

QUALITY CONTROL REPORT

Work Order	: EP1516864	Page	: 1 of 10
Client	: GASCOYNE WATER COOPERATIVE LTD	Laboratory	: Environmental Division Perth
Contact	: MISS LISA HODSON	Contact	: Customer Services EP
Address	: 50 BOUNDARY ROAD PO BOX 5 CARNARVON WESTERN AUSTRALIA, AUSTRALIA 6701	Address	: 10 Hod Way Malaga WA Australia 6090
E-mail	: lisa@gascoynewater.com.au	E-mail	: ALSEnviro.Perth@alsglobal.com
Telephone	: +61 08 9941 4488	Telephone	: +61-8-9209 7655
Facsimile	: +61 9941 4499	Facsimile	: +61-8-9209 7600
Project	: Water Samples NBF	QC Level	: NEPM 2013 B3 & ALS QC Standard
Order number	: 0018	Date Samples Received	: 09-Dec-2015
C-O-C number	: ----	Date Analysis Commenced	: 09-Dec-2015
Sampler	: SAXON BOSTON	Issue Date	: 17-Dec-2015
Site	: ----	No. of samples received	: 9
Quote number	: ----	No. of samples analysed	: 9

This report supersedes any previous report(s) with this reference. Results apply to the sample(s) as submitted.

This Quality Control Report contains the following information:

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



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Laboratory 825

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compliance with
ISO/IEC 17025.

Signatories

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

<i>Signatories</i>	<i>Position</i>	<i>Accreditation Category</i>
Dilani Fernando	Senior Inorganic Chemist	Melbourne Inorganics, Springvale, VIC
Indra Astuty	Instrument Chemist	Perth Inorganics, Malaga, WA
Jeremy Truong	Laboratory Supervisor	Perth Inorganics, Malaga, WA

