

	PROJECT: AMULSAR GOLD PROJECT PROJECT LOCATION: JERMUK, ARMENIA	Lydian Doc #	0-00-RPT-ENV-82097	
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Environmental Monitoring Report: Q1, 2017

This report should be read in conjunction with the Environmental Monitoring Plan (EMP), version V5, February 2016. The EMP includes drawings showing monitoring and sampling locations. An update of the EMP will be in use for Q2 2017 monitoring.

1. Weather stations

Lydian maintains two meteorological stations that record continuous data for temperature, wind speed, wind direction, humidity, rainfall and air pressure. These stations have been located at the proposed Barren Rock Storage Facility (BRSF) and Heap Leach Facility (HLF) for several years. On 27 March 2017, the HLF station was dismantled and moved to a temporary location near the mine camp (which is under construction). In the near future a move to the new Primary Monitoring Station (PMS) adjacent to the Gndevaz dairy farm is planned. The move of the weather station was necessitated by the imminent start of construction of the HLF.

It is anticipated that the BRSF weather station will be moved in summer 2017, prior to start of construction of that facility.

The data card from the HLF station was removed on 27 March and a new card inserted in its place. The BRSF station is currently inaccessible because of snow. Data from both weather stations are stored on the Lydian server. The EMP will be updated to show the new weather station locations.

2. Air quality

2.1. Nitrogen dioxide and sulphur dioxide

As reported in the EMP, new air quality monitoring points were established at locations between the local communities and the project site during the second quarter of 2015, and it was planned that NO₂ and SO₂ monitoring would be discontinued at the old monitoring points within the communities after a six-month period of 'overlap' monitoring to confirm no significant variation in results. However, during a public hearing there was a suggestion by a Non-Governmental Organisation (NGO) to continue monitoring in the communities, and it was therefore decided to continue monitoring at both the old and new locations (see Tables 3 and 4 in the EMP).

Passive samplers provided by IVL Svenska Miljöinstitutet (IVL) of Sweden were deployed for monthly periods until either 9 or 10 March 2017, depending on location. At this point monitoring had to be suspended, because replacement samplers were not available. An investigation into the circumstances of this situation was undertaken and a Non-Conformance Report (NCR) filed (reference 0-00-NCR-ENV-82403, 31 March 2017). The NCR identified unexpected delays in the procurement process as the cause. Procedures have been changed to ensure that this situation does not arise again.

The results of the passive gas monitoring up to 9/10 March 2017 are included in Appendix 1. The EMP provides compliance criteria for air quality; during the period monitored there were no recorded exceedances of the criteria for NO₂ and SO₂.

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2.2. Dust

Lydian uses DustScan DS100 multi-directional sticky pad gauges to measure airborne dust at ten sites around Amulsar. However, until now it has not been deemed necessary to deploy the gauges during winter when the ground is snow-covered, as the likelihood of dust generation is low. In future, however, now that construction has started it is planned to measure nuisance dust year round.

2.3. Fine particulates

Two Osiris monitors were deployed at the Gorayk and Saravan locations in January 2017, to gather data to improve understanding of baseline conditions in the communities. Data collected at Saravan are summarised in Appendix 1. At Gorayk location, for reasons as-yet unknown the data were obtained from the monitor in a raw, non-averaged form, and are not amenable to easy summarisation. The data will be retained for future reference if necessary.

At Saravan, no exceedances of the Project compliance criteria for PM₁₀ (50 µg/m³) or PM_{2.5} (25 µg/m³) were noted.

3. Noise

Noise monitoring is undertaken using type 1 Cirrus noise meters with environmental monitoring kits. Before and after each measurement, the sound level meter is field calibrated to a reference level of 94 dB.

During Q1 2017, noise monitoring equipment was deployed at the PMS continuously from 6 February to 6 March, and also to provide shorter 'spot' measurements at in-community monitoring locations in Kechut, Saravan, Gndevaz, Jermuk and Saralanj. It was also deployed at the PMS and near Gndevaz for 'spot' measurements during blasting events on 13, 22 and 29 March. Data from the noise monitoring are included in Appendix 2.

Noise compliance criteria are yet to be established at the PMS (independent analysis using baseline data gathered in 2016 has been commissioned).

Spot measurements undertaken in the communities showed small exceedances of daytime compliance targets at Kechut, and no exceedances elsewhere.

4. Surface water

4.1. Flow measurement

No measurements of surface water flows were conducted in Q1 2017.

4.2. Surface water sampling and analysis

The surface water locations sampled in Q1 were generally as planned in the EMP, except for AW001, AW041 and FDMP3, which were inaccessible at the time of sampling. Sampling took place between 17 and 22 February 2017. In-field data measurement records and laboratory analytical data are included in Appendix 4 and will be uploaded to the Lydian Armenia database.

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The results of laboratory analysis have been compared with Armenian Maximum Acceptable Criteria (MAC) for the Arpa and Vorotan river basins (as appropriate), which have been selected as the project compliance criteria for receiving waters (see EMP Section 12.3). It should be noted that the laboratory method detection limits for antimony, beryllium, cobalt and tin are higher than both the Arpa and Vorotan MAC, and the method detection limit for molybdenum is higher than the Arpa MAC. In these cases, it cannot be determined that the analyte concentrations comply with the MACs. The following table shows the schedule of surface water sampling, sampling dates, and MACs exceeded. It should be noted that the sample denoted AW022 is a duplicate of AWJ5, and AW023 is a trip blank (distilled water).

ID	Date	Catchment	MACs exceeded
AWJ6	17/02/2017	Arpa	Hardness as CaCO ₃ , Beryllium*, Lithium, Sodium, Dissolved silicate as SiO ₂ , Sulphate as SO ₄ ²⁻ , Electrical Conductivity @ 25°C, Antimony*, Boron, Cobalt*, Iron, Molybdenum, Tin*
AWJ5	18/02/2017	Arpa	Hardness as CaCO ₃ , Beryllium*, Sodium, Antimony*, Cobalt*, Manganese, Molybdenum*, Tin*
AW022	19/02/2017		Hardness as CaCO ₃ , Beryllium*, Sodium, Dissolved silicate as SiO ₂ , Antimony*, Cobalt*, Manganese, Molybdenum*, Tin*
FM10	20/02/2017	Arpa	Hardness as CaCO ₃ , Beryllium*, Dissolved silicate as SiO ₂ , Antimony*, Cobalt*, Iron, Manganese, Molybdenum*, Tin*
AW003	22/02/2017	Vorotan	Hardness as CaCO ₃ , Beryllium*, Dissolved silicate as SiO ₂ , Antimony*, Cobalt*, Manganese, Tin*
AFF1	18/02/2017	Arpa	Hardness as CaCO ₃ , Beryllium*, Sodium, Dissolved silicate as SiO ₂ , Nitrate as N, Electrical Conductivity @ 25°C, Antimony*, Cobalt*, Molybdenum, Tin*, Vanadium
AW010	19/02/2017	Arpa	Hardness as CaCO ₃ , Beryllium*, Lithium, Sodium, Dissolved silicate as SiO ₂ , Antimony*, Cobalt*, Iron, Manganese, Molybdenum*, Tin*
AW009	20/02/2017	Arpa	Hardness as CaCO ₃ , Beryllium*, Lithium, Sodium, Dissolved silicate as SiO ₂ , Antimony*, Cobalt*, Iron, Manganese, Molybdenum*, Tin*
AW023	19/02/2017		Beryllium*, Sulphate as SO ₄ ²⁻ , pH, Antimony*, Cobalt*, Molybdenum*, Tin*

* Limit of detection is higher than the MAC

Hardness as CaCO₃ was elevated above the MAC in all surface water samples, and dissolved silicate in all but one, which appears to reflect regional baseline conditions. The other results are broadly consistent with historical results obtained by Lydian. Total iron and manganese are commonly elevated above MACs in Arpa drainage samples, along with lithium in samples from around Kechut reservoir. In this monitoring round, elevated lithium was also observed in the downstream Arpa samples AW010 and AW009.

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The elevated sodium at AWJ6, which represents outflow from the Spandaryan-Kechut tunnel, has also been noted historically. Absence of orthophosphate and phosphorus at elevated concentrations, as observed in Q2, Q3 and Q4 2016, may reflect the lack of agricultural activity during the winter.

5. Groundwater

5.1. Groundwater Level

Spot level measurements were made in accessible groundwater monitoring wells on several dates during Q1; the results are included in Appendix 5.

5.2. Groundwater sampling and analysis

Only two groundwater monitoring wells were sampled in Q1 2017; these were the only two that were accessible. Both are located in the HLF valley. Three springs used for drinking water are included in the monitoring plan: AW070 (Gorayk), AW052 (Gndevaz), and AW083 (Kechut - Madikenc spring). Since these springs represent emerging groundwater, they are included in this section of the report.

