow event	Grab sample
pH	pH	Each overflow event	Grab sample
Phosphorus	milligrams per litre	Each overflow event	Grab sample
Potassium	milligrams per litre	Each overflow event	Grab sample
Redox potential	milligrams per litre	Each overflow event	Grab sample
Selenium	milligrams per litre	Each overflow event	Grab sample
Silica	milligrams per litre	Each overflow event	Grab sample
Sodium	milligrams per litre	Each overflow event	Grab sample
Strontium (dissolved)	milligrams per litre	Each overflow event	Grab sample
Sulfate	milligrams per litre	Each overflow event	Grab sample
Total alkalinity	milligrams per litre	Each overflow event	Grab sample
Total dissolved solids	milligrams per litre	Each overflow event	Grab sample
Total suspended solids	milligrams per litre	Each overflow event	Grab sample
Uranium	milligrams per litre	Each overflow event	Grab sample
Vanadium	milligrams per litre	Each overflow event	Grab sample
Zinc	milligrams per litre	Each overflow event	Grab sample

POINT 35,36,37,38,39,40,41,42,43,44

Pollutant	Units of measure	Frequency	Sampling Method
Aluminium	milligrams per litre	Quarterly	Grab sample
Ammonia	milligrams per litre	Quarterly	Grab sample
Arsenic	milligrams per litre	Quarterly	Grab sample
Barium	milligrams per litre	Quarterly	Grab sample
Beryllium	milligrams per litre	Quarterly	Grab sample
Boron	milligrams per litre	Quarterly	Grab sample
Cadmium	milligrams per litre	Quarterly	Grab sample
Calcium	milligrams per litre	Quarterly	Grab sample
Chromium	milligrams per litre	Quarterly	Grab sample
Cobalt	milligrams per litre	Quarterly	Grab sample
Copper	milligrams per litre	Quarterly	Grab sample
Dissolved Oxygen	milligrams per litre	Quarterly	Grab sample

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POINT 35,39,40,41,42,43,44

Pollutant	Units of measure	Frequency	Sampling Method
Electrical conductivity	microsiemens per centimetre	Quarterly	Grab sample

POINT 35,36,37,38,39,40,41,42,43,44

Pollutant	Units of measure	Frequency	Sampling Method
Iron	milligrams per litre	Quarterly	Grab sample
Lead	milligrams per litre	Quarterly	Grab sample
Lithium	milligrams per litre	Quarterly	Grab sample
Magnesium	milligrams per litre	Quarterly	Grab sample
Manganese	milligrams per litre	Quarterly	Grab sample
Mercury	milligrams per litre	Quarterly	Grab sample
Molybdenum	milligrams per litre	Quarterly	Grab sample
Nickel	milligrams per litre	Quarterly	Grab sample
Nitrate	milligrams per litre	Quarterly	Grab sample
pH	pH	Quarterly	Grab sample
Phosphorus	milligrams per litre	Quarterly	Grab sample
Potassium	milligrams per litre	Quarterly	Grab sample
Redox potential	milligrams per litre	Quarterly	Grab sample
Selenium	milligrams per litre	Quarterly	Grab sample
Silica	milligrams per litre	Quarterly	Grab sample
Silver	milligrams per litre	Quarterly	Grab sample
Sodium	milligrams per litre	Quarterly	Grab sample
Strontium (dissolved)	milligrams per litre	Quarterly	Grab sample
Sulfate	milligrams per litre	Quarterly	Grab sample
Tin	milligrams per litre	Quarterly	Grab sample
Total alkalinity	milligrams per litre	Quarterly	Grab sample
Total dissolved solids	milligrams per litre	Quarterly	Grab sample

POINT 35,36,37,38

Pollutant	Units of measure	Frequency	Sampling Method
Total suspended solids	milligrams per litre	Quarterly	Grab sample

POINT 35,36,37,38,39,40,41,42,43,44

Pollutant	Units of measure	Frequency	Sampling Method
Uranium	milligrams per litre	Quarterly	Grab sample
Vanadium	milligrams per litre	Quarterly	Grab sample
Zinc	milligrams per litre	Quarterly	Grab sample

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POINT 36,37,38

Pollutant	Units of measure	Frequency	Sampling Method
Electrical conductivity	microsiemens per centimetre	Daily	Continuously

POINT 39,40,41,42

Pollutant	Units of measure	Frequency	Sampling Method
Standing Water Level	metres (Australian Height Datum)	Special Frequency 2	Level sensor and continuous logger

POINT 43,44

Pollutant	Units of measure	Frequency	Sampling Method
Standing Water Level	metres (Australian Height Datum)	Quarterly	Level sensor and continuous logger