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General Comments

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

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

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

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



Laboratory Duplicate (DUP) Report

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

Sub-Matrix: **WATER**

				Laboratory Duplicate (DUP) Report					
Laboratory sample ID	Client sample ID	Method: Compound	CAS Number	LOR	Unit	Original Result	Duplicate Result	RPD (%)	Recovery Limits (%)
EA005P: pH by PC Titrator (QC Lot: 305836)									
EP1516827-001	Anonymous	EA005-P: pH Value	----	0.01	pH Unit	6.07	6.13	0.984	0% - 20%
EP1516864-004	Bore 19/10	EA005-P: pH Value	----	0.01	pH Unit	7.92	7.93	0.126	0% - 20%
EA010P: Conductivity by PC Titrator (QC Lot: 305837)									
EP1516835-015	Anonymous	EA010-P: Electrical Conductivity @ 25°C	----	1	µS/cm	48300	48300	0.00	0% - 20%
EP1516835-025	Anonymous	EA010-P: Electrical Conductivity @ 25°C	----	1	µS/cm	80100	79800	0.350	0% - 20%
EA010P: Conductivity by PC Titrator (QC Lot: 305840)									
EP1516875-001	Anonymous	EA010-P: Electrical Conductivity @ 25°C	----	1	µS/cm	572	571	0.175	0% - 20%
EP1516864-004	Bore 19/10	EA010-P: Electrical Conductivity @ 25°C	----	1	µS/cm	1040	1030	0.967	0% - 20%
EA015: Total Dissolved Solids dried at 180 ± 5 °C (QC Lot: 305660)									
EP1516804-004	Anonymous	EA015H: Total Dissolved Solids @180°C	----	10	mg/L	3760	3740	0.507	0% - 20%
EP1516762-001	Anonymous	EA015H: Total Dissolved Solids @180°C	----	10	mg/L	570	570	0.00	0% - 20%
ED037P: Alkalinity by PC Titrator (QC Lot: 305834)									
EP1516808-001	Anonymous	ED037-P: Bicarbonate Alkalinity as CaCO3	71-52-3	1	mg/L	218	218	0.00	0% - 20%
		ED037-P: Carbonate Alkalinity as CaCO3	3812-32-6	1	mg/L	<1	<1	0.00	No Limit
		ED037-P: Hydroxide Alkalinity as CaCO3	DMO-210-001	1	mg/L	<1	<1	0.00	No Limit
		ED037-P: Total Alkalinity as CaCO3	----	1	mg/L	218	218	0.00	0% - 20%
EP1516812-002	Anonymous	ED037-P: Bicarbonate Alkalinity as CaCO3	71-52-3	1	mg/L	213	217	1.91	0% - 20%
		ED037-P: Carbonate Alkalinity as CaCO3	3812-32-6	1	mg/L	<1	<1	0.00	No Limit
		ED037-P: Hydroxide Alkalinity as CaCO3	DMO-210-001	1	mg/L	<1	<1	0.00	No Limit
		ED037-P: Total Alkalinity as CaCO3	----	1	mg/L	213	217	1.91	0% - 20%
ED037P: Alkalinity by PC Titrator (QC Lot: 305839)									
EP1516875-001	Anonymous	ED037-P: Bicarbonate Alkalinity as CaCO3	71-52-3	1	mg/L	103	112	8.27	0% - 20%
		ED037-P: Carbonate Alkalinity as CaCO3	3812-32-6	1	mg/L	<1	<1	0.00	No Limit
		ED037-P: Hydroxide Alkalinity as CaCO3	DMO-210-001	1	mg/L	<1	<1	0.00	No Limit
		ED037-P: Total Alkalinity as CaCO3	----	1	mg/L	103	112	8.27	0% - 20%
EP1516864-004	Bore 19/10	ED037-P: Bicarbonate Alkalinity as CaCO3	71-52-3	1	mg/L	114	115	0.00	0% - 20%
		ED037-P: Carbonate Alkalinity as CaCO3	3812-32-6	1	mg/L	<1	<1	0.00	No Limit
		ED037-P: Hydroxide Alkalinity as CaCO3	DMO-210-001	1	mg/L	<1	<1	0.00	No Limit
		ED037-P: Total Alkalinity as CaCO3	----	1	mg/L	114	115	0.00	0% - 20%
ED040F: Dissolved Major Anions (QC Lot: 306092)									
EP1516864-001	Bore 2/10	ED040F: Silicon	7440-21-3	0.05	mg/L	32.7	33.3	1.61	0% - 20%
ED041G: Sulfate (Turbidimetric) as SO4 2- by DA (QC Lot: 306095)									
EP1516864-001	Bore 2/10	ED041G: Sulfate as SO4 - Turbidimetric	14808-79-8	1	mg/L	44	50	13.2	0% - 20%
ED045G: Chloride by Discrete Analyser (QC Lot: 306094)									