The results of laboratory analysis have been compared with Armenian MACs as described above for surface water. The following table shows the schedule of groundwater and spring sampling, sampling dates, and MACs exceeded. In-field data measurement records and summarised laboratory analytical data are included in Appendix 5 and will be uploaded to the Lydian Armenia database. The laboratory report is included in Appendix 6.

ID	Date	Catchment	MACs exceeded parameters
GGDW007	21/02/2017	Arpa	Hardness as CaCO ₃ , Barium, Beryllium*, Lithium, Sodium, Ammonia and ammonium ions as N, Chemical Oxygen Demand (COD-Cr), Dissolved Silicate as SiO ₂ , Nitrite as N, Orthophosphate as P, Electrical Conductivity @ 25°C, Antimony*, Cobalt*, Lead, Manganese, Molybdenum*, Tin*
GGDW013	18/02/2017	Arpa	Hardness as CaCO ₃ , Barium, Beryllium*, Lithium, Sodium, Ammonia and ammonium ions as N, Nitrite as N, Suspended solids dried at 105 °C, Electrical Conductivity @ 25°C, Antimony*, Cobalt*, Iron, Lead, Manganese, Molybdenum, Tin*
SP83	21/02/2017	Arpa	Hardness as CaCO ₃ , Beryllium*, Dissolved Silicate as SiO ₂ , Orthophosphate as P, Sulphate as SO ₄ ²⁻ , Antimony*, Cobalt*, Molybdenum*, Tin*
AW070	23/02/2017	Vorotan	Hardness as CaCO ₃ , Beryllium*, Dissolved Silicate as SiO ₂ , Antimony*, Cobalt*, Tin*
AW052	20/02/2017	Arpa	Hardness as CaCO ₃ , Beryllium*, Ammonia and Ammonium ions as N, Dissolved Silicate as SiO ₂ , Inorganic Nitrogen as N, Electrical Conductivity at 25°C, Antimony*, Cobalt*, Molybdenum*, Tin*

* Limit of detection is higher than the MAC

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The results are broadly consistent with previous results obtained both for the HLF wells and the springs.

A separate table in Appendix 5 lists the three drinking water samples with corresponding drinking water quality guidelines published by the World Health Organization (WHO). None of the guideline values are exceeded in any sample. This comparison is provided for information only, and does not constitute any opinion on whether or not the sampled water is suitable for drinking.

Samples from these three springs were also subject to testing for radiological parameters. Neither gross alpha nor gross beta particles were detected above the method limits in any sample.

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Appendix 1: Air Quality Data

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Uppdragsnr Analysupdrag

17-0135	Geoteam CSJC
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* STP=Standard Temperature and Pressure 20C 1013hPa

Sp-id	Station	Inne/StatTyp	Start	Stop	Temp C	SO ₂ µg/m ³ STP	NO ₂ µg/m ³ STP	Anmärkning
1543	AQ-1	outdoors	13/12/2016 10:05	10/01/2017 13:40	-9.0	0.8	0.9	
1543	AQ-1	outdoors	10/01/2017 13:40	10/02/2017 13:20	-12.0	0.7	0.8	
1543	AQ-1	outdoors	09/02/2017 13:20	10/03/2017 11:40	-3.0	0.4	0.6	
1544	AQ-2	outdoors	12/12/2016 13:10	10/01/2017 14:05	-12.0	1.2	1.1	
1544	AQ-2	outdoors	10/01/2017 14:05	10/02/2017 14:20	-14.0	0.9	0.9	
1544	AQ-2	outdoors	09/02/2017 14:20	10/03/2017 10:50	-9.0	0.5	0.6	
1545	AQ-3	outdoors	13/12/2016 11:10	10/01/2017 15:05	-10.0	1.1	1.9	
1545	AQ-3	outdoors	10/01/2017 15:05	09/02/2017 13:50	-10.0	0.9	1.4	
1545	AQ-3	outdoors	09/02/2017 13:50	10/03/2017 12:20	-8.0	0.6	1.0	
1546	AQ-4	outdoors	12/12/2016 13:55	09/01/2017 13:50	-12.0	0.8	3.3	
1546	AQ-4	outdoors	09/01/2017 13:55	09/02/2017 12:40	-10.0	1.2	2.1	
1546	AQ-4	outdoors	09/02/2017 12:40	09/03/2017 13:40	-5.0	0.6	1.6	
1547	AQ-5	outdoors	12/12/2016 14:45	09/01/2017 13:35	-8.0	1.1	1.1	
1547	AQ-5	outdoors	09/01/2017 13:35	09/02/2017 11:10	-10.0	1.3	1.0	
1547	AQ-5	outdoors	09/02/2017 11:10	09/03/2017 15:10	-7.0	0.8	0.8	
1548	AQ-6	outdoors	13/12/2016 16:55	09/01/2017 12:25	-12.0	1.0	0.7	
1548	AQ-6	outdoors	09/01/2017 12:25	08/02/2017 12:30	-15.0	1.0	0.6	
1548	AQ-6	outdoors	08/02/2017 12:30	09/03/2017 12:17	-5.0	0.9	0.6	
1549	Gndevaz	outdoors	12/12/2016 17:05	10/01/2017 15:30	-10.0	0.9	4.6	SO2: corrosion on the steel screen
1549	Gndevaz	outdoors	10/01/2017 15:30	08/02/2017 10:30	-12.0	0.7	3.1	
1549	Gndevaz	outdoors	08/02/2017 10:30	09/03/2017 16:45	-9.0	0.6	2.5	
1550	Gorhayk	outdoors	13/12/2016 17:10	09/01/2017 12:55	-12.0	1.0	2.9	
1550	Gorhayk	outdoors	09/01/2017 12:55	08/02/2017 12:50	-14.0	1.1	2.3	
1550	Gorhayk	outdoors	08/02/2017 12:50	09/03/2017 12:40	-5.0	1.0	1.9	
1551	Jermuk	outdoors	12/12/2016 15:55	10/01/2017 13:05	-10.0	0.8	3.4	
1551	Jermuk	outdoors	10/01/2017 13:05	10/02/2017 13:35	-14.0	0.7	3.0	
1551	Jermuk	outdoors	10/02/2017 13:35	10/03/2017 11:05	-8.0	0.4	1.7	
1552	Kechut	outdoors	12/12/2016 16:10	10/01/2017 14:15	-10.0	1.5	5.3	
1552	Kechut	outdoors	10/01/2017 14:15	10/02/2017 14:45	-10.0	1.2	4.2	
1552	Kechut	outdoors	10/02/2017 14:45	10/03/2017 10:40	-8.0	1.0	3.2	
1553	Saravan	outdoors	12/12/2016 15:15	09/01/2017 15:10	-14.0	0.7	10.7	
1553	Saravan	outdoors	09/01/2017 15:10	08/02/2017 14:25	-8.0	1.0	7.8	
1553	Saravan	outdoors	08/02/2017 14:25	09/03/2017 13:20	-9.0	0.9	6.2	SO2: crack in the lid. Results may be overestimated.

Q1 2017 Particulate Matter (PM) Air Quality Monitoring Data

Osiris, location: Saravan

Date	Duration	24-hour averages ($\mu\text{g}/\text{m}^3$)	
		PM10	PM2.5
1-Jan-17	24 hours	25.09	8.97
2-Jan-17	24 hours	5.38	3.86
3-Jan-17	24 hours	3.54	2.72
4-Jan-17	24 hours	2.96	2.43
5-Jan-17	24 hours	3.28	2.72
6-Jan-17	24 hours	3.52	2.81
7-Jan-17	24 hours	11.51	8.88
8-Jan-17	24 hours	21.29	14.48
9-Jan-17	24 hours	16.03	5.78
10-Jan-17	24 hours	17.26	9.50

Note: a second Osiris recorded PM data in Gorayk over the same time period. However, due to a software problem the data, although existing, is not in a format amenable to easy manipulation and summarisation. The intention is to import it to the Project MonitorPro5 database for future reference if needed.