POINT 45,46,47,48,49,50,51,52

Pollutant	Units of measure	Frequency	Sampling Method
Aluminium	milligrams per litre	Quarterly	Grab sample
Ammonia	milligrams per litre	Quarterly	Grab sample
Arsenic	milligrams per litre	Quarterly	Grab sample
Barium	milligrams per litre	Quarterly	Grab sample
Beryllium	milligrams per litre	Quarterly	Grab sample
Boron	milligrams per litre	Quarterly	Grab sample
Cadmium	milligrams per litre	Quarterly	Grab sample
Calcium	milligrams per litre	Quarterly	Grab sample
Chromium	milligrams per litre	Quarterly	Grab sample
Cobalt	milligrams per litre	Quarterly	Grab sample
Copper	milligrams per litre	Quarterly	Grab sample
Dissolved Oxygen	milligrams per litre	Quarterly	Grab sample
Electrical conductivity	microsiemens per centimetre	Quarterly	Grab sample
Iron	milligrams per litre	Quarterly	Grab sample
Lead	milligrams per litre	Quarterly	Grab sample
Lithium	milligrams per litre	Quarterly	Grab sample
Magnesium	milligrams per litre	Quarterly	Grab sample
Manganese	milligrams per litre	Quarterly	Grab sample
Mercury	milligrams per litre	Quarterly	Grab sample
Molybdenum	milligrams per litre	Quarterly	Grab sample
Nickel	milligrams per litre	Quarterly	Grab sample
Nitrate	milligrams per litre	Quarterly	Grab sample
pH	pH	Quarterly	Grab sample
Phosphorus	milligrams per litre	Quarterly	Grab sample
Potassium	milligrams per litre	Quarterly	Grab sample

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Redox potential	milligrams per litre	Quarterly	Grab sample
Selenium	milligrams per litre	Quarterly	Grab sample
Silica	milligrams per litre	Quarterly	Grab sample
Silver	milligrams per litre	Quarterly	Grab sample
Sodium	milligrams per litre	Quarterly	Grab sample
Standing Water Level	metres (Australian Height Datum)	Quarterly	Special Method 1
Strontium (dissolved)	milligrams per litre	Quarterly	Grab sample
Sulfate	milligrams per litre	Quarterly	Grab sample
Tin	milligrams per litre	Quarterly	Grab sample
Total alkalinity	milligrams per litre	Quarterly	Grab sample
Total dissolved solids	milligrams per litre	Quarterly	Grab sample
Uranium	milligrams per litre	Quarterly	Grab sample
Vanadium	milligrams per litre	Quarterly	Grab sample
Zinc	milligrams per litre	Quarterly	Grab sample

POINT 53,54,55,56,57,58,59,60,61,62,63,64,65,66,67,68,69,70,71,72,73,74,75,76,77,78,79,80,81

Pollutant	Units of measure	Frequency	Sampling Method
Aluminium	milligrams per kilogram	Every 6 months	Special Method 2
Available phosphorus	milligrams per kilogram	Every 6 months	Special Method 2
Boron	milligrams per kilogram	Every 6 months	Special Method 2
Calcium	milligrams per kilogram	Every 6 months	Special Method 2
Cation Exchange Capacity	milligrams per kilogram	Every 6 months	Special Method 2
Chloride	milligrams per kilogram	Every 6 months	Special Method 2
Copper	milligrams per kilogram	Every 6 months	Special Method 2
Electrical conductivity	microsiemens per metre	Every 6 months	Special Method 2
Exchangeable sodium percentage	percent	Every 6 months	Special Method 2
Iron	milligrams per kilogram	Every 6 months	Special Method 2
Magnesium	milligrams per kilogram	Every 6 months	Special Method 2
Manganese	milligrams per kilogram	Every 6 months	Special Method 2
Nitrogen (nitrate)	milligrams per kilogram	Every 6 months	Special Method 2
Organic carbon	percent	Every 6 months	Special Method 2
pH	pH	Every 6 months	Special Method 2
Phosphorus	milligrams per kilogram	Every 6 months	Special Method 2
Potassium	milligrams per kilogram	Every 6 months	Special Method 2
Sodium	milligrams per kilogram	Every 6 months	Special Method 2
Soil texture	Visible	Every 6 months	In situ
Sulfate	milligrams per kilogram	Every 6 months	Special Method 2
Zinc	milligrams per kilogram	Every 6 months	Special Method 2