Sub-Matrix: WATER				Laboratory Duplicate (DUP) Report					
Laboratory sample ID	Client sample ID	Method: Compound	CAS Number	LOR	Unit	Original Result	Duplicate Result	RPD (%)	Recovery Limits (%)
ED045G: Chloride by Discrete Analyser (QC Lot: 306094) - continued									
EP1516864-001	Bore 2/10	ED045G: Chloride	16887-00-6	1	mg/L	302	303	0.403	0% - 20%
ED093F: Dissolved Major Cations (QC Lot: 306649)									
EP1516864-001	Bore 2/10	ED093F: Calcium	7440-70-2	1	mg/L	44	44	0.00	0% - 20%
		ED093F: Magnesium	7439-95-4	1	mg/L	32	32	0.00	0% - 20%
		ED093F: Potassium	7440-09-7	1	mg/L	21	20	0.00	0% - 20%
		ED093F: Sodium	7440-23-5	1	mg/L	122	122	0.00	0% - 20%
EP1516893-011	Anonymous	ED093F: Calcium	7440-70-2	1	mg/L	1740	1790	3.17	0% - 20%
		ED093F: Magnesium	7439-95-4	1	mg/L	2980	3040	1.96	0% - 20%
		ED093F: Potassium	7440-09-7	1	mg/L	263	264	0.645	0% - 20%
		ED093F: Sodium	7440-23-5	1	mg/L	30000	30700	2.24	0% - 20%
EG020F: Dissolved Metals by ICP-MS (QC Lot: 309813)									
EM1518360-001	Anonymous	EG020A-F: Cadmium	7440-43-9	0.0001	mg/L	<0.0001	<0.0001	0.00	No Limit
		EG020A-F: Arsenic	7440-38-2	0.001	mg/L	0.002	0.002	0.00	No Limit
		EG020A-F: Copper	7440-50-8	0.001	mg/L	0.002	0.002	0.00	No Limit
		EG020A-F: Lead	7439-92-1	0.001	mg/L	<0.001	<0.001	0.00	No Limit
		EG020A-F: Manganese	7439-96-5	0.001	mg/L	0.021	0.022	0.00	0% - 20%
		EG020A-F: Molybdenum	7439-98-7	0.001	mg/L	<0.001	<0.001	0.00	No Limit
		EG020A-F: Zinc	7440-66-6	0.005	mg/L	0.008	0.023	102	No Limit
		EG020A-F: Aluminium	7429-90-5	0.01	mg/L	<0.01	<0.01	0.00	No Limit
		EG020A-F: Selenium	7782-49-2	0.01	mg/L	<0.01	<0.01	0.00	No Limit
		EG020A-F: Boron	7440-42-8	0.05	mg/L	0.08	0.07	0.00	No Limit
		EG020A-F: Iron	7439-89-6	0.05	mg/L	<0.05	<0.05	0.00	No Limit
		EP1516864-007	Bore 2/14	EG020A-F: Cadmium	7440-43-9	0.0001	mg/L	<0.0001	<0.0001
EG020A-F: Arsenic	7440-38-2			0.001	mg/L	0.001	0.002	0.00	No Limit
EG020A-F: Copper	7440-50-8			0.001	mg/L	<0.001	<0.001	0.00	No Limit
EG020A-F: Lead	7439-92-1			0.001	mg/L	<0.001	<0.001	0.00	No Limit
EG020A-F: Manganese	7439-96-5			0.001	mg/L	<0.001	<0.001	0.00	No Limit
EG020A-F: Molybdenum	7439-98-7			0.001	mg/L	<0.001	<0.001	0.00	No Limit
EG020A-F: Zinc	7440-66-6			0.005	mg/L	<0.005	<0.005	0.00	No Limit
EG020A-F: Aluminium	7429-90-5			0.01	mg/L	<0.01	<0.01	0.00	No Limit
EG020A-F: Selenium	7782-49-2			0.01	mg/L	<0.01	<0.01	0.00	No Limit
EG020A-F: Boron	7440-42-8			0.05	mg/L	0.18	0.17	0.00	No Limit
EG020A-F: Iron	7439-89-6			0.05	mg/L	<0.05	<0.05	0.00	No Limit
EG020T: Total Metals by ICP-MS (QC Lot: 309782)									
EM1518265-001	Anonymous	EG020A-T: Cadmium	7440-43-9	0.0001	mg/L	0.140	0.141	0.592	0% - 20%
		EG020A-T: Arsenic	7440-38-2	0.001	mg/L	0.014	0.014	0.00	0% - 50%
		EG020A-T: Copper	7440-50-8	0.001	mg/L	0.229	0.228	0.525	0% - 20%
		EG020A-T: Lead	7439-92-1	0.001	mg/L	0.342	0.335	2.05	0% - 20%
		EG020A-T: Manganese	7439-96-5	0.001	mg/L	2.95	3.05	3.36	0% - 20%
		EG020A-T: Molybdenum	7439-98-7	0.001	mg/L	0.001	0.001	0.00	No Limit