EPAM 5000, location: Gndevaz, PM10

Date	Start time	Stop time	Duration	Average $\mu\text{g}/\text{m}^3$
16-Mar-17	08:05:26	00:29:26	16:24:00	99

Spot-PM measurements during blasting events

EPAM 5000, location: Gndevaz, PM2.5

Date	Start time	Stop time	Duration	Average $\mu\text{g}/\text{m}^3$
13-Mar-17	15:22:17	21:22:17	06:00:00	15
22-Mar-17	15:48:04	17:36:04	01:48:00	26
29-Mar-17	15:48:21	17:38:21	01:50:00	9

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Appendix 2: Noise Data

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Quarter 1 2017

Noise data, Primary Monitoring Station, near Gndevaz

Date	Average Daytime* Leq (dBA)	Average Night-time* Leq (dBA)
06/02/2017	43.38696	
07/02/2017	43.8875	41.64444
08/02/2017	46.44545	42.92821
09/02/2017	42.80606	44.84615
10/02/2017	40.91818	40.59189
11/02/2017	44.64545	39.98108
12/02/2017	50.35758	49.61053
13/02/2017	43.49394	49.68421
14/02/2017	42.68788	43.85789
15/02/2017	43.98182	39.35789
16/02/2017	41.51212	40.86053
17/02/2017	56.33636	40.80789
18/02/2017	43.09091	55.54722
19/02/2017	40.67273	39.96111
20/02/2017	41.06667	39.86667
21/02/2017	43.80909	39.39189
22/02/2017	45.09091	42.89737
23/02/2017	44.69697	42.66667
24/02/2017	48.34242	46.31795
25/02/2017	44.82424	46.96316
26/02/2017	47.29091	48.32778
27/02/2017	46.65455	49.51081
28/02/2017	45.20909	43.86316
02/03/2017	45.39259	44.14583
03/03/2017	43.88889	41.35217
04/03/2017	44.2875	41.65
05/03/2017	44.69394	45.13684
06/03/2017		44.11633

* Daytime is 07:00 – 22:00; Night-time 22:00 - 0700

“Spot” noise measurements*

Location	Date	Average Daytime* Leq (dBA)	Average Night-time* Leq (dBA)
Kechut	04/03/2017	44.22	
Kechut	05/03/2017	43.54	39.57
Kechut	06/03/2017	41.76	42.04
Kechut	07/03/2017		35.70
Saravan	08/03/2017	34.33	
Saravan	09/03/17		34.10
Gndevaz	09/03/2017	37.27	
Jermuk	10/03/2017	41.64	
Saralanj	10/03/2017	31.14	33.63

* not necessarily full daytime (15 hour) or night-time (9 hour) measurements

“Spot” noise measurements during blast events

Date	Time	Peak dB, Dairy Farm location	Peak dB, entrance to Gndevaz
13/03/2017	18:15	102.10	87.10
22/03/2017	18:30		117.5
29/03/2017	18:30	117.4	100.5

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Appendix 3: Surface Water Flow Measurement Data

(No data for Q1 2017)

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Appendix 4: Surface Water Sampling and Analytical Data

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Q1 2017 Surface Water Sampling: Field-Measured Parameters

ID	Date			°C	mS/cm	DO %	DO mg/l	pH	pHmV	ORP
	dd	mm	yy							
AWJ-6	17	2	17	6.32	0.485	60.5	7.15	8.28	-94.4	52.6
				6.32	0.486	60.8	7.22	8.30	-94.2	53.1
				6.28	0.486	61.3	7.30	8.30	-94.2	53.2
AWJ-5	17	2	17	2.32	0.048	74.4	10.28	8.24	-110.4	44.4
				2.29	0.052	74.9	10.30	8.24	-111.2	44.0
				2.27	0.055	75.4	10.32	8.25	-111.2	43.8
FM-10	17	2	17	5.47	0.110	44.4	5.48	7.44	-26.4	56.4
				5.47	0.112	44.6	5.52	7.48	-26.8	56.9
				5.47	0.112	44.6	5.53	7.49	-27.2	57.2
AW-003	17	2	17	4.28	0.52	60.8	7.14	8.58	-110.2	62.4
				4.28	0.51	61.2	7.20	8.59	-110.5	62.8
				4.27	0.52	61.2	7.21	8.59	-110.5	63.1
AW-010	18	2	17	6.42	0.212	101.5	13.62	7.66	-48.4	117.2
				6.38	0.211	101.2	13.64	7.70	-48.2	117.6
				6.38	0.211	101.2	13.67	7.72	-48.4	117.8
AW-009	18	2	17	6.14	0.168	109.9	13.38	6.24	-3.3	164.7
				6.17	0.170	110.4	13.40	6.27	-3.5	168.8
				6.18	0.172	110.5	13.42	6.28	-3.5	170.1

Q1 2017 Surface Water Sample Chemical Analytical Results
(Orange highlight = MAC exceeded; yellow highlight = MAC is lower than limit of reporting (LOR))

		Client Sample ID				AWJ 6	AWJ 5	AW 022	FM 10	AW 003	AFF 1	AW 010	AW 009	AW 023
	Laboratory Sample ID		Arpa	Vorotan	PR1701248001	PR1701248002	PR1701248003	PR1701248004	PR1701248006	PR1701248008	PR1701248009	PR1701248010	PR1701248010	PR1701248013
	Client Sampling Date		MAC	MAC	17/02/2017	18/02/2017	19/02/2017	20/02/2017	22/02/2017	18/02/2017	19/02/2017	20/02/2017	19/02/2017	
Parameter	Method	Unit	LOR											
Agregate Parameters														
Calcium Hardness	W-HARD-FX	mmol/L	0.0002			2.49	0.269	0.267	0.472	0.173	1.29	0.504	0.573	0.00115
Hardness	W-HARD-FX	mmol/L	0.0002			3.08	0.438	0.432	0.683	0.279	1.72	0.750	0.850	0.00158
Hardness as CaCO3	W-HARD-FX	mg CaCO3/	0.02	10	10	308	43.8	43.2	68.3	27.9	172	75.0	85.0	0.158
Magnesium Hardness	W-HARD-FX	mg CaCO3/	0.02			59.9	16.9	16.4	21.1	10.6	43.0	24.6	27.6	0.043
Dissolved Metals / Major Cations														
Aluminium	W-METAXFL1	mg/L	0.01	0.144	0.284	0.019	<0.010	<0.010	<0.010	0.030	<0.010	<0.010	<0.010	<0.010
Antimony	W-METAXFL1	mg/L	0.01			<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010
Arsenic	W-METAXFL1	mg/L	0.005			<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050
Barium	W-METAXFL1	mg/L	0.0005	0.028	0.012	0.0191	0.0102	0.0101	0.00819	0.00648	0.00076	0.0134	0.0148	<0.00050
Beryllium	W-METAXFL1	mg/L	0.0002	0.000038	0.000054	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020
Boron	W-METAXFL1	mg/L	0.01	0.45	0.45	0.066	0.040	0.040	<0.010	<0.010	0.044	0.075	0.089	<0.010
Cadmium	W-METAXFL1	mg/L	0.0004			<0.00040	<0.00040	<0.00040	<0.00040	<0.00040	<0.00040	<0.00040	<0.00040	<0.00040
Calcium	W-METAXFL1	mg/L	0.005	100	100	76.8	9.38	9.92	14.9	6.12	28.6	17.2	20.1	0.0235
Chromium	W-METAXFL1	mg/L	0.001			<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
Cobalt	W-METAXFL1	mg/L	0.002			<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020
Copper	W-METAXFL1	mg/L	0.001			<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
Hexavalent Chromium - Soluble	W-CR6-IC	µg/L	0.4			<0.40	<0.40	<0.40	<0.40	<0.40	<0.40	<0.40	<0.40	<0.40
Iron	W-METAXFL1	mg/L	0.002			0.0142	0.0058	0.0070	0.0054	0.0120	<0.0020	0.0094	0.0088	<0.0020
Lead	W-METAXFL1	mg/L	0.005			<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050
Lithium	W-METAXFL1	mg/L	0.001	0.003	0.002	0.0088	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	0.0171	0.0186	<0.0010
Magnesium	W-METAXFL1	mg/L	0.003	50	50	10.8	3.48	3.60	3.90	2.19	10.7	4.84	5.75	<0.0030
Manganese	W-METAXFL1	mg/L	0.0005			0.00187	0.0105	0.00955	0.00862	0.00455	<0.00050	<0.00050	<0.00050	<0.00050
Molybdenum	W-METAXFL1	mg/L	0.002			0.0024	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020
Nickel	W-METAXFL1	mg/L	0.002			<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020
Phosphorus	W-METAXFL1	mg/L	0.01			0.104	0.042	0.036	0.067	0.059	0.048	0.054	0.053	<0.010
Potassium	W-METAXFL1	mg/L	0.015	3.12	4.46	2.79	2.22	2.32	2.04	1.67	1.46	2.50	2.52	<0.015
Selenium	W-METAXFL1	mg/L	0.01			<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010
Silver	W-METAXFL1	mg/L	0.001			<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
Sodium	W-METAXFL1	mg/L	0.03	10	8.46	25.3	10.4	11.0	5.08	3.60	11.0	14.0	15.4	0.038
Thallium	W-METAXFL1	mg/L	0.01			<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010
Vanadium	W-METAXFL1	mg/L	0.001			0.0073	0.0054	0.0054	0.0074	0.0053	0.0229	0.0050	0.0052	<0.0010
Zinc	W-METAXFL1	mg/L	0.002			<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	0.0547
Nonmetallic Inorganic Parameters														
Acid neutralizing capacity (alkalinity) pH 4.5	W-ALK-PCT	mmol/L	0.15			2.11	0.944	0.954	1.04	0.616	2.48	1.37	1.49	<0.150
Acid neutralizing capacity (alkalinity) pH 8.3	W-ALK-PCT	mmol/L	0.15			<0.150	<0.150	<0.150	<0.150	<0.150	<0.150	<0.150	<0.150	<0.150
Aggressive CO2	W-CO2F-CC2	mg/L	0			0	2.50	2.96	2.49	2.11	0	0.29	1.10	1.89
Ammonia and ammonium ions as N	W-NH4-SPC	mg/L	0.04	0.4	0.4	<0.040	<0.040	<0.040	<0.040	<0.040	<0.040	<0.040	<0.040	0.129
Ammonia and ammonium ions as NH4	W-NH4-SPC	mg/L	0.05			<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	0.166
Base neutralizing capacity (acidity) pH 4.5	W-ACID-PCT	mmol/L	0.15			<0.150	<0.150	<0.150	<0.150	<0.150	<0.150	<0.150	<0.150	<0.150
Base neutralizing capacity (acidity) pH 8.3	W-ACID-PCT	mmol/L	0.15			<0.150	<0.150	<0.150	<0.150	<0.150	<0.150	<0.150	<0.150	<0.150
Biochemical Oxygen Demand (BOD 5)	W-BOD5-OXY	mg/L	1			<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	2.9
Carbonates (CO3 2-)	W-CO2F-CC2	mg/L	0			7.84	0	0	0	0	0	0	0	0
Chemical Oxygen Demand (COD-Cr)	W-COD-SPC	mg/L	5	25	25	18.0	11.0	<5.0	19.0	6.0	11.0	13.0	16.0	18.0
Chemical Oxygen Demand (COD-Mn)	W-CODMN-SPC	mg/L	0.5	10	10	<0.50	<0.50	<0.50	1.51	0.56	<0.50	0.59	0.76	0.59
Chloride	W-CL-IC	mg/L	1	6.88	8	3.25	1.88	1.88	<1.00	<1.00	2.48	5.07	5.63	<1.00
Dissolved Oxygen	W-O2D-ELE	mg/L	0.2			10.6	11.6	14.8	15.5	7.00	14.4	10.2	14.4	12.0

