

## BOC GASES BOMADERRY

BOLONG ROAD

BOMADERRY NSW 2541 AUSTRALIA

Sold To: 0150199259 Ship To: 0150199259

Representative: Mark Landstra

Sample Taken From: BOC Bomaderry-EPA Licence point

Date Sampled: 10-Oct-2023

Final - Report Number: 3857100

Sample Number: AW103795

Date Received: 11-Oct-2023

Date Completed: 20-Oct-2023

Date Authorised: 20-Oct-2023

## Summary Report

Results apply to the sample as received:

## Testing Laboratory: ALS Environmental

## Water

Alkalinity	Test Method: ED037-P	Total
Total Alkalinity (CaCO <sub>3</sub> )		40 mg/L

Phosphate	Test Method: EK067G	Total
Total Phosphate (PO <sub>4</sub> )		0.78 mg/L

Physical	Test Method	Total
Conductivity at 25°C	EA010-P	313 µS/cm
pH @ 25°C	EA005-P	5.51 pH Units

Demand	Test Method	Total
BOD (5-Day)	EP030	59 mg/L
Chemical Oxygen Demand (O <sub>2</sub> )	EP026SP	120 mg/L

Other	Test Method	Total
Free Carbon Dioxide	EA165-P	247 mg/L
Total Carbon Dioxide	EA165-P	282 mg/L
Ethanol	EP117	26.4 mg/L
Nitrogen (N)	EK062G	0.4 mg/L

Testing services provided by: ALS Environmental. NATA Accreditation no. 825. Report Number: ES2335025. Report Date: 19-Oct-2023



Authorised by Mi Hei Hwang

Senior Chemist

**Final - Report Number:** 3631168

**BOC GASES BOMADERRY**

BOLONG ROAD

BOMADERRY NSW 2541 AUSTRALIA

**Sold To:** 0150199259 **Ship To:** 0150199259

**Representative:** Mark Landstra

**Sample Number:** AW098314

**Date Sampled:** 30-Nov-2022

**Date Received:** 02-Dec-2022

**Date Completed:** 12-Dec-2022

**Date Authorised:** 21-Dec-2022

### Summary Report

Results apply to the sample as received:

**Sampling point:** BOC Bomaderry-EPA Licence point

**Testing Laboratory:** ALS Environmental

**Water**

Alkalinity	Test Method: ED037-P	Total
Total Alkalinity (CaCO <sub>3</sub> )		63 mg/L

Phosphate	Test Method: EK067G	Total
Total Phosphate (PO <sub>4</sub> )		0.48 mg/L

Physical	Test Method	Total
Conductivity at 25°C	EA010-P	327 µS/cm
pH @ 25°C	EA005-P	5.70 pH Units

Demand	Test Method	Total
BOD (5-Day)	EP030	177 mg/L
Chemical Oxygen Demand (O <sub>2</sub> )	EP026SP	297 mg/L

Other	Test Method	Total
Free Carbon Dioxide	EA165-P	251 mg/L
Total Carbon Dioxide	EA165-P	307 mg/L
Ethanol	EP117	58.3 mg/L
Nitrogen (N)	EK062G	0.4 mg/L

Testing services provided by: ALS Environmental. NATA Accreditation no. 825. Report Number: ES2243635. Report Date: 9-Dec-2022



Authorised by Thanh Hoang Le  
Lead Chemist

**Final - Report Number:** 3394231

**BOC GASES BOMBADERRY**

BOLONG ROAD

BOMADERRY NSW 2541 AUSTRALIA

**Sold To:** 0150199259 **Ship To:** 0150199259

**Representative:** Clive Stacey

**Sample Number:** AW092282

**Date Sampled:** 18-Jan-2022

**Date Received:** 19-Jan-2022

**Date Completed:** 27-Jan-2022

**Date Authorised:** 27-Jan-2022

**Summary Report**

Results apply to the sample as received:

**Sampling point:** BOC Bomaderry-EPA Licence point

**Testing Laboratory:** ALS Environmental

**Water**

Alkalinity	Test Method: ED037-P	Total
Total Alkalinity (CaCO <sub>3</sub> )		58 mg/L

Phosphate	Test Method: EK067G	Total
Total Phosphate (PO <sub>4</sub> )		1.89 mg/L

Physical	Test Method	Total
Conductivity at 25°C	EA010-P	324 µS/cm
pH @ 25°C	EA005	5.58 pH Units

Demand	Test Method	Total
BOD (5-Day)	EP030	196 mg/L
Chemical Oxygen Demand (O <sub>2</sub> )	EP026SP	377 mg/L

Other	Test Method	Total
Free Carbon Dioxide	EA165-P	402 mg/L
Total Carbon Dioxide	EA165-P	453 mg/L
Ethanol	EP117	38.4 mg/L
Nitrogen (N)	EK062G	<1.0 mg/L

Testing services provided by: ALS Environmental. NATA Accreditation no. 825. Report Number: ES2201673. Report Date: 25-Jan-2022