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Pollutant	Units of measure	Frequency	Sampling Method
Aluminium	milligrams per litre	Special Frequency 4	Grab sample
Ammonia	milligrams per litre	Special Frequency 4	Grab sample
Arsenic	milligrams per litre	Special Frequency 4	Grab sample
Barium	milligrams per litre	Special Frequency 4	Grab sample
Beryllium	milligrams per litre	Special Frequency 4	Grab sample
Bicarbonate	milligrams per litre	Special Frequency 4	Grab sample
Boron	milligrams per litre	Special Frequency 4	Grab sample
Cadmium	milligrams per litre	Special Frequency 4	Grab sample
Calcium	milligrams per litre	Special Frequency 4	Grab sample
Carbonate	milligrams per litre	Special Frequency 4	Grab sample
Chloride	milligrams per litre	Special Frequency 4	Grab sample
Choline Chloride	milligrams per litre	Special Frequency 4	Method approved in writing by the Authority
Chromium	milligrams per litre	Special Frequency 4	Grab sample
Cobalt	milligrams per litre	Special Frequency 4	Grab sample
Copper	milligrams per litre	Special Frequency 4	Grab sample
Electrical conductivity	microsiemens per centimetre	Special Frequency 4	Grab sample
Fluoride	milligrams per litre	Special Frequency 4	Grab sample
Iron	milligrams per litre	Special Frequency 4	Grab sample
Lead	milligrams per litre	Special Frequency 4	Grab sample
Magnesium	milligrams per litre	Special Frequency 4	Grab sample
Manganese	milligrams per litre	Special Frequency 4	Grab sample
Mercury	milligrams per litre	Special Frequency 4	Grab sample
Methane	milligrams per litre	Special Frequency 4	Grab sample
Molybdenum	milligrams per litre	Special Frequency 4	Grab sample
Monoethanolamine Borate	milligrams per litre	Special Frequency 4	Method approved in writing by the Authority
Nickel	milligrams per litre	Special Frequency 4	Grab sample
Nitrate	milligrams per litre	Special Frequency 4	Grab sample
Nitrite	milligrams per litre	Special Frequency 4	Grab sample
pH	pH	Special Frequency 4	Grab sample
Phosphorus (total)	milligrams per litre	Special Frequency 4	Grab sample
Potassium	milligrams per litre	Special Frequency 4	Grab sample
Reactive Phosphorus	milligrams per litre	Special Frequency 4	Grab sample
Selenium	milligrams per litre	Special Frequency 4	Grab sample
Silica	milligrams per litre	Special Frequency 4	Grab sample
Sodium	milligrams per litre	Special Frequency 4	Grab sample
Sodium Hypochlorite	milligrams per litre	Special Frequency 4	Method approved in writing by the Authority
Standing Water Level	metres (Australian Height Datum)	Special Frequency 9	Special Method 3
Strontium (dissolved)	milligrams per litre	Special Frequency 4	Grab sample
Sulfate	milligrams per litre	Special Frequency 4	Grab sample

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THPS (Phosphonium, Tetra kis(Hydroxymethyl) -Sulfate)	milligrams per litre	Special Frequency 4	Method approved in writing by the Authority
Total dissolved solids	milligrams per litre	Special Frequency 4	Grab sample
Total organic carbon	milligrams per litre	Special Frequency 4	Grab sample
Total suspended solids	milligrams per litre	Special Frequency 4	Grab sample
Uranium	milligrams per litre	Special Frequency 4	Grab sample
Vanadium	milligrams per litre	Special Frequency 4	Grab sample
Zinc	milligrams per litre	Special Frequency 4	Grab sample

POINT 90,91

Pollutant	Units of measure	Frequency	Sampling Method
Standing Water Level	metres (Australian Height Datum)	Special Frequency 6	Special Method 1

M2.3 The monitoring frequency for monitoring point 17, 86, 87, 88 and 89 as identified in Condition M2.2 is only required when the assessment well is operational and when water is being produced.

M2.4 For the purpose of Condition M2 the following definitions apply to the required frequency in the tables:

Frequency ID	Definition
Special Frequency 1	Quarterly if inflow within 12 hours of purging dry.
Special Frequency 2	Every 24 hours
Special Frequency 3	One sampling event before the Waukivory Pilot Project fracture stimulation commences, one sampling event within 24 hours of the completion of the Waukivory Fracture Stimulation, and one sample at week 2 and week 4 after the completion of the Waukivory pilot fracture stimulation.
Special Frequency 4	Every fortnight for 8 weeks from the commencement of the Waukivory pilot flow testing, then every 2 months thereafter until the cessation of the Waukivory pilot flow testing.
Special Frequency 5	One sampling event within 24 hours of the completion of the fracture stimulation of each well, and one sampling event one week after the completion of the fracture stimulation of each well, and one sampling event every 6 months thereafter until the cessation of the Waukivory pilot flow testing.
Special Frequency 6	One monitoring event to determine water level prior to the Waukivory Pilot Project fracture stimulation.
Special Frequency 7	One sampling event within 4 weeks of the cessation of the Craven 6 pilot flow testing.
Special Frequency 8	Every 6 hours.
Special Frequency 9	Every 6 hours when using a level sensor and continuous logger; or, once every fortnight using a Sonolog in the event of failure of a level sensor and continuous logger.