Sub-Matrix: WATER				Laboratory Duplicate (DUP) Report					
Laboratory sample ID	Client sample ID	Method: Compound	CAS Number	LOR	Unit	Original Result	Duplicate Result	RPD (%)	Recovery Limits (%)
EG020T: Total Metals by ICP-MS (QC Lot: 309782) - continued									
EM1518265-001	Anonymous	EG020A-T: Zinc	7440-66-6	0.005	mg/L	47.4	47.6	0.291	0% - 20%
		EG020A-T: Aluminium	7429-90-5	0.01	mg/L	5.63	5.68	1.03	0% - 20%
		EG020A-T: Selenium	7782-49-2	0.01	mg/L	<0.01	<0.01	0.00	No Limit
		EG020A-T: Boron	7440-42-8	0.05	mg/L	0.05	<0.05	0.00	No Limit
		EG020A-T: Iron	7439-89-6	0.05	mg/L	4.66	4.65	0.00	0% - 20%
EM1518382-008	Anonymous	EG020A-T: Cadmium	7440-43-9	0.0001	mg/L	<0.0001	<0.0001	0.00	No Limit
		EG020A-T: Arsenic	7440-38-2	0.001	mg/L	<0.001	<0.001	0.00	No Limit
		EG020A-T: Copper	7440-50-8	0.001	mg/L	0.009	0.009	0.00	No Limit
		EG020A-T: Lead	7439-92-1	0.001	mg/L	<0.001	<0.001	0.00	No Limit
		EG020A-T: Manganese	7439-96-5	0.001	mg/L	0.326	0.317	2.75	0% - 20%
		EG020A-T: Molybdenum	7439-98-7	0.001	mg/L	<0.001	<0.001	0.00	No Limit
		EG020A-T: Zinc	7440-66-6	0.005	mg/L	0.011	0.008	31.2	No Limit
		EG020A-T: Aluminium	7429-90-5	0.01	mg/L	0.34	0.36	4.10	0% - 20%
		EG020A-T: Selenium	7782-49-2	0.01	mg/L	<0.01	<0.01	0.00	No Limit
		EG020A-T: Boron	7440-42-8	0.05	mg/L	<0.05	<0.05	0.00	No Limit
EG020A-T: Iron	7439-89-6	0.05	mg/L	0.10	0.10	0.00	No Limit		
EG020T: Total Metals by ICP-MS (QC Lot: 309783)									
EP1516864-002	Bore 3/10	EG020A-T: Cadmium	7440-43-9	0.0001	mg/L	<0.0001	<0.0001	0.00	No Limit
		EG020A-T: Arsenic	7440-38-2	0.001	mg/L	<0.001	<0.001	0.00	No Limit
		EG020A-T: Copper	7440-50-8	0.001	mg/L	<0.001	<0.001	0.00	No Limit
		EG020A-T: Lead	7439-92-1	0.001	mg/L	<0.001	<0.001	0.00	No Limit
		EG020A-T: Manganese	7439-96-5	0.001	mg/L	0.003	0.003	0.00	No Limit
		EG020A-T: Molybdenum	7439-98-7	0.001	mg/L	0.002	0.002	0.00	No Limit
		EG020A-T: Zinc	7440-66-6	0.005	mg/L	<0.005	<0.005	0.00	No Limit
		EG020A-T: Aluminium	7429-90-5	0.01	mg/L	<0.01	0.01	0.00	No Limit
		EG020A-T: Selenium	7782-49-2	0.01	mg/L	<0.01	<0.01	0.00	No Limit
		EG020A-T: Boron	7440-42-8	0.05	mg/L	0.34	0.33	0.00	No Limit
EG020A-T: Iron	7439-89-6	0.05	mg/L	0.16	0.16	0.00	No Limit		
EP1516877-003	Anonymous	EG020A-T: Cadmium	7440-43-9	0.0001	mg/L	<0.0001	<0.0001	0.00	No Limit
		EG020A-T: Arsenic	7440-38-2	0.001	mg/L	16.5	16.1	2.93	0% - 20%
		EG020A-T: Copper	7440-50-8	0.001	mg/L	1.53	1.51	1.08	0% - 20%
		EG020A-T: Lead	7439-92-1	0.001	mg/L	0.006	0.006	0.00	No Limit
		EG020A-T: Manganese	7439-96-5	0.001	mg/L	0.012	0.011	0.00	0% - 50%
		EG020A-T: Molybdenum	7439-98-7	0.001	mg/L	0.057	0.054	5.36	0% - 20%
		EG020A-T: Zinc	7440-66-6	0.005	mg/L	0.054	0.051	4.03	0% - 50%
		EG020A-T: Aluminium	7429-90-5	0.01	mg/L	0.59	0.53	10.9	0% - 20%
		EG020A-T: Selenium	7782-49-2	0.01	mg/L	0.02	0.02	0.00	No Limit
		EG020A-T: Boron	7440-42-8	0.05	mg/L	0.62	0.60	4.32	0% - 50%
EG020A-T: Iron	7439-89-6	0.05	mg/L	2.42	2.39	1.23	0% - 20%		
EK040P: Fluoride by PC Titrator (QC Lot: 305838)									