Q1 2017 Surface Water Sample Chemical Analytical Results
(Orange highlight = MAC exceeded; yellow highlight = MAC is lower than limit of reporting (LOR))

		Client Sample ID				AWJ 6	AWJ 5	AW 022	FM 10	AW 003	AFF 1	AW 010	AW 009	AW 023
	Laboratory Sample ID		Arpa	Vorotan		PR1701248001	PR1701248002	PR1701248003	PR1701248004	PR1701248006	PR1701248008	PR1701248009	PR1701248010	PR1701248013
	Client Sampling Date		MAC	MAC		17/02/2017	18/02/2017	19/02/2017	20/02/2017	22/02/2017	18/02/2017	19/02/2017	20/02/2017	19/02/2017
Parameter	Method	Unit	LOR											
Phosphorus	W-METAFX1	mg/L	0.01			0.155	0.060	0.060	0.102	0.080	0.059	0.082	0.090	0.022
Potassium	W-METAFX1	mg/L	0.015			4.15	2.96	2.88	2.99	2.21	1.79	3.69	3.57	0.089
Selenium	W-METMSFX1	µg/L	1	20	20	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Silver	W-METMSFX2	µg/L	1			<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Sodium	W-METAFX1	mg/L	0.03			33.4	12.0	11.8	6.61	4.15	10.4	16.8	17.6	0.089
Strontium	W-METMSFX2	µg/L	1			919	102	105	109	53.7	261	150	164	<1.0
Tellurium	W-METMSFX2	µg/L	5			<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0
Thallium	W-METMSFX1	µg/L	0.5			<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
Tin	W-METMSFX2	µg/L	1	0.08	0.16	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Titanium	W-METMSFX2	µg/L	5			<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0
Uranium	W-METMSFX3	µg/L	0.1			0.60	<0.10	<0.10	0.14	<0.10	2.04	0.37	0.46	<0.10
Vanadium	W-METMSFX2	µg/L	5	10	16	9.0	7.0	6.6	9.6	6.9	24.2	6.5	6.5	<5.0
Zinc	W-METMSFX2	µg/L	2	100	100	7.4	7.8	5.1	9.1	5.7	5.2	6.7	10.4	78.1

	PROJECT: AMULSAR GOLD PROJECT PROJECT LOCATION: JERMUK, ARMENIA	Lydian Doc #	0-00-RPT-ENV-82097	
		Vendor Doc #	N/A	
Date: April 2017	Environmental Monitoring Report: Quarter 1, 2017	Rev#	0	

Appendix 5: Groundwater Depth, Sampling and Analytical Data

Author: Artur Pepanyan Environmental Supervisor	Reviewed By: Alan Blakemore Environmental Superintendent	Approved by: Carl Nicholas Environmental Manager	Date Printed: 26-Apr-17
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Standpipe Piezometer Installation Data and Water Level Measurements - Q1 2017

Borehole/ Corehole	Geoteam Identification	Drilled Depth (m)	Total Depth (m)	Hole Diameter (mm)	Piezometer Pipe OD/ID (mm)	Pipe Screened Section Depths (m)		Depth to Water (m below ground surface)		
						Top	Bottom	Febr.18	Mar.06	Mar.29
BH-409	GCSC-035	17	10.7	150	50 / 44	4	11		7.4	4.35
GW-401A	GGDW-016	13	1	96	50 / 44	6	12			
GW-401B	GGDW-016A	60	1.9	96	50 / 44	53	59			
GW-403	GGDW-014	93	76.3	75.7	50 / 44	70.5	79.5		70.	
GW-404B	GGDW-013	63.6	58.6	96	50 / 44	54	60	13.05	11.65	
GW-405A	GGDW-010A	24.4	22.5	75.7	50 / 44	16.6	22.6			
GW-405B	GGDW-010B	70	68.6	75.7	50 / 44	60	69			
GW-406	GGDW-015	60	58.6	75.7	50 / 44	53	59			
GW-407	GGDW-007	129	127.4	75.7	50 / 44	120.5	126.5	12.	12.22	11
GW-408	GGDW-008	60	58	75.7	50 / 44	52.5	58.5		11.10	8.55
GW-409	GGDW-011	60	59.4	75.7	50 / 44	50	59			
GW-410	GGDW-012	70.6	69.55	75.7	50 / 44	60.9	69.9			
GW-411B	GGDW-009	118	114.2	96	50 / 44	108	117		36.30	
GW-404A	GGDW 013A	19.7	19.1		50 / 44				12.60	
GW-412	GGDW-017	18.1	18.1		40 (check if ID)	10	20		16.12	
GW-413	DDGW-021	12.5	12.							
GW-813	DDGW-022	34.6	34.6							
GW-816	DDGW-023	21	20.5							
GW-815	DDGW-024	11.3	11.3							
GW-814	DDGW-025	19.30	17.							

Q1 2017 Groundwater Sampling: Field-Measured Parameters

ID	Date			°C	mS/cm	DO %	DO mg/l	pH	pHmV	ORP
	dd	mm	yy							
SP-83	17	2	17	7.66	0.122	41.1	4.56	8.02	-34.1	65.3
				7.62	0.121	41.8	4.60	8.03	-34.4	65.8
				7.62	0.119	42.0	4.60	8.03	-34.4	65.9
AW-070	17	2	17	4.66	0.072	66.1	8.38	8.14	-87.6	78.2
				4.63	0.073	66.3	8.42	8.17	-87.8	78.4
				4.62	0.073	66.3	8.45	8.18	-87.8	78.5
AFF-1	18	2	17	6.88	0.321	73.8	8.91	8.21	-111.4	63.6
				6.88	0.320	73.9	8.93	8.23	-111.6	63.9
				6.86	0.317	74.2	8.95	8.24	-111.7	64.1
GGDW-007	18	2	17	11.35	0.136	31.7	3.7	5.44	-75.5	124.6
				11.33	0.134	31.4	3.6	5.42	-75.3	124.8
				11.33	0.134	31.4	3.4	5.42	-75.3	130.1
GGDW-013	18	2	17	5.74	0.344	46.8	5.65	8.25	-70.6	78.3
				5.71	0.342	46.4	5.68	8.23	-70.9	78.7
				5.71	0.342	46.4	5.70	8.23	-71.1	78.7
AW-052	18	2	17	5.18	0.059	68.4	7.75	8.18	-67.7	83.2
				5.17	0.062	68.1	7.77	8.15	-67.5	83.5
				5.17	0.062	68.1	7.77	8.15	-67.5	83.5