M2.5 For the purpose of Condition M2 the following definitions apply to the required methods in the tables:

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Sampling Method ID	Definition
Special Method 3	Use of level sensor and continuous logger. As a back up contingency, by use of Sonolog in the event of failure of a level sensor and continuous logger.
Special Method 1	Manual Dip
Special Method 2	<p>Samples will be taken at 20cm intervals down to the base of the respective treatment depth of 120cm (or until refusal on rock), ie 6 depth increments. For each of the four treatments, each depth interval from each soil sample location will be combined into a composite sample to provide a representative sample for analysis for that respective treatment.</p> <p>Depth Increments:</p> <ul style="list-style-type: none"> * 0-20 * 20-40 * 40-60 * 60-80 * 80-100 * 100-120
Special Method 4	By Calculation

M2.6 For the purpose of Condition M2 the following definition applies to the Sampling Method specified in the tables:

Sampling Method ID: Method Approved in Writing by the Authority

Definition: By analysis of the chemical compound, or analysis of the elemental constituents of the target compound when the individual chemical compound cannot be identified at low concentrations in waters.

The following elemental constituents are required for the corresponding pollutant:

Choline Chloride: Chloride and Nitrogen

Monoethanolamine Borate: Boron and Nitrogen

Sodium Hypochlorite: Free and residual chlorine

THPS (Phosphonium, Tetrakis (Hydroxymethyl)-Sulfate): Phosphorous and sulphate

The target compounds outlined above must be reported in terms of compound concentrations.

M3 Testing methods - concentration limits

M3.1 Subject to any express provision to the contrary in this licence, monitoring for the concentration of a pollutant discharged to waters or applied to a utilisation area must be done in accordance with the Approved Methods Publication unless another method has been approved by the EPA in writing before any tests are conducted.

M4 Testing methods - load limits

Note: Division 3 of the *Protection of the Environment Operations (General) Regulation 2009* requires that

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monitoring of actual loads of assessable pollutants listed in L2.2 must be carried out in accordance with the relevant load calculation protocol set out for the fee-based activity classification listed in the Administrative Conditions of this licence.

M5 Weather monitoring

M5.1 The meteorological weather station must be maintained so as to be capable of continuously monitoring the parameters specified in the condition below.

M5.2 For licence monitoring point 26 (weather monitoring), the licensee must monitor (by sampling and obtaining results by analysis) the parameters specified in Column 1. The licensee must use the units of measure, frequency, averaging period and sampling method specified opposite in the other columns.

Parameter	Units of Measure	Frequency	Averaging Period	Sampling Method
Air Temperature	° C	Continuous	1 Hour	AM-4
Wind Direction	°	Continuous	15 Minute	AM-2 & AM-4
Wind Speed	m/s	Continuous	15 Minute	AM-2 and AM-4
Sigma theta	°	Continuous	15 Minute	AM-2 and AM-4
Rainfall	mm	Continuous	15 Minute	AM-4
Relative Humidity	%	Continuous	1 Hour	AM-4

M6 Recording of pollution complaints

M6.1 The licensee must keep a legible record of all complaints made to the licensee or any employee or agent of the licensee in relation to pollution arising from any activity to which this licence applies.

M6.2 The record must include details of the following:

- a) the date and time of the complaint;
- b) the method by which the complaint was made;
- c) any personal details of the complainant which were provided by the complainant or, if no such details were provided, a note to that effect;
- d) the nature of the complaint;
- e) the action taken by the licensee in relation to the complaint, including any follow-up contact with the complainant; and
- f) if no action was taken by the licensee, the reasons why no action was taken.

M6.3 The record of a complaint must be kept for at least 4 years after the complaint was made.

M6.4 The record must be produced to any authorised officer of the EPA who asks to see them.

M7 Telephone complaints line

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- M7.1 The licensee must operate during its operating hours a telephone complaints line for the purpose of receiving any complaints from members of the public in relation to activities conducted at the premises or by the vehicle or mobile plant, unless otherwise specified in the licence.
- M7.2 The licensee must notify the public of the complaints line telephone number and the fact that it is a complaints line so that the impacted community knows how to make a complaint.
- M7.3 The preceding two conditions do not apply until :
- the date of the issue of this licence or
 - if this licence is a replacement licence within the meaning of the Protection of the Environment Operations (Savings and Transitional) Regulation 1998, the date on which a copy of the licence was served on the licensee under clause 10 of that regulation.
- M7.4 The licensee must nominate to the EPA a representative of the company that is available at all times and is capable of providing immediate assistance or response during emergencies or any other incidents at the premises. The name of the nominated representative and their contact details, including their telephone number, must be current at all times. The nomination and contact details must be provided to the EPA's Regional Manager- Hunter at PO Box 488G, Newcastle NSW 2300.
Note: This condition does not apply until two (2) weeks after the date of issue of the variation notice to include this condition.