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 Project : Water Samples NBF



Sub-Matrix: **WATER**

				<i>Laboratory Duplicate (DUP) Report</i>					
<i>Laboratory sample ID</i>	<i>Client sample ID</i>	<i>Method: Compound</i>	<i>CAS Number</i>	<i>LOR</i>	<i>Unit</i>	<i>Original Result</i>	<i>Duplicate Result</i>	<i>RPD (%)</i>	<i>Recovery Limits (%)</i>
EK040P: Fluoride by PC Titrator (QC Lot: 305838) - continued									
EP1516880-002	Anonymous	EK040P: Fluoride	16984-48-8	0.1	mg/L	0.4	0.4	0.00	No Limit
EP1516864-004	Bore 19/10	EK040P: Fluoride	16984-48-8	0.1	mg/L	0.3	0.3	0.00	No Limit
EK057G: Nitrite as N by Discrete Analyser (QC Lot: 306093)									
EP1516864-001	Bore 2/10	EK057G: Nitrite as N	14797-65-0	0.01	mg/L	<0.01	<0.01	0.00	No Limit
EK059G: Nitrite plus Nitrate as N (NOx) by Discrete Analyser (QC Lot: 305893)									
EP1516864-001	Bore 2/10	EK059G: Nitrite + Nitrate as N	----	0.01	mg/L	0.72	0.72	0.00	0% - 20%