Q1 2017 Groundwater and Spring Water Sample Chemical Analytical Results
(Orange highlight = MAC exceeded; yellow highlight = MAC is lower than limit of reporting (LOR))

		Client Sample ID				GGDW 007	GGDW 013	SP 83	AW 070	AW 052
	Laboratory Sample ID		Arpa	Vorotan	PR1701248011	PR1701248012	PR1701248005	PR1701248007	PR1701248014	
	Client Sampling Date		MAC	MAC	21/02/2017	18/02/2017	21/02/2017	23/02/2017	20/02/2017	
Parameter	Method	Unit	LOR							
Agregate Parameters										
Calcium Hardness	W-HARD-FX	mmol/L	0.0002			1.03	0.460	0.416	0.252	0.183
Hardness	W-HARD-FX	mmol/L	0.0002			1.17	0.916	0.600	0.384	0.316
Hardness as CaCO3	W-HARD-FX	mg CaCO3	0.02	10	10	117	91.6	60.0	38.4	31.6
Magnesium Hardness	W-HARD-FX	mg CaCO3	0.02			14.3	45.6	18.4	13.1	13.3
Dissolved Metals / Major Cations										
Aluminium	W-METAXFL1	mg/L	0.01	0.144	0.284	0.011	<0.010	<0.010	0.012	<0.010
Antimony	W-METAXFL1	mg/L	0.01			<0.010	<0.010	<0.010	<0.010	<0.010
Arsenic	W-METAXFL1	mg/L	0.005			<0.0050	<0.0050	<0.0050	<0.0050	<0.0050
Barium	W-METAXFL1	mg/L	0.0005	0.028	0.012	0.107	0.0330	0.00445	0.0109	0.00271
Beryllium	W-METAXFL1	mg/L	0.0002	0.000038	0.000054	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020
Boron	W-METAXFL1	mg/L	0.01	0.45	0.45	0.058	0.262	<0.010	<0.010	<0.010
Cadmium	W-METAXFL1	mg/L	0.0004			<0.00040	<0.00040	<0.00040	<0.00040	<0.00040
Calcium	W-METAXFL1	mg/L	0.005	100	100	34.4	14.6	14.3	7.66	5.09
Chromium	W-METAXFL1	mg/L	0.001			<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
Cobalt	W-METAXFL1	mg/L	0.002			<0.0020	<0.0020	<0.0020	<0.0020	<0.0020
Copper	W-METAXFL1	mg/L	0.001			<0.0010	<0.0010	0.0135	<0.0010	<0.0010
Hexavalent Chromium - Soluble	W-CR6-IC	µg/L	0.4			<0.40	<0.40	<0.40	<0.40	<0.40
Iron	W-METAXFL1	mg/L	0.002			0.722	0.0561	<0.0020	0.0179	0.0232
Lead	W-METAXFL1	mg/L	0.005			0.0495	0.0053	<0.0050	<0.0050	<0.0050
Lithium	W-METAXFL1	mg/L	0.001	0.003	0.002	0.0138	0.0107	<0.0010	<0.0010	<0.0010
Magnesium	W-METAXFL1	mg/L	0.003	50	50	2.78	8.59	3.78	2.28	2.15
Manganese	W-METAXFL1	mg/L	0.0005			0.00095	0.0702	<0.00050	0.00098	<0.00050
Molybdenum	W-METAXFL1	mg/L	0.002			0.0314	0.0060	<0.0020	<0.0020	<0.0020
Nickel	W-METAXFL1	mg/L	0.002			0.0023	<0.0020	<0.0020	<0.0020	<0.0020
Phosphorus	W-METAXFL1	mg/L	0.01			0.105	0.022	0.095	0.057	0.072
Potassium	W-METAXFL1	mg/L	0.015	3.12	4.46	2.24	0.567	1.88	1.62	1.37
Selenium	W-METAXFL1	mg/L	0.01			<0.010	<0.010	<0.010	<0.010	<0.010
Silver	W-METAXFL1	mg/L	0.001			<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
Sodium	W-METAXFL1	mg/L	0.03	10	8.46	33.3	60.9	4.97	3.48	3.07
Thallium	W-METAXFL1	mg/L	0.01			<0.010	<0.010	<0.010	<0.010	<0.010
Vanadium	W-METAXFL1	mg/L	0.001			<0.0010	<0.0010	0.0106	0.0032	0.0060
Zinc	W-METAXFL1	mg/L	0.002			0.0025	<0.0020	0.0322	0.0175	0.0046
Nonmetallic Inorganic Parameters										
Acid neutralizing capacity (alkalinity) pH 4.5	W-ALK-PCT	mmol/L	0.15			3.02	4.01	1.03	0.725	<0.150
Acid neutralizing capacity (alkalinity) pH 8.3	W-ALK-PCT	mmol/L	0.15			<0.150	<0.150	<0.150	<0.150	<0.150
Aggressive CO2	W-CO2F-CC2	mg/L	0			0	0	3.34	2.79	0
Ammonia and ammonium ions as N	W-NH4-SPC	mg/L	0.04	0.4	0.4	1.84	0.477	<0.040	<0.040	161
Ammonia and ammonium ions as NH4	W-NH4-SPC	mg/L	0.05			2.37	0.614	<0.050	<0.050	208
Base neutralizing capacity (acidity) pH 4.5	W-ACID-PCT	mmol/L	0.15			<0.150	<0.150	<0.150	<0.150	224
Base neutralizing capacity (acidity) pH 8.3	W-ACID-PCT	mmol/L	0.15			<0.150	<0.150	<0.150	<0.150	234
Biochemical Oxygen Demand (BOD 5)	W-BOD5-OXY	mg/L	1			2.1	<1.0	<1.0	<1.0	<1.0
Carbonates (CO3 2-)	W-CO2F-CC2	mg/L	0			0	0	0	0	0
Chemical Oxygen Demand (COD-Cr)	W-COD-SPC	mg/L	5	25	25	74.0	18.0	9.0	6.0	13.0
Chemical Oxygen Demand (COD-Mn)	W-CODMN-SPC	mg/L	0.5	10	10	1.94	0.82	<0.50	<0.50	<0.50
Chloride	W-CL-IC	mg/L	1	6.88	8	5.37	4.12	<1.00	<1.00	<1.00
Dissolved Oxygen	W-O2D-ELE	mg/L	0.2			11.5	11.4	15.0	14.8	12.7
Dissolved silicate as H2SiO3	W-SIO3-SPC	mg/L	0.1			41.9	44.0	61.9	71.1	62.8
Dissolved silicate as SiO2	W-SIO3-SPC	mg/L	0.08	25	23.64	32.2	33.8	47.6	54.7	48.3
Dissolved silicate as SiO3	W-SIO3-SPC	mg/L	0.1			40.8	42.8	60.2	69.3	61.1
Free Carbon Dioxide as CO2	W-CO2F-CC2	mg/L	0			4.97	2.42	3.74	2.90	10300
Hydrogen carbonates (HCO3-)	W-CO2F-CC2	mg/L	0			184	244	63.0	44.2	0
Inorganic Nitrogen as N	W-NING-CC	mg/L	0.5	4	4	2.00	<0.500	0.794	0.651	162
Nitrate as N	W-NO3-SPC	mg/L	0.06	2.5	2.5	0.081	<0.060	0.794	0.651	0.649
Nitrates	W-NO3-SPC	mg/L	0.27			0.36	<0.27	3.52	2.88	2.88
Nitrite + Nitrate as N	W-NNO-SPC	mg/L	0.06			0.163	<0.060	0.794	0.651	0.667
Nitrite as N	W-NO2-SPC	mg/L	0.002	0.06	0.06	0.0817	0.0154	<0.0020	<0.0020	0.0175
Nitrites	W-NO2-SPC	mg/L	0.005			0.268	0.0506	<0.0050	<0.0050	0.0575
Orthophosphate	W-PO4O-SPC	mg/L	0.04			0.406	0.044	0.401	0.140	<0.040
Orthophosphate as P	W-PO4O-SPC	mg/L	0.01	0.1	0.1	0.132	0.014	0.131	0.046	<0.010
Oxygen Saturation	W-O2D-ELE	%	1			135	131	182	170	153
Phosphorus (as P2O5)	W-PTOT-SPC	mg/L	0.023			0.322	0.098	0.241	0.078	0.103
Sulfide as S2-	W-H2S-PHO	mg/L	0.05			<0.050	<0.050	<0.050	<0.050	<0.050
Sulfides as H2S	W-H2S-PHO	mg/L	0.05			<0.050	<0.050	<0.050	<0.050	<0.050
Sulphate as SO4 2-	W-SO4-IC	mg/L	5	16.04	17.02	6.82	9.20	590	<5.00	531
Suspended solids dried at 105 °C	W-TSS-GR	mg/L	5	6.8	5.5	<5.0	10.9	<5.0	<5.0	<5.0
Total Carbon Dioxide as CO2	W-CO2F-CC2	mg/L	0			138	179	49.2	34.8	10300
Total Phosphorus as P	W-PTOT-SPC	mg/L	0.01	0.2	0.2	0.141	0.043	0.105	0.034	0.045
Total Phosphorus as PO4 3-	W-PTOT-SPC	mg/L	0.04			0.431	0.131	0.322	0.105	0.138
Physical Parameters										
Colour (True)	W-COL-SPC	mgPt/l	2			25.1	8.8	6.0	<2.0	4.2
Electrical Conductivity @ 25°C	W-CON-PCT	mS/m	0.1	21.562	16.2	31.5	41.0	13.1	8.15	8590
pH Value	W-PH-PCT		1	6.5 - 9.0	6.5 - 9.0	7.81	8.10	7.49	7.55	<1.00
Radiological Parameters										
Gross alpha activity	W-GAA-SCI	Bq/L	0.04					<0.04	<0.04	<0.04
Gross beta activity	W-GBA-PRO	Bq/L	0.1					<0.10	<0.10	<0.10
Total Metals / Major Cations										
Aluminium	W-METMSFX2	µg/L	5			65.8	92.8	46.7	18.2	21.7
Antimony	W-METMSFX1	µg/L	1	0.28	0.28	<1.0	<1.0	<1.0	<1.0	<1.0
Arsenic	W-METMSFX1	µg/L	1	20	20	2.3	1.2	<1.0	<1.0	<1.0
Barium	W-METMSFX2	µg/L	1			104	37.3	4.9	11.9	2.3