M8 Requirement to monitor volume or mass

- M8.1 For each discharge point or utilisation area specified below, the licensee must monitor:
- the volume of liquids discharged to water or applied to the area;
 - the mass of solids applied to the area;
 - the mass of pollutants emitted to the air;
- at the frequency and using the method and units of measure, specified below.

POINT 17

Frequency	Unit of Measure	Sampling Method
Special Frequency 1	kilolitres	By Calculation (volume flow rate or pump capacity multiplied by operating time)

POINT 32

Frequency	Unit of Measure	Sampling Method
Continuous during discharge	kilolitres per day	By Calculation (volume flow rate or pump capacity multiplied by operating time)

- M8.2 For the purpose of the condition above:
Special Frequency 1 = Each time the produced water from Craven 6 is collected for disposal.

M9 Other monitoring and recording conditions

Leak Detection and Repair Program

- M9.1 The licensee must operate a Leak Detection And Repair (LDAR) program for all relevant components of

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plant and equipment in order to detect gas leaks.

M9.2 The LDAR program must, unless otherwise approved by the EPA, monitor for the detection of leaks in accordance with US EPA Method 21- Determination of Volatile Organic Compound Leaks (40 CFR Part 60, Appendix A, Method 21).

M9.3 Leak Detection and Repairs

When a gas leak is identified, the licensee must have the component repaired as follows:

- Within a period of 14 days if the concentration of the fugitive VOCs emission is greater than or equal to 1,000 parts per million by volume (ppmv) but not more than 10,000 ppmv (minor leak), as methane, above background.
- Within a period of 5 days if the concentration of the fugitive VOCs emission is greater than or equal to 10,000 parts per million by volume (ppmv) but not more than 50,000 ppmv (major leak), as methane, above background.
- Within a period of 1 day if the concentration of the fugitive VOCs emission is greater than or equal to 50,000 parts per million by volume (ppmv) (significant leak >50,000 ppmv), as methane, above background.

M10 Noise monitoring

M10.1 To assess compliance with the noise limits specified in this licence, attended noise monitoring must be undertaken in accordance with Conditions L6.5 and:

a) at each one of the locations identified in the table below, as shown on:

- Map titled 'AGL Gloucester Gas Project - Craven 6 Noise Monitoring', EPA reference DOC14/49504.
- Map titled 'AGL Gloucester Gas Project - Waukivory Area', EPA reference DOC14/20568.

b) occur every 6 months in a reporting period;

c) occur during each day, evening and night period as defined in the NSW Industrial Noise Policy for a minimum of:

- 1.5 hours during the day;
- 30 minutes during the evening; and
- 1 hour during the night.

d) occur for three consecutive operating days.

Location	Frequency
Lot 442, DP 1125089	Every 6 Months
Lot 1, DP 744913	Every 6 Months
Lot A, DP 116327	Every 6 Months
Lot 2, DP 795361	Every 6 Months
Lot 11, DP 841445	Every 6 Months

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6 Reporting Conditions

R1 Annual return documents

- R1.1 The licensee must complete and supply to the EPA an Annual Return in the approved form comprising:
- a) a Statement of Compliance; and
 - b) a Monitoring and Complaints Summary.

At the end of each reporting period, the EPA will provide to the licensee a copy of the form that must be completed and returned to the EPA.

- R1.2 An Annual Return must be prepared in respect of each reporting period, except as provided below.

Note: The term "reporting period" is defined in the dictionary at the end of this licence. Do not complete the Annual Return until after the end of the reporting period.

- R1.3 Where this licence is transferred from the licensee to a new licensee:

- a) the transferring licensee must prepare an Annual Return for the period commencing on the first day of the reporting period and ending on the date the application for the transfer of the licence to the new licensee is granted; and
- b) the new licensee must prepare an Annual Return for the period commencing on the date the application for the transfer of the licence is granted and ending on the last day of the reporting period.

Note: An application to transfer a licence must be made in the approved form for this purpose.

- R1.4 Where this licence is surrendered by the licensee or revoked by the EPA or Minister, the licensee must prepare an Annual Return in respect of the period commencing on the first day of the reporting period and ending on:

- a) in relation to the surrender of a licence - the date when notice in writing of approval of the surrender is given; or
- b) in relation to the revocation of the licence - the date from which notice revoking the licence operates.

- R1.5 The Annual Return for the reporting period must be supplied to the EPA by registered post not later than 60 days after the end of each reporting period or in the case of a transferring licence not later than 60 days after the date the transfer was granted (the 'due date').

- R1.6 Where the licensee is unable to complete a part of the Annual Return by the due date because the licensee was unable to calculate the actual load of a pollutant due to circumstances beyond the licensee's control, the licensee must notify the EPA in writing as soon as practicable, and in any event not later than the due date. The notification must specify:

- a) the assessable pollutants for which the actual load could not be calculated; and
- b) the relevant circumstances that were beyond the control of the licensee.