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

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

Sub-Matrix: **WATER**

Method: Compound	CAS Number	LOR	Unit	Method Blank (MB) Report	Laboratory Control Spike (LCS) Report				
				Result	Spike Concentration	Spike Recovery (%)		Recovery Limits (%)	
						LCS	Low	High	
EA005P: pH by PC Titrator (QCLot: 305836)									
EA005-P: pH Value	----	----	pH Unit	----	4 pH Unit	100	99	102	
				----	7 pH Unit	100	99	102	
EA010P: Conductivity by PC Titrator (QCLot: 305837)									
EA010-P: Electrical Conductivity @ 25°C	----	1	µS/cm	<1	24800 µS/cm	96.3	95	105	
EA010P: Conductivity by PC Titrator (QCLot: 305840)									
EA010-P: Electrical Conductivity @ 25°C	----	1	µS/cm	<1	24800 µS/cm	96.3	95	105	
EA015: Total Dissolved Solids dried at 180 ± 5 °C (QCLot: 305660)									
EA015H: Total Dissolved Solids @180°C	----	10	mg/L	<10	2000 mg/L	97.6	83	111	
				<10	293 mg/L	110	70	130	
ED037P: Alkalinity by PC Titrator (QCLot: 305834)									
ED037-P: Bicarbonate Alkalinity as CaCO3	71-52-3	1	mg/L	<1	----	----	----	----	
ED037-P: Carbonate Alkalinity as CaCO3	3812-32-6	1	mg/L	<1	----	----	----	----	
ED037-P: Hydroxide Alkalinity as CaCO3	DMO-210-00 1	1	mg/L	<1	----	----	----	----	
ED037-P: Total Alkalinity as CaCO3	----	1	mg/L	<1	20 mg/L	97.8	76	126	
				<1	200 mg/L	92.5	90	106	
ED037P: Alkalinity by PC Titrator (QCLot: 305839)									
ED037-P: Bicarbonate Alkalinity as CaCO3	71-52-3	1	mg/L	<1	----	----	----	----	
ED037-P: Carbonate Alkalinity as CaCO3	3812-32-6	1	mg/L	<1	----	----	----	----	
ED037-P: Hydroxide Alkalinity as CaCO3	DMO-210-00 1	1	mg/L	<1	----	----	----	----	
ED037-P: Total Alkalinity as CaCO3	----	1	mg/L	<1	20 mg/L	104	76	126	
				<1	200 mg/L	91.4	90	106	
ED040F: Dissolved Major Anions (QCLot: 306092)									
ED040F: Silicon	7440-21-3	0.05	mg/L	<0.05	----	----	----	----	
ED041G: Sulfate (Turbidimetric) as SO4 2- by DA (QCLot: 306095)									
ED041G: Sulfate as SO4 - Turbidimetric	14808-79-8	1	mg/L	<1	25 mg/L	103	89	113	
				<1	100 mg/L	92.7	79	121	
ED045G: Chloride by Discrete Analyser (QCLot: 306094)									
ED045G: Chloride	16887-00-6	1	mg/L	<1	10 mg/L	101	84	120	
				<1	1000 mg/L	95.2	84	110	
ED093F: Dissolved Major Cations (QCLot: 306649)									
ED093F: Calcium	7440-70-2	1	mg/L	<1	50 mg/L	97.9	91	109	