Q1 2017 Groundwater and Spring Water Sample Chemical Analytical Results
(Orange highlight = MAC exceeded; yellow highlight = MAC is lower than limit of reporting (LOR))

	Client Sample ID					GGDW 007	GGDW 013	SP 83	AW 070	AW 052
	Laboratory Sample ID			Arpa	Vorotan	PR1701248011	PR1701248012	PR1701248005	PR1701248007	PR1701248014
	Client Sampling Date			MAC	MAC	21/02/2017	18/02/2017	21/02/2017	23/02/2017	20/02/2017
Parameter	Method	Unit	LOR							
Beryllium	W-METMSFX1	µg/L	0.2			<0.20	<0.20	<0.20	<0.20	<0.20
Bismuth	W-METMSFX2	µg/L	1			<1.0	<1.0	<1.0	<1.0	<1.0
Boron	W-METAXFX1	mg/L	0.01			0.065	0.260	0.013	0.014	<0.010
Cadmium	W-METMSFX1	µg/L	0.5	1.014	1.01	<0.50	<0.50	<0.50	<0.50	<0.50
Calcium	W-METAXFX1	mg/L	0.005			41.3	18.4	16.7	10.1	7.34
Chromium	W-METMSFX1	µg/L	5	11	10.5	<5.0	<5.0	<5.0	<5.0	<5.0
Cobalt	W-METMSFX2	µg/L	0.5	0.36	0.28	<0.50	<0.50	<0.50	<0.50	<0.50
Copper	W-METMSFX2	µg/L	1	21	22	<1.0	1.8	17.7	<1.0	<1.0
Iron	W-METAXFX1	mg/L	0.002	0.072	0.16	0.760	0.222	0.0274	0.0181	0.0252
Lead	W-METMSFX1	µg/L	1	10.14	10.14	89.1	46.5	1.1	1.6	<1.0
Lithium	W-METMSFX2	µg/L	1			9.3	11.5	1.2	<1.0	1.1
Magnesium	W-METMSFX2	µg/L	10			2260	7870	3980	2390	2280
Manganese	W-METMSFX2	µg/L	0.5	12	8	56.4	85.8	0.88	0.63	1.18
Mercury	W-HG-AFSFX	µg/L	0.01	0.3	0.3	<0.010	<0.010	<0.010	<0.010	<0.010
Molybdenum	W-METMSFX1	µg/L	1	0.82	2	35.4	9.2	<1.0	<1.0	<1.0
Nickel	W-METMSFX1	µg/L	3	10.34	10.45	<3.0	<3.0	<3.0	<3.0	<3.0
Phosphorus	W-METAXFX1	mg/L	0.01			0.134	0.064	0.115	0.061	0.084
Potassium	W-METAXFX1	mg/L	0.015			3.44	1.20	2.69	2.60	2.83
Selenium	W-METMSFX1	µg/L	1	20	20	<1.0	<1.0	<1.0	<1.0	<1.0
Silver	W-METMSFX2	µg/L	1			<1.0	<1.0	<1.0	<1.0	<1.0
Sodium	W-METAXFX1	mg/L	0.03			40.0	74.5	6.00	4.52	4.49
Strontium	W-METMSFX2	µg/L	1			176	196	110	56.4	56.7
Tellurium	W-METMSFX2	µg/L	5			<5.0	<5.0	<5.0	<5.0	<5.0
Thallium	W-METMSFX1	µg/L	0.5			<0.50	<0.50	<0.50	<0.50	<0.50
Tin	W-METMSFX2	µg/L	1	0.08	0.16	<1.0	<1.0	<1.0	<1.0	<1.0
Titanium	W-METMSFX2	µg/L	5			<5.0	<5.0	<5.0	<5.0	<5.0
Uranium	W-METMSFX3	µg/L	0.1			0.31	0.22	0.18	0.16	<0.10
Vanadium	W-METMSFX2	µg/L	5	10	16	<5.0	<5.0	13.8	<5.0	8.6
Zinc	W-METMSFX2	µg/L	2	100	100	11.6	14.5	43.8	5.4	4.4

Q1 2017 Spring Water Sample Chemical Analytical Results
(Orange highlight = WHO standard for drinking water exceeded)