Authorised by Mohammad Sjam  
Chemist

**Final - Report Number:** 3262075

**BOC GASES BOMBADERRY**

BOLONG ROAD

BOMADERRY NSW 2541 AUSTRALIA

**Sold To:** 0150199259 **Ship To:** 0150199259

**Representative:** Clive Stacey

**Sample Number:**

AW088977

**Date Sampled:**

22-Jul-2021

**Date Received:**

23-Jul-2021

**Date Completed:**

29-Jul-2021

**Date Authorised:**

03-Aug-2021

**Summary Report**

This sample was analysed as received, the results being as follows:

**Sampling point:** Waste Water

**Testing Laboratory:** ALS Environmental

**Water**

Cations - Metals	Test Method	Total
Aluminium (Al)	EG005T	0.15 mg/L
Antimony (Sb)	EG005T	<0.01 mg/L
Barium (Ba)	EG005T	<0.1 mg/L
Beryllium (Be)	EG005T	<0.01 mg/L
Boron (B)	EG005T	<0.1 mg/L
Cadmium (Cd)	EG005T	<0.005 mg/L
Calcium (Ca)	ED093T	42 mg/L
Chromium (Cr)	EG005T	<0.01 mg/L
Cobalt (Co)	EG005T	<0.01 mg/L
Copper (Cu)	EG005T	0.18 mg/L
Iron (Fe)	EG005T	0.42 mg/L
Lead (Pb)	EG005T	0.10 mg/L
Magnesium (Mg)	ED093T	8 mg/L
Manganese (Mn)	EG005T	0.03 mg/L
Molybdenum (Mo)	EG005T	<0.01 mg/L
Nickel (Ni)	EG005T	<0.01 mg/L
Potassium (K)	ED093T	3 mg/L
Silica (SiO <sub>2</sub> )	ED040T	13.0 mg/L
Sodium (Na)	ED093T	26 mg/L
Strontium (Sr)	EG005T	<0.1 mg/L
Tin (Sn)	EG005T	<0.01 mg/L
Titanium (Ti)	EG005T	<0.01 mg/L
Vanadium (V)	EG005T	<0.01 mg/L
Zinc (Zn)	EG005T	0.31 mg/L



Authorised by Mohammad Sjam  
Chemist

**Final - Report Number:** 3262075

**BOC GASES BOMBADERRY**

BOLONG ROAD

BOMADERRY NSW 2541 AUSTRALIA

**Sold To:** 0150199259 **Ship To:** 0150199259

**Representative:** Clive Stacey

**Sample Number:** AW088977

**Date Sampled:** 22-Jul-2021

**Date Received:** 23-Jul-2021

**Date Completed:** 29-Jul-2021

**Date Authorised:** 03-Aug-2021

### Summary Report

This sample was analysed as received, the results being as follows:

**Sampling point:** Waste Water

**Testing Laboratory:** ALS Environmental

<b>Anions</b>	<b>Test Method: ED009-X</b>	<b>Filtered</b>
Sulfate (SO4)		40.3 mg/L
<b>Phosphate</b>	<b>Test Method: EK067G</b>	<b>Total</b>
Total Phosphorus (P)		0.35 mg/L
<b>Physical</b>	<b>Test Method</b>	<b>Total</b>
Conductivity at 25°C	EA010-P	396 µS/cm
pH @ 25°C	EA005-P	5.72 pH Units
Total Suspended Solids @ 105°C	EA025H	50 mg/L
<b>Demand</b>	<b>Test Method</b>	<b>Total</b>
BOD (5-Day)	EP030	64 mg/L
Organic Carbon (C)	EP005	29 mg/L
Chemical Oxygen Demand (O2)	EP026SP	120 mg/L
<b>Other</b>	<b>Test Method</b>	<b>Total</b>
Ammonia (NH3-N)	EK055G	0.02 mg/L
Oil and Grease - Total	EP020	<5 mg/L

Testing services provided by: ALS Environmental. NATA Accreditation no. 825. Report Number: ES2127069. Report Date: 29-Jul-2021



Authorised by Mohammad Sjam  
Chemist

**Final - Report Number:** 2961634

**BOC GASES BOMBADERRY**

BOLONG ROAD

BOMADERRY NSW 2541 AUSTRALIA

**Sold To:** 0150199259 **Ship To:** 0150199259

**Representative:** Clive Stacey

**Sample Number:** AW082348

**Date Sampled:** 24-Jun-2020

**Date Received:** 26-Jun-2020

**Date Completed:** 03-Jul-2020

**Date Authorised:** 06-Jul-2020

### Summary Report

This sample was analysed as received, the results being as follows:

**Sampling point:** Trade Waste

**Testing Laboratory:** ALS Environmental

**Water**

Cations - Metals	Test Method	Total
Aluminium (Al)	EG005T	<0.10 mg/L
Antimony (Sb)	EG005T	<0.01 mg/L
Barium (Ba)	EG005T	<0.1 mg/L
Beryllium (Be)	EG005T	<0.01 mg/L
Boron (B)	EG005T	<0.1 mg/L
Cadmium (Cd)	EG005T	<0.005 mg/L
Calcium (Ca)	ED093T	25 mg/L
Chromium (Cr)	EG005T	<0.01 mg/L
Cobalt (Co)	EG005T	<0.01 mg/L
Copper (Cu)	EG005T	0.20 mg/L
Iron (Fe)	EG005T	<0.05 mg/L
Lead (Pb)	EG005T	<0.01 mg/L
Magnesium (Mg)	ED093T	7 mg/L
Manganese (Mn)	EG005T	<0.01 mg/L
Molybdenum (Mo)	EG005T	<0.01 mg/L
Nickel (Ni)	EG005T	<0.01 mg/L
Potassium (K)	ED093T	4 mg/L
Silica (SiO <sub>2</sub> )	ED040T	3.4 mg/L
Sodium (Na)	ED093T	19 mg/L
Strontium (Sr)	EG005T	<0.1 mg/L
Tin (Sn)	EG005T	<0.01 mg/L
Titanium (Ti)	EG005T	<0.01 mg/L
Vanadium (V)	EG005T	<0.01 mg/L
Zinc (Zn)	EG005T	0.05 mg/L