Sub-Matrix: WATER

Method: Compound	CAS Number	LOR	Unit	Method Blank (MB) Report	Laboratory Control Spike (LCS) Report				
				Result	Spike	Spike Recovery (%)		Recovery Limits (%)	
					Concentration	LCS	Low	High	
ED093F: Dissolved Major Cations (QCLot: 306649) - continued									
ED093F: Magnesium	7439-95-4	1	mg/L	<1	50 mg/L	95.9	90	108	
ED093F: Potassium	7440-09-7	1	mg/L	<1	50 mg/L	96.0	90	110	
ED093F: Sodium	7440-23-5	1	mg/L	<1	50 mg/L	96.8	87	111	
EG020F: Dissolved Metals by ICP-MS (QCLot: 309813)									
EG020A-F: Aluminium	7429-90-5	0.01	mg/L	<0.01	0.5 mg/L	97.8	93	105	
EG020A-F: Arsenic	7440-38-2	0.001	mg/L	<0.001	0.1 mg/L	95.4	94	108	
EG020A-F: Boron	7440-42-8	0.05	mg/L	<0.05	0.1 mg/L	101	84	116	
EG020A-F: Cadmium	7440-43-9	0.0001	mg/L	<0.0001	0.1 mg/L	94.6	86	108	
EG020A-F: Copper	7440-50-8	0.001	mg/L	<0.001	0.1 mg/L	94.2	87	107	
EG020A-F: Iron	7439-89-6	0.05	mg/L	<0.05	0.5 mg/L	101	94	106	
EG020A-F: Lead	7439-92-1	0.001	mg/L	<0.001	0.1 mg/L	94.5	87	109	
EG020A-F: Manganese	7439-96-5	0.001	mg/L	<0.001	0.1 mg/L	99.2	87	109	
EG020A-F: Molybdenum	7439-98-7	0.001	mg/L	<0.001	0.1 mg/L	93.1	86	110	
EG020A-F: Selenium	7782-49-2	0.01	mg/L	<0.01	0.1 mg/L	92.7	87	109	
EG020A-F: Zinc	7440-66-6	0.005	mg/L	<0.005	0.1 mg/L	103	87	107	
EG020T: Total Metals by ICP-MS (QCLot: 309782)									
EG020A-T: Aluminium	7429-90-5	0.01	mg/L	<0.01	0.5 mg/L	106	100	108	
EG020A-T: Arsenic	7440-38-2	0.001	mg/L	<0.001	0.1 mg/L	100	94	116	
EG020A-T: Boron	7440-42-8	0.05	mg/L	<0.05	0.1 mg/L	107	88	118	
EG020A-T: Cadmium	7440-43-9	0.0001	mg/L	<0.0001	0.1 mg/L	99.3	90	110	
EG020A-T: Copper	7440-50-8	0.001	mg/L	<0.001	0.1 mg/L	98.0	91	109	
EG020A-T: Iron	7439-89-6	0.05	mg/L	<0.05	0.5 mg/L	107	99	109	
EG020A-T: Lead	7439-92-1	0.001	mg/L	<0.001	0.1 mg/L	99.2	91	111	
EG020A-T: Manganese	7439-96-5	0.001	mg/L	<0.001	0.1 mg/L	105	91	111	
EG020A-T: Molybdenum	7439-98-7	0.001	mg/L	<0.001	0.1 mg/L	102	90	112	
EG020A-T: Selenium	7782-49-2	0.01	mg/L	<0.01	0.1 mg/L	105	86	110	
EG020A-T: Zinc	7440-66-6	0.005	mg/L	<0.005	0.1 mg/L	103	91	109	
EG020T: Total Metals by ICP-MS (QCLot: 309783)									
EG020A-T: Aluminium	7429-90-5	0.01	mg/L	<0.01	0.5 mg/L	105	100	108	
EG020A-T: Arsenic	7440-38-2	0.001	mg/L	<0.001	0.1 mg/L	100	94	116	
EG020A-T: Boron	7440-42-8	0.05	mg/L	<0.05	0.1 mg/L	104	88	118	
EG020A-T: Cadmium	7440-43-9	0.0001	mg/L	<0.0001	0.1 mg/L	97.2	90	110	
EG020A-T: Copper	7440-50-8	0.001	mg/L	<0.001	0.1 mg/L	98.1	91	109	
EG020A-T: Iron	7439-89-6	0.05	mg/L	<0.05	0.5 mg/L	106	99	109	
EG020A-T: Lead	7439-92-1	0.001	mg/L	<0.001	0.1 mg/L	99.3	91	111	
EG020A-T: Manganese	7439-96-5	0.001	mg/L	<0.001	0.1 mg/L	100	91	111	
EG020A-T: Molybdenum	7439-98-7	0.001	mg/L	<0.001	0.1 mg/L	99.8	90	112	
EG020A-T: Selenium	7782-49-2	0.01	mg/L	<0.01	0.1 mg/L	100	86	110	



Sub-Matrix: **WATER**

Method: Compound	CAS Number	LOR	Unit	Method Blank (MB) Report Result	Laboratory Control Spike (LCS) Report			
					Spike Concentration	Spike Recovery (%)	Recovery Limits (%)	
						LCS	Low	High
EG020T: Total Metals by ICP-MS (QCLot: 309783) - continued								
EG020A-T: Zinc	7440-66-6	0.005	mg/L	<0.005	0.1 mg/L	100.0	91	109
EK040P: Fluoride by PC Titrator (QCLot: 305838)								
EK040P: Fluoride	16984-48-8	0.1	mg/L	<0.1	5 mg/L	96.0	86	116
EK057G: Nitrite as N by Discrete Analyser (QCLot: 306093)								
EK057G: Nitrite as N	14797-65-0	0.01	mg/L	<0.01	0.5 mg/L	104	86	112
EK059G: Nitrite plus Nitrate as N (NOx) by Discrete Analyser (QCLot: 305893)								
EK059G: Nitrite + Nitrate as N	----	0.01	mg/L	<0.01	0.5 mg/L	102	92	112