- R1.7 The licensee must retain a copy of the Annual Return supplied to the EPA for a period of at least 4 years after the Annual Return was due to be supplied to the EPA.

- R1.8 Within the Annual Return, the Statement of Compliance must be certified and the Monitoring and Complaints Summary must be signed by:

- a) the licence holder; or

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b) by a person approved in writing by the EPA to sign on behalf of the licence holder.

R1.9 The applicant must provide an annual return to the EPA in relation to the development as required by any licence under the Protection of the Environment Operations Act 1997 in relation to the development. In the return the applicant must report on the annual monitoring undertaken (where the activity results in pollutant discharges), provide a summary of complaints relating to the development, report on compliance with licence conditions and provide a calculation of licence fees (administrative fees and, where relevant, load based fees) that are payable. If load based fees apply to the activity the applicant will be required to submit load-based fee calculation worksheets with the return.

R2 Notification of environmental harm

R2.1 Notifications must be made by telephoning the Environment Line service on 131 555.

Note: The licensee or its employees must notify all relevant authorities of incidents causing or threatening material harm to the environment immediately after the person becomes aware of the incident in accordance with the requirements of Part 5.7 of the Act.

R2.2 The licensee must provide written details of the notification to the EPA within 7 days of the date on which the incident occurred.

R3 Written report

R3.1 Where an authorised officer of the EPA suspects on reasonable grounds that:

- a) where this licence applies to premises, an event has occurred at the premises; or
- b) where this licence applies to vehicles or mobile plant, an event has occurred in connection with the carrying out of the activities authorised by this licence, and the event has caused, is causing or is likely to cause material harm to the environment (whether the harm occurs on or off premises to which the licence applies), the authorised officer may request a written report of the event.

R3.2 The licensee must make all reasonable inquiries in relation to the event and supply the report to the EPA within such time as may be specified in the request.

R3.3 The request may require a report which includes any or all of the following information:

- a) the cause, time and duration of the event;
- b) the type, volume and concentration of every pollutant discharged as a result of the event;
- c) the name, address and business hours telephone number of employees or agents of the licensee, or a specified class of them, who witnessed the event;
- d) the name, address and business hours telephone number of every other person (of whom the licensee is aware) who witnessed the event, unless the licensee has been unable to obtain that information after making reasonable effort;
- e) action taken by the licensee in relation to the event, including any follow-up contact with any complainants;
- f) details of any measure taken or proposed to be taken to prevent or mitigate against a recurrence of such an event; and
- g) any other relevant matters.

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- R3.4 The EPA may make a written request for further details in relation to any of the above matters if it is not satisfied with the report provided by the licensee. The licensee must provide such further details to the EPA within the time specified in the request.

R4 Other reporting conditions

Leak Detection and Repair Program Summary Report

- R4.1 The licensee must submit a brief summary report on the Leak Detection and Repair (LDAR) program with the annual return. The summary report must include, but may not be limited to:
- The total number of components inspected, as well as the number and percentage of minor, major and significant leaking components found by component types;
 - The type of components and the scale of the leak for any equipment where leaks are found;
 - The emission level of leaking equipment and emission level of re-check after leak was repaired;
 - The repair responses and times as listed in the table below

Table: Repair Responses and Times

Scale of leak (ppmv)	Initial remedial repair in response	Actual repair time
1,000 - <10,000 (Minor)		
>=10,000 - <50,000 (Major)		
>=50,000 (Significant)		

Spatial Information

- R4.2 The licensee must submit to the EPA updated spatial information with the Annual Return when there have been infrastructure changes to the licence as identified in condition A2.1. The information must be provided in an ESRI geodatabase or shapefile format or any ESRI compatible dataset in GDA94.

Surface Water and Groundwater Monitoring Report

- R4.3 The licensee must supply with the Annual Return a Surface Water and Groundwater Monitoring Report for all water monitoring points identified on this licence which provides:
- a presentation of the required monitoring results;
 - an analysis and interpretation of monitoring results; and
 - actions to correct identified adverse trends.

Noise Compliance Assessment Report

- R4.4 A noise compliance assessment report must be submitted to the EPA within 30 days of the completion of each noise monitoring event. The assessment must be prepared by a suitably qualified and experienced acoustical consultant and include:

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- a) an assessment of compliance with noise limits presented in Condition L6.1; and
- b) an outline of any management actions taken within the monitoring period to address any exceedences of the limits contained in Condition L6.1.

Tiedman Irrigation Program Reporting

- R4.5 The licensee must submit to the EPA the bi-annual (six monthly) Tiedman Irrigation Program reports as required by condition 6) of the Tiedman Irrigation Program project approval granted by the NSW Trade and Investment, Office of Coal Seam Gas on 4 July 2014, reference number 13/36641.