Authorised by Mohammad Sjam  
Chemist

**Final - Report Number:** 2961634

**BOC GASES BOMBADERRY**

BOLONG ROAD

BOMADERRY NSW 2541 AUSTRALIA

**Sold To:** 0150199259 **Ship To:** 0150199259

**Representative:** Clive Stacey

**Sample Number:** AW082348

**Date Sampled:** 24-Jun-2020

**Date Received:** 26-Jun-2020

**Date Completed:** 03-Jul-2020

**Date Authorised:** 06-Jul-2020

### Summary Report

This sample was analysed as received, the results being as follows:

**Sampling point:** Trade Waste

**Testing Laboratory:** ALS Environmental

<b>Anions</b>	<b>Test Method: ED009-X</b>	<b>Filtered</b>
Sulfate (SO4)		24.5 mg/L
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<b>Phosphate</b>	<b>Test Method: EK067G</b>	<b>Total</b>
Total Phosphorus (P)		0.17 mg/L
<hr/>		
<b>Physical</b>	<b>Test Method</b>	<b>Total</b>
Conductivity at 25°C	EA010-P	269 µS/cm
pH @ 25°C	EA005-P	5.66 pH Units
Total Suspended Solids @ 105°C	EA025H	<5 mg/L
<hr/>		
<b>Demand</b>	<b>Test Method</b>	<b>Total</b>
BOD (5-Day)	EP030	19 mg/L
Organic Carbon (C)	EP005	18 mg/L
Chemical Oxygen Demand (O2)	EP026SP	42 mg/L
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<b>Other</b>	<b>Test Method</b>	<b>Total</b>
Ammonia (NH3-N)	EK055G	0.10 mg/L
Oil and Grease - Total	EP020	<5 mg/L

Testing services provided by: ALS Environmental. NATA Accreditation no. 825. Report Number: ES2022251. Report Date: 2-Jul-2020



Authorised by Mohammad Sjam  
Chemist

**Final - Report Number:** 2846457

**BOC GASES BOMBADERRY**

BOLONG ROAD

BOMADERRY NSW 2541 AUSTRALIA

**Sold To:** 0150199259 **Ship To:** 0150199259

**Representative:** Clive Stacey

**Sample Number:** AW079830

**Date Sampled:** 14-Jan-2020

**Date Received:** 15-Jan-2020

**Date Completed:** 24-Jan-2020

**Date Authorised:** 29-Jan-2020

### Summary Report

This sample was analysed as received, the results being as follows:

**Sampling point:** Tradewaste

**Testing Laboratory:** ALS Environmental

**Water**

Cations - Metals	Test Method	Total
Aluminium (Al)	EG005T	0.18 mg/L
Antimony (Sb)	EG005T	<0.01 mg/L
Barium (Ba)	EG005T	<0.1 mg/L
Beryllium (Be)	EG005T	<0.01 mg/L
Boron (B)	EG005T	<0.1 mg/L
Cadmium (Cd)	EG005T	<0.005 mg/L
Calcium (Ca)	ED093T	29 mg/L
Chromium (Cr)	EG005T	<0.01 mg/L
Cobalt (Co)	EG005T	<0.01 mg/L
Copper (Cu)	EG005T	0.05 mg/L
Iron (Fe)	EG005T	0.18 mg/L
Lead (Pb)	EG005T	<0.01 mg/L
Magnesium (Mg)	ED093T	6 mg/L
Manganese (Mn)	EG005T	0.01 mg/L
Molybdenum (Mo)	EG005T	<0.01 mg/L
Nickel (Ni)	EG005T	<0.01 mg/L
Potassium (K)	ED093T	2 mg/L
Silica (SiO <sub>2</sub> )	ED040T	3.2 mg/L
Sodium (Na)	ED093T	32 mg/L
Strontium (Sr)	EG005T	<0.1 mg/L
Tin (Sn)	EG005T	<0.01 mg/L
Titanium (Ti)	EG005T	<0.01 mg/L
Vanadium (V)	EG005T	<0.01 mg/L
Zinc (Zn)	EG005T	1.38 mg/L



Authorised by Mohammad Sjam  
Chemist



**Final - Report Number:** 2846457

**BOC GASES BOMBADERRY**

BOLONG ROAD

BOMADERRY NSW 2541 AUSTRALIA

**Sold To:** 0150199259 **Ship To:** 0150199259

**Representative:** Clive Stacey

**Sample Number:** AW079830

**Date Sampled:** 14-Jan-2020

**Date Received:** 15-Jan-2020

**Date Completed:** 24-Jan-2020

**Date Authorised:** 29-Jan-2020

### Summary Report

This sample was analysed as received, the results being as follows:

**Sampling point:** Tradewaste

**Testing Laboratory:** ALS Environmental

<b>Anions</b>	<b>Test Method: ED009-X</b>	<b>Filtered</b>
Sulfate (SO <sub>4</sub> )		24.4 mg/L
<b>Phosphate</b>	<b>Test Method: EK067G</b>	<b>Total</b>
Total Phosphorus (P)		1.50 mg/L
<b>Physical</b>	<b>Test Method</b>	<b>Total</b>
Conductivity at 25°C	EA010-P	350 µS/cm
pH @ 25°C	EA005-P	5.35 pH Units
Total Suspended Solids @ 105°C	EA025H	<5 mg/L
<b>Demand</b>	<b>Test Method</b>	<b>Total</b>
BOD (5-Day)	EP030	141 mg/L
Organic Carbon (C)	EP005	88 mg/L
Chemical Oxygen Demand (O <sub>2</sub> )	EP026SP	278 mg/L
<b>Other</b>	<b>Test Method</b>	<b>Total</b>
Ammonia (NH <sub>3</sub> -N)	EK055G	<0.01 mg/L
Oil and Grease - Total	EP020	<5 mg/L

Testing services provided by: ALS Environmental. NATA Accreditation no. 825. Report Number: ES2001130. Report Date: 24-Jan-2020



Authorised by Mohammad Sjam  
Chemist

**Final - Report Number:** 2750740

**BOC GASES BOMBADERRY**

BOLONG ROAD

BOMADERRY NSW 2541 AUSTRALIA

**Sold To:** 0150199259 **Ship To:** 0150199259

**Representative:** Clive Stacey

**Sample Number:** AW077938

**Date Sampled:** 17-Sep-2019

**Date Received:** 18-Sep-2019

**Date Completed:** 26-Sep-2019

**Date Authorised:** 30-Sep-2019

### Summary Report

This sample was analysed as received, the results being as follows:

**Sampling point:** BOC Bomaderry-EPA Licence point

**Testing Laboratory:** ALS Environmental

**Water**

Alkalinity	Test Method: ED037-P	Total
Total Alkalinity (CaCO <sub>3</sub> )		56 mg/L

Phosphate	Test Method: EK067G	Total
Total Phosphate (PO <sub>4</sub> )		0.19 mg/L

Physical	Test Method	Total
Conductivity at 25°C	EA010-P	257 µS/cm
pH @ 25°C	EA005-P	5.38 pH Units

Demand	Test Method	Total
BOD (5-Day)	EP030	107 mg/L
Chemical Oxygen Demand (O <sub>2</sub> )	EP026SP	141 mg/L

Other	Test Method	Total
Free Carbon Dioxide	EA165-P	467 mg/L
Total Carbon Dioxide	EA165-P	516 mg/L
Ethanol	EP117	28.5 mg/L
Nitrogen (N)	EK062G	0.2 mg/L

Testing services provided by: ALS Environmental. NATA Accreditation no. 825. Report Number: ES1930148. Report Date: 26-Sep-2019



Authorised by Mohammad Sjam  
Chemist

**Final - Report Number:** 2378708

**BOC GASES BOMBADERRY**

BOLONG ROAD

BOMADERRY NSW 2541 AUSTRALIA

**Sold To:** 0150199259 **Ship To:** 0150199259

**Representative:** Clive Stacey

**Sample Number**

AW069979

**Date Sampled**

15-Jun-2018

**Date Received**

18-Jun-2018

**Date Completed**

27-Jun-2018

**Date Authorised**

27-Jun-2018

### Summary Report

This sample was analysed as received, the results being as follows:

**Sampling point:** BOC Bomaderry-EPA Licence point

**Testing Laboratory:** ALS Environmental

**Water**

Alkalinity	Test Method: ED037-P	Total
Total Alkalinity (CaCO <sub>3</sub> )		33 mg/L

Phosphate	Test Method: EK067G	Total
Total Phosphate (PO <sub>4</sub> )		0.35 mg/L

Physical	Test Method	Total
Conductivity at 25°C	EA010-P	253 µS/cm
pH @ 25°C	EA005-P	4.93 pH Units

Demand	Test Method	Total
BOD (5-Day)	EP030	645 mg/L
Chemical Oxygen Demand (O <sub>2</sub> )	EP026ST	826 mg/L

Other	Test Method	Total
Free Carbon Dioxide	EA165-P	775 mg/L
Total Carbon Dioxide	EA165-P	804 mg/L
Ethanol	EP117	666 mg/L
Nitrogen (N)	EK062G	1.2 mg/L

Testing services provided by: ALS Environmental. NATA Accreditation no. 825. Report Number: ES1817710. Report Date: 25-Jun-2018



Authorised by Mohammad Sjam  
Chemist

**Final - Report Number:** 2355593

**BOC GASES BOMBADERRY**

BOLONG ROAD

BOMADERRY NSW 2541 AUSTRALIA

**Sold To:** 0150199259 **Ship To:** 0150199259

**Representative:** Clive Stacey

**Sample Number**

AW069552

**Date Sampled**

17-May-2018

**Date Received**

18-May-2018

**Date Completed**

29-May-2018

**Date Authorised**

30-May-2018

### Summary Report

This sample was analysed as received, the results being as follows:

**Sampling point:** CT RECIRCULATING

**Testing Laboratory:** ALS Environmental

**Water**

Cations - Metals	Test Method	Total
Aluminium (Al)	EG005T	0.26 mg/L
Barium (Ba)	EG005T	<0.1 mg/L
Beryllium (Be)	EG005T	<0.01 mg/L
Boron (B)	EG005T	<0.1 mg/L
Cadmium (Cd)	EG005T	<0.005 mg/L
Calcium (Ca)	ED093T	105 mg/L
Chromium (Cr)	EG005T	<0.01 mg/L
Cobalt (Co)	EG005T	<0.01 mg/L
Copper (Cu)	EG005T	0.05 mg/L
Iron (Fe)	EG005T	0.31 mg/L
Lead (Pb)	EG005T	<0.01 mg/L
Magnesium (Mg)	ED093T	25 mg/L
Manganese (Mn)	EG005T	0.05 mg/L
Molybdenum (Mo)	EG005T	<0.01 mg/L
Nickel (Ni)	EG005T	<0.01 mg/L
Potassium (K)	ED093T	7 mg/L
Sodium (Na)	ED093T	93 mg/L
Strontium (Sr)	EG005T	0.2 mg/L
Titanium (Ti)	EG005T	<0.01 mg/L
Vanadium (V)	EG005T	<0.01 mg/L
Zinc (Zn)	EG005T	1.46 mg/L



Authorised by Mohammad Sjam  
Chemist

**Final - Report Number:** 2355593

**BOC GASES BOMBADERRY**

BOLONG ROAD

BOMADERRY NSW 2541 AUSTRALIA

**Sold To:** 0150199259 **Ship To:** 0150199259

**Representative:** Clive Stacey

**Sample Number**

AW069552

**Date Sampled**

17-May-2018

**Date Received**

18-May-2018

**Date Completed**

29-May-2018

**Date Authorised**

30-May-2018

### Summary Report

This sample was analysed as received, the results being as follows:

**Sampling point:** CT RECIRCULATING

**Testing Laboratory:** ALS Environmental

**Anions Test Method: ED009-X**

Chloride (Cl)

**Filtered**

161 mg/L

**Alkalinity Test Method: ED037-P**

Total Alkalinity (CaCO<sub>3</sub>)

**Total**

258 mg/L

**Phosphate**

**Test Method**

**Filtered**

**Total**

Ortho Phosphate (PO<sub>4</sub>)

EK071FG

2.60 mg/L

Total Phosphate (PO<sub>4</sub>)

EK067G

4.11 mg/L

**Physical**

**Test Method**

**Total**

Conductivity at 25°C

EA010-P

1150 µS/cm

pH @ 25°C

EA005-P

8.32 pH Units

Total Suspended Solids @ 105°C

EA025H

<5 mg/L

Testing services provided by: ALS Environmental. NATA Accreditation no. 825. Report Number: ES1814340. Report Date: 28-May-2018



Authorised by Mohammad Sjam  
Chemist

**Final - Report Number:** 2097426

**BOC GASES BOMBADERRY**

BOLONG ROAD

BOMADERRY NSW 2541 AUSTRALIA

**Sold To:** 0150199259 **Ship To:** 0150199259

**Representative:** Clive Stacey

**Sample Number**

AW064155

**Date Sampled**

2-Jul-2017

**Date Received**

3-Jul-2017

**Date Completed**

14-Jul-2017

**Date Authorised**

14-Jul-2017

### Summary Report

This sample was analysed as received, the results being as follows:

**Sampling point:** BOC Bomaderry-EPA Licence point

**Testing Laboratory:** ALS Environmental

**Water**

Alkalinity	Test Method: ED037-P	Total
Total Alkalinity (CaCO <sub>3</sub> )		82 mg/L

Phosphate	Test Method: EK067G	Total
Total Phosphate (PO <sub>4</sub> )		2.11 mg/L

Physical	Test Method	Total
Conductivity at 25°C	EA010-P	525 µS/cm
pH @ 25°C	EA005-P	5.65 pH Units

Demand	Test Method	Total
BOD (5-Day)	EP030	93 mg/L
Chemical Oxygen Demand (O <sub>2</sub> )	EP026ST	238 mg/L

Other	Test Method	Total
Free Carbon Dioxide	EA165-P	367 mg/L
Total Carbon Dioxide	EA165-P	439 mg/L
Ethanol	EP117	63.3 mg/L
Nitrogen (N)	EK062G	1.8 mg/L

Testing services provided by: ALS Environmental. NATA Accreditation no. 825. Report Number: ES1716254. Report Date: 10-Jul-2017

Testing services provided by: ALS Environmental. NATA Accreditation no. 825. Report Number: ES1716254. Report Date: 14-Jul-2017