		Client Sample ID			SP 83	AW 070	AW 052
	Laboratory Sample ID		WHO		PR1701248005	PR1701248007	PR1701248014
	Client Sampling Date		DW		21/02/2017	23/02/2017	20/02/2017
Parameter	Method	Unit	LOR				
Agregate Parameters							
Calcium Hardness	W-HARD-FX	mmol/L	0.0002		0.416	0.252	0.183
Hardness	W-HARD-FX	mmol/L	0.0002		0.600	0.384	0.316
Hardness as CaCO3	W-HARD-FX	mg CaCO3/	0.02		60.0	38.4	31.6
Magnesium Hardness	W-HARD-FX	mg CaCO3/	0.02		18.4	13.1	13.3
Dissolved Metals / Major Cations							
Aluminium	W-METAXFL1	mg/L	0.01		<0.010	0.012	<0.010
Antimony	W-METAXFL1	mg/L	0.01	0.02	<0.010	<0.010	<0.010
Arsenic	W-METAXFL1	mg/L	0.005	0.01	<0.0050	<0.0050	<0.0050
Barium	W-METAXFL1	mg/L	0.0005	0.7	0.00445	0.0109	0.00271
Beryllium	W-METAXFL1	mg/L	0.0002		<0.00020	<0.00020	<0.00020
Boron	W-METAXFL1	mg/L	0.01	2.4	<0.010	<0.010	<0.010
Cadmium	W-METAXFL1	mg/L	0.0004	0.003	<0.00040	<0.00040	<0.00040
Calcium	W-METAXFL1	mg/L	0.005		14.3	7.66	5.09
Chromium	W-METAXFL1	mg/L	0.001	0.05	<0.0010	<0.0010	<0.0010
Cobalt	W-METAXFL1	mg/L	0.002		<0.0020	<0.0020	<0.0020
Copper	W-METAXFL1	mg/L	0.001	2	0.0135	<0.0010	<0.0010
Hexavalent Chromium - Soluble	W-CR6-IC	µg/L	0.4		<0.40	<0.40	<0.40
Iron	W-METAXFL1	mg/L	0.002		<0.0020	0.0179	0.0232
Lead	W-METAXFL1	mg/L	0.005	0.01	<0.0050	<0.0050	<0.0050
Lithium	W-METAXFL1	mg/L	0.001		<0.0010	<0.0010	<0.0010
Magnesium	W-METAXFL1	mg/L	0.003		3.78	2.28	2.15
Manganese	W-METAXFL1	mg/L	0.0005		<0.00050	0.00098	<0.00050
Molybdenum	W-METAXFL1	mg/L	0.002		<0.0020	<0.0020	<0.0020
Nickel	W-METAXFL1	mg/L	0.002		<0.0020	<0.0020	<0.0020
Phosphorus	W-METAXFL1	mg/L	0.01		0.095	0.057	0.072
Potassium	W-METAXFL1	mg/L	0.015		1.88	1.62	1.37
Selenium	W-METAXFL1	mg/L	0.01		<0.010	<0.010	<0.010
Silver	W-METAXFL1	mg/L	0.001		<0.0010	<0.0010	<0.0010
Sodium	W-METAXFL1	mg/L	0.03		4.97	3.48	3.07
Thallium	W-METAXFL1	mg/L	0.01		<0.010	<0.010	<0.010
Vanadium	W-METAXFL1	mg/L	0.001		0.0106	0.0032	0.0060
Zinc	W-METAXFL1	mg/L	0.002		0.0322	0.0175	0.0046
Nonmetallic Inorganic Parameters							
Acid neutralizing capacity (alkalinity) pH 4.5	W-ALK-PCT	mmol/L	0.15		1.03	0.725	<0.150
Acid neutralizing capacity (alkalinity) pH 8.3	W-ALK-PCT	mmol/L	0.15		<0.150	<0.150	<0.150
Aggressive CO2	W-CO2F-CC2	mg/L	0		3.34	2.79	0
Ammonia and ammonium ions as N	W-NH4-SPC	mg/L	0.04		<0.040	<0.040	161
Ammonia and ammonium ions as NH4	W-NH4-SPC	mg/L	0.05		<0.050	<0.050	208
Base neutralizing capacity (acidity) pH 4.5	W-ACID-PCT	mmol/L	0.15		<0.150	<0.150	224
Base neutralizing capacity (acidity) pH 8.3	W-ACID-PCT	mmol/L	0.15		<0.150	<0.150	234
Biochemical Oxygen Demand (BOD 5)	W-BOD5-OXY	mg/L	1		<1.0	<1.0	<1.0
Carbonates (CO3 2-)	W-CO2F-CC2	mg/L	0		0	0	0
Chemical Oxygen Demand (COD-Cr)	W-COD-SPC	mg/L	5		9.0	6.0	13.0
Chemical Oxygen Demand (COD-Mn)	W-CODMN-SPC	mg/L	0.5		<0.50	<0.50	<0.50
Chloride	W-CL-IC	mg/L	1		<1.00	<1.00	<1.00
Dissolved Oxygen	W-O2D-ELE	mg/L	0.2		15.0	14.8	12.7
Dissolved silicate as H2SiO3	W-SIO3-SPC	mg/L	0.1		61.9	71.1	62.8
Dissolved silicate as SiO2	W-SIO3-SPC	mg/L	0.08		47.6	54.7	48.3
Dissolved silicate as SiO3	W-SIO3-SPC	mg/L	0.1		60.2	69.3	61.1
Free Carbon Dioxide as CO2	W-CO2F-CC2	mg/L	0		3.74	2.90	10300
Hydrogen carbonates (HCO3-)	W-CO2F-CC2	mg/L	0		63.0	44.2	0
Inorganic Nitrogen as N	W-NING-CC	mg/L	0.5		0.794	0.651	162
Nitrate as N	W-NO3-SPC	mg/L	0.06	50	0.794	0.651	0.649
Nitrates	W-NO3-SPC	mg/L	0.27		3.52	2.88	2.88
Nitrite + Nitrate as N	W-NNO-SPC	mg/L	0.06		0.794	0.651	0.667
Nitrite as N	W-NO2-SPC	mg/L	0.002	3	<0.0020	<0.0020	0.0175
Nitrites	W-NO2-SPC	mg/L	0.005		<0.0050	<0.0050	0.0575
Orthophosphate	W-PO4O-SPC	mg/L	0.04		0.401	0.140	<0.040
Orthophosphate as P	W-PO4O-SPC	mg/L	0.01		0.131	0.046	<0.010
Oxygen Saturation	W-O2D-ELE	%	1		182	170	153
Phosphorus (as P2O5)	W-PTOT-SPC	mg/L	0.023		0.241	0.078	0.103
Sulfide as S2-	W-H2S-PHO	mg/L	0.05		<0.050	<0.050	<0.050
Sulfides as H2S	W-H2S-PHO	mg/L	0.05		<0.050	<0.050	<0.050
Sulphate as SO4 2-	W-SO4-IC	mg/L	5		590	<5.00	531
Suspended solids dried at 105 °C	W-TSS-GR	mg/L	5		<5.0	<5.0	<5.0
Total Carbon Dioxide as CO2	W-CO2F-CC2	mg/L	0		49.2	34.8	10300
Total Phosphorus as P	W-PTOT-SPC	mg/L	0.01		0.105	0.034	0.045

Q1 2017 Spring Water Sample Chemical Analytical Results
(Orange highlight = WHO standard for drinking water exceeded)

		Client Sample ID			SP 83	AW 070	AW 052
	Laboratory Sample ID		WHO		PR1701248005	PR1701248007	PR1701248014
	Client Sampling Date		DW		21/02/2017	23/02/2017	20/02/2017
Parameter	Method	Unit	LOR				
Total Phosphorus as PO4 3-	W-PTOT-SPC	mg/L	0.04		0.322	0.105	0.138
Physical Parameters							
Colour (True)	W-COL-SPC	mgPt/l	2		6.0	<2.0	4.2
Electrical Conductivity @ 25°C	W-CON-PCT	mS/m	0.1		13.1	8.15	8590
pH Value	W-PH-PCT		1		7.49	7.55	<1.00
Radiological Parameters							
Gross alpha activity	W-GAA-SCI	Bq/L	0.04		<0.04	<0.04	<0.04
Gross beta activity	W-GBA-PRO	Bq/L	0.1		<0.10	<0.10	<0.10
Total Metals / Major Cations							
Aluminium	W-METMSFX2	µg/L	5		46.7	18.2	21.7
Antimony	W-METMSFX1	µg/L	1	20	<1.0	<1.0	<1.0
Arsenic	W-METMSFX1	µg/L	1	10	<1.0	<1.0	<1.0
Barium	W-METMSFX2	µg/L	1	700	4.9	11.9	2.3
Beryllium	W-METMSFX1	µg/L	0.2		<0.20	<0.20	<0.20
Bismuth	W-METMSFX2	µg/L	1		<1.0	<1.0	<1.0
Boron	W-METAXFX1	mg/L	0.01	2.4	0.013	0.014	<0.010
Cadmium	W-METMSFX1	µg/L	0.5	3	<0.50	<0.50	<0.50
Calcium	W-METAXFX1	mg/L	0.005		16.7	10.1	7.34
Chromium	W-METMSFX1	µg/L	5		<5.0	<5.0	<5.0
Cobalt	W-METMSFX2	µg/L	0.5		<0.50	<0.50	<0.50
Copper	W-METMSFX2	µg/L	1	2000	17.7	<1.0	<1.0
Iron	W-METAXFX1	mg/L	0.002		0.0274	0.0181	0.0252
Lead	W-METMSFX1	µg/L	1	10	1.1	1.6	<1.0
Lithium	W-METMSFX2	µg/L	1		1.2	<1.0	1.1
Magnesium	W-METMSFX2	µg/L	10		3980	2390	2280
Manganese	W-METMSFX2	µg/L	0.5		0.88	0.63	1.18
Mercury	W-HG-AFSFX	µg/L	0.01	6	<0.010	<0.010	<0.010
Molybdenum	W-METMSFX1	µg/L	1		<1.0	<1.0	<1.0
Nickel	W-METMSFX1	µg/L	3	70	<3.0	<3.0	<3.0
Phosphorus	W-METAXFX1	mg/L	0.01		0.115	0.061	0.084
Potassium	W-METAXFX1	mg/L	0.015		2.69	2.60	2.83
Selenium	W-METMSFX1	µg/L	1	40	<1.0	<1.0	<1.0
Silver	W-METMSFX2	µg/L	1		<1.0	<1.0	<1.0
Sodium	W-METAXFX1	mg/L	0.03		6.00	4.52	4.49
Strontium	W-METMSFX2	µg/L	1		110	56.4	56.7
Tellurium	W-METMSFX2	µg/L	5		<5.0	<5.0	<5.0
Thallium	W-METMSFX1	µg/L	0.5		<0.50	<0.50	<0.50
Tin	W-METMSFX2	µg/L	1		<1.0	<1.0	<1.0
Titanium	W-METMSFX2	µg/L	5		<5.0	<5.0	<5.0
Uranium	W-METMSFX3	µg/L	0.1		0.18	0.16	<0.10
Vanadium	W-METMSFX2	µg/L	5		13.8	<5.0	8.6
Zinc	W-METMSFX2	µg/L	2		43.8	5.4	4.4