Matrix Spike (MS) Report

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

Sub-Matrix: **WATER**

Laboratory sample ID	Client sample ID	Method: Compound	CAS Number	Matrix Spike (MS) Report			
				Spike Concentration	Spike Recovery(%) MS	Low	High
ED041G: Sulfate (Turbidimetric) as SO4 2- by DA (QCLot: 306095)							
EP1516864-001	Bore 2/10	ED041G: Sulfate as SO4 - Turbidimetric	14808-79-8	100 mg/L	104	70	130
ED045G: Chloride by Discrete Analyser (QCLot: 306094)							
EP1516864-001	Bore 2/10	ED045G: Chloride	16887-00-6	1000 mg/L	93.3	70	130
EG020F: Dissolved Metals by ICP-MS (QCLot: 309813)							
EM1518360-001	Anonymous	EG020A-F: Arsenic	7440-38-2	0.2 mg/L	102	85	131
		EG020A-F: Cadmium	7440-43-9	0.05 mg/L	100	81	133
		EG020A-F: Copper	7440-50-8	0.2 mg/L	96.8	76	130
		EG020A-F: Lead	7439-92-1	0.2 mg/L	96.8	75	133
		EG020A-F: Manganese	7439-96-5	0.2 mg/L	98.9	64	134
		EG020A-F: Zinc	7440-66-6	0.2 mg/L	106	75	131
EG020T: Total Metals by ICP-MS (QCLot: 309782)							
EM1518265-001	Anonymous	EG020A-T: Arsenic	7440-38-2	1 mg/L	99.8	82	118
		EG020A-T: Cadmium	7440-43-9	0.25 mg/L	101	75	129
		EG020A-T: Copper	7440-50-8	1 mg/L	87.3	81	115
		EG020A-T: Lead	7439-92-1	1 mg/L	85.2	83	121
		EG020A-T: Manganese	7439-96-5	1 mg/L	95.6	73	123
		EG020A-T: Zinc	7440-66-6	1 mg/L	# Not Determined	74	116
EG020T: Total Metals by ICP-MS (QCLot: 309783)							
EP1516864-002	Bore 3/10	EG020A-T: Arsenic	7440-38-2	1 mg/L	93.5	82	118
		EG020A-T: Cadmium	7440-43-9	0.25 mg/L	90.8	75	129

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 Work Order : EP1516864
 Client : GASCOYNE WATER COOPERATIVE LTD
 Project : Water Samples NBF



Sub-Matrix: **WATER**

				<i>Matrix Spike (MS) Report</i>			
				<i>Spike</i>	<i>SpikeRecovery(%)</i>	<i>Recovery Limits (%)</i>	
<i>Laboratory sample ID</i>	<i>Client sample ID</i>	<i>Method: Compound</i>	<i>CAS Number</i>	<i>Concentration</i>	<i>MS</i>	<i>Low</i>	<i>High</i>
EG020T: Total Metals by ICP-MS (QCLot: 309783) - continued							
EP1516864-002	Bore 3/10	EG020A-T: Copper	7440-50-8	1 mg/L	102	81	115
		EG020A-T: Lead	7439-92-1	1 mg/L	100	83	121
		EG020A-T: Manganese	7439-96-5	1 mg/L	92.5	73	123
		EG020A-T: Zinc	7440-66-6	1 mg/L	92.7	74	116
EK040P: Fluoride by PC Titrator (QCLot: 305838)							
EP1516864-002	Bore 3/10	EK040P: Fluoride	16984-48-8	4.9 mg/L	91.6	70	130
EK057G: Nitrite as N by Discrete Analyser (QCLot: 306093)							
EP1516864-001	Bore 2/10	EK057G: Nitrite as N	14797-65-0	0.5 mg/L	118	70	130
EK059G: Nitrite plus Nitrate as N (NOx) by Discrete Analyser (QCLot: 305893)							
EP1516864-001	Bore 2/10	EK059G: Nitrite + Nitrate as N	----	0.5 mg/L	101	70	130