Authorised by Mohammad Sjam  
Chemist

**Final - Report Number:** 1782919

**BOC GASES BOMBADERRY**

BOLONG ROAD

BOMADERRY NSW 2541 AUSTRALIA

**Sold To:** 0150199259 **Ship To:** 0150199259

**Representative:** CLIVE STACEY

**Sample Number**

AW058325

**Date Sampled**

22-Jun-2016

**Date Received**

23-Jun-2016

**Date Completed**

7-Jul-2016

**Date Authorised**

7-Jul-2016

### Summary Report

This sample was analysed as received, the results being as follows:

**Sampling point:** BOC Bomaderry-EPA Licence point

**Testing Laboratory:** ALS Environmental

**Water**

Alkalinity	Test Method: ED037-P	Total
Total Alkalinity (CaCO <sub>3</sub> )		45 mg/L

Phosphate	Test Method: EK067G	Total
Total Phosphate (PO <sub>4</sub> )		0.50 mg/L

Physical	Test Method	Total
Conductivity at 25°C	EA010-P	263 µS/cm
pH @ 25°C	EA005-P	5.14 pH Units

Demand	Test Method	Total
BOD (5-Day)	EP030	179 mg/L
Chemical Oxygen Demand (O <sub>2</sub> )	EP026ST	390 mg/L

Other Analytes	Test Method	Total
Free Carbon Dioxide	EA165-P	652 mg/L
Ethanol	EP117	99.7 mg/L
Nitrogen (N)	EK062G	0.8 mg/L

Testing services provided by: ALS Environmental. NATA accreditation number 825. Refer attached document for ALS Environmental NATA accredited report.



Authorised by Mohammad Sjam  
Chemist

## Customer Analytical Services

Gate 5 / 3 Anderson Street Botany NSW2019

Phone: (612) 9392 3708 Fax: (612) 9392 3722 Email: customeranalyticalservices@nalco.com

# NALCO

An Ecolab Company

**Final - Report Number:** 1353870

**BOC GASES BOMBADERRY**

BOLONG ROAD

BOMADERRY NSW 2541 AUSTRALIA

**Sold To:** 0150199259 **Ship To:** 0150199259

**Representative:** NATHAN EDWARD PETERSEN

**Sample Number**

AW049261

**Date Sampled**

30-Jan-2015

**Date Received**

31-Jan-2015

**Date Completed**

10-Feb-2015

**Date Authorised**

11-Feb-2015

### Analytical Report

This sample was analysed as received, the results being as follows:

**Sampling point:** BOC Bomaderry-EPA Licence point

**Water**

Alkalinity	Test Method: *CA12121 (CA11113)	Total
Total Alkalinity (CaCO <sub>3</sub> )		29 mg/L
Phenolphthalein Alkalinity (CaCO <sub>3</sub> )		<25 mg/L
Bicarbonate (CaCO <sub>3</sub> )		29 mg/L

Phosphate	Test Method: *CA13200	Total
Total Phosphate (PO <sub>4</sub> )		<0.1 mg/L

Physical	Test Method	Total
Conductivity at 25°C	*CA11116	190 µS/cm
pH @ 25°C	*A-4.4	4.9 pH Units

Demand	Test Method: *External	Total
BOD (5-Day)		19 mg/L
Chemical Oxygen Demand (O <sub>2</sub> )		37 mg/L

Other Analytes	Test Method	Total
Free Carbon Dioxide (calculated)	CA11147	730 mg/L
Ethanol	*External	9.46 mg/L

Other	Test Method: CA13204	Total
Nitrogen (N)		<1.3 mg/L

External Analysis Performed By: Australian Laboratory Services. NATA Accreditation no. 825. Report Number: ES1502251. Report Date: 9-Feb-2015

Ethanol

Biological Oxygen Demand (BOD)

COD

\* The indicated analyses are included in the NATA scope of accreditation.



Accreditation Number 1099  
Accredited for compliance with ISO/IEC 17025.

Authorised by Thanh Hoang Le  
Senior Chemist



## Customer Analytical Services

Gate 5 / 3 Anderson Street Botany NSW 2019

Phone: (612) 9392 3708 Fax: (612) 9392 3722 Email: customeranalyticalservices@nalco.com



**Final - Report Number:** 1202564

**BOC GASES BOMBADERRY**

BOLONG ROAD

BOMADERRY NSW 2541 AUSTRALIA

**Sold To:** 0150199259 **Ship To:** 0150199259

**Representative:** Nathan Edward Petersen

**Sample Number**

AW043791

**Date Sampled**

10-Jul-2014

**Date Received**

12-Jul-2014

**Date Completed**

24-Jul-2014

**Date Authorised**

25-Jul-2014

### Analytical Report

This sample was analysed as received, the results being as follows:

**Sampling point:** BOC Bomaderry-EPA Licence point

**Water**

Alkalinity	Test Method: *CA12121	Total
Total Alkalinity (CaCO <sub>3</sub> )		33 mg/L
Phenolphthalein Alkalinity (CaCO <sub>3</sub> )		<25 mg/L
Bicarbonate (CaCO <sub>3</sub> )		33 mg/L

Phosphate	Test Method: *CA13200	Total
Total Phosphate (PO <sub>4</sub> )		<0.1 mg/L

Physical	Test Method: *CA12121	Total
Conductivity at 25°C		210 µS/cm
pH @ 25°C		5.0 pH Units

Demand	Test Method: *External	Total
BOD (5-Day)		50 mg/L
Chemical Oxygen Demand (O <sub>2</sub> )		120 mg/L

Other Analytes	Test Method	Total
Free Carbon Dioxide (calculated)	CA11147	660 mg/L
Ethanol	External	21.100 mg/L

Other	Test Method: *CA13204	Total
Nitrogen (N)		<1.0 mg/L

External Analysis Performed By: Australian Laboratory Services. NATA Accreditation no. 825. Report Number: ES1415392. Report Date: 21-Jul-2014

Ethanol

Biological Oxygen Demand (BOD)

COD

\* The indicated analyses are included in the NATA scope of accreditation.