The reports must show the pollutant base line levels, monitoring trends, an analysis and interpretation of monitoring results, and where required any actions to correct adverse trends.

7 General Conditions

G1 Copy of licence kept at the premises or plant

- G1.1 A copy of this licence must be kept at the premises to which the licence applies.
- G1.2 The licence must be produced to any authorised officer of the EPA who asks to see it.
- G1.3 A copy of this licence must be kept at the mobile plant to which the licence applies.
- G1.4 The licence must be available for inspection by any employee or agent of the licensee working at the premises.

G2 Other general conditions

- G2.1 Waukivory Surface Water and Groundwater Management Sub Plan

The licensee must revise the “Surface Water and Groundwater Management Plan for the Waukivory Pilot Program – Gloucester Gas Project, dated 9 July 2014” (SGMP) for the proposal and submit it to the EPA for review 1 month prior to the commencement of fracture stimulation activities. The plan must include the additional information below:

- a) A methodology that clearly defines what constitutes a significant deviation from the trends observed in baseline surface and groundwater parameter ranges at the prescribed surface and groundwater monitoring locations being used to assess potential pollution from fracking activities. This methodology should include the full range of analytes being sampled at surface and groundwater locations monitoring for potential pollution, and should also include salinity.
- b) If produced water from the Tiedman dams will be used as fracking make-up water, the proposed salinity trigger value may not be appropriate and the SGMP will need to be updated to include trigger values that account for the salinity of the makeup water.

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c) Some tanks remain open topped and therefore certain risk factors remain. Management triggers in the SGMP should address contingency actions to cease pumping into staging dams if there is a chance of overflow (e.g. due to either pump out failures or high rainfall).

d) Provide further information on intermediate breakdown products of Tetrakis (hydroxymethyl) Phosphonium Sulfate (THPS). These intermediate breakdown products may include, but not be limited to, trishydroxymethyl phosphine (THP) and tris hydroxymethyl phosphine oxide (THPO). Propose analytical methods to be used for licence monitoring of THPS and intermediate breakdown products (prior to full breakdown to elemental constituents).

e) Outline a proposed sampling and monitoring program for the detection of fracture stimulation chemical compounds (including THPS, Choline Chloride, Monoethanolamine Borate and Sodium Hypochlorite and any relevant intermediate breakdown products) to monitor their presence/absence of any fracking chemicals in produced water before being transferred to the Tiedman Irrigation produced water dams. This sampling should be included as part of the operational triggers in Section 6.1 of the SGMP that define when the change from flowback water to produced water occurs. The program should include justification for the location and frequency of sampling and the frequency should relate to how the change of flow back water to produced water will be handled.

G2.2 Construction Noise Management Plan

The licensee must prepare and implement a detailed and site-specific Construction Noise Management Plan (CMNMP), prior to commencement of construction activities, to apply to:

- a) site preparation activities including earthworks;
- b) construction of water storages and pipelines;
- c) hydraulic fracture stimulation; and
- d) well workover.

The CMNMP must include but is not necessarily limited to:

- a) identification of each work area, site compound and access route (both private and public);
- b) identification of the specific activities that will be carried out and associated noise sources at the premises and access routes;
- c) identification of all potentially affected sensitive receivers;
- d) the noise objectives identified in accordance with the Interim Construction Noise Guideline (ICNG, DECC 2009) and New South Wales Industrial Noise Policy (INP, EPA 2000);
- e) assessment of potential noise and vibration from the proposed methods against the objectives identified in (d);
- f) an analysis of feasible and reasonable noise mitigation measures that can be implemented to reduce construction noise impacts, with reference to the ICNG and Chapter 7 of the INP;
- g) description of management methods and procedures and specific noise mitigation treatments that will be implemented to control noise and vibration;
- h) procedures for notifying residents of activities that are likely to affect their noise and vibration amenity; and
- i) measures to monitor noise performance and respond to complaints.

8 Special Conditions

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E1 Special Dictionary

E1.1 .

Activity Type	Definition
Construction Activities	Include drilling of wells and construction of infrastructure including pipelines, well pads, water treatment facility, flares and access roads.
Operational Activities	Includes well maintenance activities as well as all activities not defined under construction activities.