Accreditation Number 1099

Accredited for compliance with ISO/IEC 17025.

L. B. M.

Authorized by Lynette M Bissell  
Chemist

**Final - Report Number:** 1070584

**BOC GASES BOMBADERRY**

**BOLONG ROAD**

**BOMADERRY NSW 2541 AUSTRALIA**

**Sold To:** 0150199259 **Ship To:** 0150199259

**Representative:** Thorsten Kaschubs

**Sample Number**

AW038367

**Date Sampled**

21-Jan-2014

**Date Received**

22-Jan-2014

**Date Completed**

5-Feb-2014

**Date Authorised**

5-Feb-2014

### Analytical Report

This sample was analysed as received, the results being as follows:

**Sampling point:** BOC Bomaderry-EPA Licence point

**Water**

**Alkalinity Test Method: \*CA12121**

**Total**

Total Alkalinity (CaCO<sub>3</sub>)

46 mg/L

**Phosphate Test Method: \*CA13200**

**Total**

Total Phosphate (PO<sub>4</sub>)

0.1 mg/L

**Physical Test Method: \*CA12121**

**Total**

Conductivity at 25°C

210 µS/cm

pH @ 25°C

5.7 pH Units

**Demand Test Method: \*External**

**Total**

BOD (5-Day)

10 mg/L

Chemical Oxygen Demand (O<sub>2</sub>)

26 mg/L

**Other Analytes Test Method: External**

**Total**

Ethanol

6.91 mg/L

**Other Test Method: \*CA13204**

**Total**

Nitrogen (N)

<1.0 mg/L

•Free Carbon Dioxide as CO<sub>2</sub> = 248 mg/L. External Analysis Performed by: ALS. NATA Accreditation Number 825. Report Number ES 1401610. Report Date: 04/02/2014.

\* The indicated analyses are included in the NATA scope of accreditation.



Accreditation Number 1099 Site Number 1092  
Accredited for compliance with ISO/IEC 17025.

Authorized by Thanh Hoang Le  
Senior Chemist

**Customer Analytical Services**  
**Gate 5 / 3 Anderson Street Botany NSW 2019**

Phone: (612) 9392 3708 Fax: (612) 9392 3722 Email: customeranalyticalservices@nalco.com



**Final - Report Number:** 1070584

**BOC GASES BOMBADERRY**

**BOLONG ROAD**

**BOMADERRY NSW 2541 AUSTRALIA**

**Sold To:** 0150199259 **Ship To:** 0150199259

**Representative:** Thorsten Kaschubs

**Sample Number**

AW038367

**Date Sampled**

21-Jan-2014

**Date Received**

22-Jan-2014

**Date Completed**

5-Feb-2014

**Date Authorised**

5-Feb-2014

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**Analytical Report**

This sample was analysed as received, the results being as follows:

**Sampling point:** BOC Bomaderry-EPA Licence point

*External Analysis Performed By: Australian Laboratory Services. NATA Accreditation no. 825. Report Number: ES1401317. Report Date: 30-Jan-2014*

*COD*

*Biological Oxygen Demand (BOD)*

*External Analysis Performed By: Australian Laboratory Services. NATA Accreditation no. 825. Report Number: ES1401610. Report Date: 4-Feb-2014*

*Ethanol*

\* The indicated analyses are included in the NATA scope of accreditation.

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Accreditation Number 1099 Site Number 1092  
Accredited for compliance with ISO/IEC 17025.

Authorized by Thanh Hoang Le  
Senior Chemist

## Customer Analytical Services

Gate 5 / 3 Anderson Street Botany NSW 2019

Phone: (612) 9392 3708 Fax: (612) 9392 3722 Email: customeranalyticalservices@nalco.com



**Final - Report Number:** 923876

**BOC GASES BOMBADERRY**

BOLONG ROAD

BOMADERRY NSW 2541 AUSTRALIA

**Sold To:** 0150199259 **Ship To:** 0150199259

**Representative:** Thorsten Kaschubs

**Sample Number**

AW032034

**Date Sampled**

1-Jul-2013

**Date Received**

2-Jul-2013

**Date Completed**

16-Jul-2013

**Date Authorised**

17-Jul-2013

### Analytical Report

This sample was analysed as received, the results being as follows:

**Sampling point:** BOC Bomaderry-EPA Licence point

**Water**

Alkalinity	Test Method: *CA12121	Total
Total Alkalinity (CaCO <sub>3</sub> )		39 mg/L
Phenolphthalein Alkalinity (CaCO <sub>3</sub> )		<25 mg/L

Phosphate	Test Method: *CA13200	Total
Total Phosphate (PO <sub>4</sub> )		0.1 mg/L

Physical	Test Method: *CA12121	Total
Conductivity at 25°C		260 µS/cm
pH @ 25°C		5.0 pH Units

Demand	Test Method: *External	Total
BOD (5-Day)		52 mg/L
Chemical Oxygen Demand (O <sub>2</sub> )		103 mg/L

Other Analytes	Test Method	Total
Ethanol	External	12.7 mg/L
Nitrogen (N)	*CA13204	<1.0 mg/L

- Free Carbon Dioxide analysis performed by ALS. NATA Accreditation Number: 825. Report number: ES1314994. Report Date: 09/07/2013
- Free Carbon Dioxide as CO<sub>2</sub> = 284 mg/L

*External Analysis Performed By: Australian Laboratory Services. NATA Accreditation no. 825. Report Number: ES1314994. Report Date: 11-Jul-2013*

*Ethanol*

*Biological Oxygen Demand (BOD)*

*COD*

\* The indicated analyses are included in the NATA scope of accreditation.



Accreditation Number 1099 Site Number 1092  
Accredited for compliance with ISO/IEC 17025.

Authorized by Antigoni Cinelli  
Senior Chemist

Additional - Report Number: 790670

Replaces previous report number: 664766 23-Jul-2012 23:33

BOC GASES BOMBADERRY

BOLONG ROAD

BOMADERRY NSW 2541 AUSTRALIA

Sold To: 0150199259 Ship To: 0150199259

Representative: Mr Kaschubs Thorsten

Sample Number	AW017447
Date Sampled	28-Jun-2012
Date Received	29-Jun-2012
Date Completed	9-Jan-2013
Date Authorised	9-Jan-2013

### Analytical Report

This sample was analysed as received, the results being as follows:

Sampling point: BOC Bomaderry-EPA Licence point

#### Water

<b>Alkalinity</b> Test Method: *CA11113	<b>Total</b>
Total Alkalinity (CaCO <sub>3</sub> )	140 mg/L
Phenolphthalein Alkalinity (CaCO <sub>3</sub> )	<20 mg/L

<b>Phosphate</b> Test Method: *CA13200	<b>Total</b>
Total Phosphate (PO <sub>4</sub> )	6.3 mg/L

<b>Physical</b> Test Method: *A-6.18	<b>Total</b>
pH @ 25°C	5.5 pH

<b>Demand</b> Test Method: *External	<b>Total</b>
BOD (5-Day)	158 mg/L
Chemical Oxygen Demand (O <sub>2</sub> )	541 mg/L

<b>Other Analytes</b>	<b>Test Method</b>	<b>Total</b>
Ethanol	External	112 mg/L
Nitrogen (N)	*CA13204	7.3 mg/L

•Free Carbon Dioxide as CO<sub>2</sub> = 231 mg/L

External Analysis Performed By: Australian Laboratory Services. NATA Accreditation no. 825. Report Number: ES01216206. Report Date: 1-Jul-2012  
Ethanol

External Analysis Performed By: Australian Laboratory Services. NATA Accreditation no. 825. Report Number: ES1216206. Report Date: 9-Jul-2012  
Biological Oxygen Demand (BOD) COD

\* The indicated analyses are included in the NATA scope of accreditation.



Accreditation Number 1099 Site Number 1092  
Accredited for compliance with ISO/IEC 17025.



Authorized by Samantha Fraser  
Analytical Laboratory Supervisor

Interim - Report Number: 790669

BOC GASES - BOMBADERRY

BOLONG ROAD

BOMBADERRY NSW 2541 AUSTRALIA

Sold To: 0150140155 Ship To: 0150146636

Representative: Mr Kaschubs Thorsten

Sample Number

AW024315

Date Sampled

20-Dec-2012

Date Received

21-Dec-2012

Date Completed

Date Authorised

### Analytical Report

This sample was analysed as received, the results being as follows:

Sampling point: Grab Sample - Discharge & Monitoring Point 1

#### Water

Alkalinity	Test Method: *CA12121	Total
Total Alkalinity (CaCO <sub>3</sub> )		49 mg/L
Phenolphthalein Alkalinity (CaCO <sub>3</sub> )		<25 mg/L
Bicarbonate (CaCO <sub>3</sub> )		49 mg/L

Phosphate	Test Method: *CA13200	Total
Total Phosphate (PO <sub>4</sub> )		<0.1 mg/L

Physical	Test Method: *CA12121	Total
Conductivity at 25°C		260 µS/cm
pH @ 25°C		5.8 pH

Demand	Test Method: *External	Total
BOD (5-Day)		113 mg/L
Chemical Oxygen Demand (O <sub>2</sub> )		252 mg/L

Other Analytes	Test Method	Total
Ethanol	External	58.100 mg/L
Nitrogen (N)	*CA13204	<1.1 mg/L

External Analysis Performed By: Australian Laboratory Services. NATA Accreditation no. 825. Report Number: ES1230342. Report Date: 3-Jan-2013  
COD Ethanol Biological Oxygen Demand (BOD)

\* The indicated analyses are included in the NATA scope of accreditation.



Accreditation Number 1099 Site Number 1092  
Accredited for compliance with ISO/IEC 17025.

Authorized by