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Dictionary

General Dictionary

3DGM [in relation to a concentration limit]	Means the three day geometric mean, which is calculated by multiplying the results of the analysis of three samples collected on consecutive days and then taking the cubed root of that amount. Where one or more of the samples is zero or below the detection limit for the analysis, then 1 or the detection limit respectively should be used in place of those samples
Act	Means the Protection of the Environment Operations Act 1997
activity	Means a scheduled or non-scheduled activity within the meaning of the Protection of the Environment Operations Act 1997
actual load	Has the same meaning as in the Protection of the Environment Operations (General) Regulation 2009
AM	Together with a number, means an ambient air monitoring method of that number prescribed by the <i>Approved Methods for the Sampling and Analysis of Air Pollutants in New South Wales</i> .
AMG	Australian Map Grid
anniversary date	The anniversary date is the anniversary each year of the date of issue of the licence. In the case of a licence continued in force by the Protection of the Environment Operations Act 1997, the date of issue of the licence is the first anniversary of the date of issue or last renewal of the licence following the commencement of the Act.
annual return	Is defined in R1.1
Approved Methods Publication	Has the same meaning as in the Protection of the Environment Operations (General) Regulation 2009
assessable pollutants	Has the same meaning as in the Protection of the Environment Operations (General) Regulation 2009
BOD	Means biochemical oxygen demand
CEM	Together with a number, means a continuous emission monitoring method of that number prescribed by the <i>Approved Methods for the Sampling and Analysis of Air Pollutants in New South Wales</i> .
COD	Means chemical oxygen demand
composite sample	Unless otherwise specifically approved in writing by the EPA, a sample consisting of 24 individual samples collected at hourly intervals and each having an equivalent volume.
cond.	Means conductivity
environment	Has the same meaning as in the Protection of the Environment Operations Act 1997
environment protection legislation	Has the same meaning as in the Protection of the Environment Administration Act 1991
EPA	Means Environment Protection Authority of New South Wales.
fee-based activity classification	Means the numbered short descriptions in Schedule 1 of the Protection of the Environment Operations (General) Regulation 2009.
general solid waste (non-putrescible)	Has the same meaning as in Part 3 of Schedule 1 of the Protection of the Environment Operations Act 1997

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flow weighted composite sample	Means a sample whose composites are sized in proportion to the flow at each composites time of collection.
general solid waste (putrescible)	Has the same meaning as in Part 3 of Schedule 1 of the Protection of the Environment Operations Act 1997
grab sample	Means a single sample taken at a point at a single time
hazardous waste	Has the same meaning as in Part 3 of Schedule 1 of the Protection of the Environment Operations Act 1997
licensee	Means the licence holder described at the front of this licence
load calculation protocol	Has the same meaning as in the Protection of the Environment Operations (General) Regulation 2009
local authority	Has the same meaning as in the Protection of the Environment Operations Act 1997
material harm	Has the same meaning as in section 147 Protection of the Environment Operations Act 1997
MBAS	Means methylene blue active substances
Minister	Means the Minister administering the Protection of the Environment Operations Act 1997
mobile plant	Has the same meaning as in Part 3 of Schedule 1 of the Protection of the Environment Operations Act 1997
motor vehicle	Has the same meaning as in the Protection of the Environment Operations Act 1997
O&G	Means oil and grease
percentile [in relation to a concentration limit of a sample]	Means that percentage [eg.50%] of the number of samples taken that must meet the concentration limit specified in the licence for that pollutant over a specified period of time. In this licence, the specified period of time is the Reporting Period unless otherwise stated in this licence.
plant	Includes all plant within the meaning of the Protection of the Environment Operations Act 1997 as well as motor vehicles.
pollution of waters [or water pollution]	Has the same meaning as in the Protection of the Environment Operations Act 1997
premises	Means the premises described in condition A2.1
public authority	Has the same meaning as in the Protection of the Environment Operations Act 1997
regional office	Means the relevant EPA office referred to in the Contacting the EPA document accompanying this licence
reporting period	For the purposes of this licence, the reporting period means the period of 12 months after the issue of the licence, and each subsequent period of 12 months. In the case of a licence continued in force by the Protection of the Environment Operations Act 1997, the date of issue of the licence is the first anniversary of the date of issue or last renewal of the licence following the commencement of the Act.
restricted solid waste	Has the same meaning as in Part 3 of Schedule 1 of the Protection of the Environment Operations Act 1997
scheduled activity	Means an activity listed in Schedule 1 of the Protection of the Environment Operations Act 1997
special waste	Has the same meaning as in Part 3 of Schedule 1 of the Protection of the Environment Operations Act 1997
TM	Together with a number, means a test method of that number prescribed by the <i>Approved Methods for the Sampling and Analysis of Air Pollutants in New South Wales</i> .

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TSP	Means total suspended particles
TSS	Means total suspended solids
Type 1 substance	Means the elements antimony, arsenic, cadmium, lead or mercury or any compound containing one or more of those elements
Type 2 substance	Means the elements beryllium, chromium, cobalt, manganese, nickel, selenium, tin or vanadium or any compound containing one or more of those elements
utilisation area	Means any area shown as a utilisation area on a map submitted with the application for this licence
waste	Has the same meaning as in the Protection of the Environment Operations Act 1997
waste type	Means liquid, restricted solid waste, general solid waste (putrescible), general solid waste (non - putrescible), special waste or hazardous waste

Ms Carmen Dwyer

Environment Protection Authority

(By Delegation)

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End Notes