	PROJECT: AMULSAR GOLD PROJECT PROJECT LOCATION: JERMUK, ARMENIA	Lydian Doc #	0-00-RPT-ENV-82097	
		Vendor Doc #	N/A	
Date: April 2017	Environmental Monitoring Report: Quarter 1, 2017	Rev#	0	

Appendix 6: Laboratory Report for water samples

Author: Artur Pepanyan Environmental Supervisor	Reviewed By: Alan Blakemore Environmental Superintendent	Approved by: Carl Nicholas Environmental Manager	Date Printed: 26-Apr-17
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CERTIFICATE OF ANALYSIS

Work Order	: PR1701248	Issue Date	: 20-Mar-2017
Client	: Lydian Armenia	Laboratory	: ALS Czech Republic, s.r.o.
Contact	: Armen Stepanyan	Contact	: Client Service
Address	: 37 Hanrapetutyun St. 4 floor 0010 Yerevan Armenia	Address	: Na Harfe 336/9 Prague 9 - Vysocany 190 00 Czech Republic
E-mail	: armen@lydianinternational.co.uk	E-mail	: customer.support@alsglobal.com
Telephone	: 37410525268	Telephone	: +420 226 226 228
Facsimile	: 37410585555	Facsimile	: +420 284 081 635
Project	: Laboratory analysis	Page	: 1 of 14
Order number	: 27.2.-8.3.2017	Date Samples Received	: 27-Feb-2017
C-O-C number	: ----	Quote number	: PR2015GEOAM-AM0291 (CZ-200-15-0357)
Site	: ----	Date of test	: 27-Feb-2017 - 09-Mar-2017
Sampled by	: client	QC Level	: ALS CR Standard Quality Control Schedule

General Comments

This report shall not be reproduced except in full, without prior written approval from the laboratory.

The laboratory declares that the test results relate only to the listed samples.

Sample(s) PR1701248/001-014, method W-O2D-ELE was/were determined in laboratory.

Responsible for accuracy

Testing Laboratory Accredited by CAI
according to CSN EN ISO/IEC 17025:2005

Signatories

Zdenek Jirak

Position

Environmental Business Unit
Manager





Analytical Results

Sub-Matrix: DRINKING WATER				Client sample ID		AW 070		AW 052	
				Laboratory sample ID		PR1701248-007		PR1701248-014	
				Client sampling date / time		21-Feb-2017 00:00		20-Feb-2017 00:00	
Parameter	Method	LOR	Unit	Result	MU	Result	MU	Result	MU
Physical Parameters									
Colour (True)	W-COL-SPC	2	mgPt/l	6.0	± 30.0%	<2.0	---	4.2	± 30.0%
Electrical Conductivity @ 25°C	W-CON-PCT	0.1	mS/m	13.1	± 10.0%	8.15	± 10.0%	8590	± 10.0%
pH Value	W-PH-PCT	1	-	7.49	± 1.1%	7.55	± 1.1%	<1.00	---
Aggregate Parameters									
Hardness	W-HARD-FX	0.0002	mmol/L	0.600	---	0.384	---	0.316	---
Calcium Hardness	W-HARD-FX	0.0002	mmol/L	0.416	---	0.252	---	0.183	---
Magnesium Hardness	W-HARD-FX	0.02	mg CaCO3/L	18.4	---	13.1	---	13.3	---
Hardness as CaCO3	W-HARD-FX	0.02	mg CaCO3/L	60.0	---	38.4	---	31.6	---
Nonmetallic Inorganic Parameters									
Ammonia and ammonium ions as N	W-NH4-SPC	0.04	mg/L	<0.040	---	<0.040	---	161	± 15.0%
Ammonia and ammonium ions as NH4	W-NH4-SPC	0.05	mg/L	<0.050	---	<0.050	---	208	± 15.0%
Biochemical Oxygen Demand (BOD 5)	W-BOD5-OXY	1	mg/L	<1.0	---	<1.0	---	<1.0	---
Carbonates (CO3 2-)	W-CO2F-CC2	0	mg/L	0	---	0	---	0	---
Chemical Oxygen Demand (COD-Cr)	W-COD-SPC	5	mg/L	9.0	± 20.6%	6.0	± 23.3%	13.0	± 18.8%
Chemical Oxygen Demand (COD-Mn)	W-CODMN-SPC	0.5	mg/L	<0.50	---	<0.50	---	<0.50	---
Chloride	W-CL-IC	1	mg/L	<1.00	---	<1.00	---	<1.00	---
Dissolved Oxygen	W-O2D-ELE	0.2	mg/L	15.0	± 30.0%	14.8	± 30.0%	12.7	± 30.0%
Dissolved silicate as SiO2	W-SIO3-SPC	0.08	mg/L	47.6	± 20.0%	54.7	± 20.0%	48.3	± 20.0%
Inorganic Nitrogen as N	W-NING-CC	0.5	mg/L	0.794	---	0.651	---	162	---
Nitrates	W-NO3-SPC	0.27	mg/L	3.52	---	2.88	---	2.88	---
Nitrite + Nitrate as N	W-NNO-SPC	0.06	mg/L	0.794	± 20.0%	0.651	± 20.0%	0.667	± 20.0%
Nitrites	W-NO2-SPC	0.005	mg/L	<0.0050	---	<0.0050	---	0.0575	± 15.0%
Orthophosphate	W-PO4O-SPC	0.04	mg/L	0.401	± 20.0%	0.140	± 20.0%	<0.040	---
Phosphorus (as P2O5)	W-PTOT-SPC	0.023	mg/L	0.241	± 20.0%	0.078	± 20.0%	0.103	± 20.0%
Sulfides as H2S	W-H2S-PHO	0.05	mg/L	<0.050	---	<0.050	---	<0.050	---
Sulphate as SO4 2-	W-SO4-IC	5	mg/L	590	± 15.0%	<5.00	---	531	± 15.0%
Total Phosphorus as P	W-PTOT-SPC	0.01	mg/L	0.105	± 20.0%	0.034	± 20.0%	0.045	± 20.0%
Total Phosphorus as PO4 3-	W-PTOT-SPC	0.04	mg/L	0.322	± 20.0%	0.105	± 20.0%	0.138	± 20.0%
Base neutralizing capacity (acidity) pH 8.3	W-ACID-PCT	0.15	mmol/L	<0.150	---	<0.150	---	234	± 15.0%
Dissolved silicate as SiO3	W-SIO3-SPC	0.1	mg/L	60.2	± 20.0%	69.3	± 20.0%	61.1	± 20.0%
Hydrogen carbonates (HCO3-)	W-CO2F-CC2	0	mg/L	63.0	± 12.0%	44.2	± 12.0%	0	---
Nitrate as N	W-NO3-SPC	0.06	mg/L	0.794	---	0.651	---	0.649	---
Nitrite as N	W-NO2-SPC	0.002	mg/L	<0.0020	---	<0.0020	---	0.0175	± 15.0%
Orthophosphate as P	W-PO4O-SPC	0.01	mg/L	0.131	± 20.0%	0.046	± 20.0%	<0.010	---
Oxygen Saturation	W-O2D-ELE	1	%	182	± 30.0%	170	± 30.0%	153	± 30.0%
Sulfide as S2-	W-H2S-PHO	0.05	mg/L	<0.050	---	<0.050	---	<0.050	---
Dissolved silicate as H2SiO3	W-SIO3-SPC	0.1	mg/L	61.9	---	71.1	---	62.8	---
Total Carbon Dioxide as CO2	W-CO2F-CC2	0	mg/L	49.2	± 12.0%	34.8	± 12.0%	10300	± 12.0%
Base neutralizing capacity (acidity) pH 4.5	W-ACID-PCT	0.15	mmol/L	<0.150	---	<0.150	---	224	± 15.0%
Free Carbon Dioxide as CO2	W-CO2F-CC2	0	mg/L	3.74	± 12.0%	2.90	± 12.0%	10300	± 12.0%
Suspended solids dried at 105 °C	W-TSS-GR	5	mg/L	<5.0	---	<5.0	---	<5.0	---
Aggressive CO2	W-CO2F-CC2	0	mg/L	3.34	± 12.0%	2.79	± 12.0%	0	---
Acid neutralizing capacity (alkalinity) pH 4.5	W-ALK-PCT	0.15	mmol/L	1.03	± 12.0%	0.725	± 12.0%	<0.150	---
Acid neutralizing capacity (alkalinity) pH 8.3	W-ALK-PCT	0.15	mmol/L	<0.150	---	<0.150	---	<0.150	---
Radiological Parameters									
Gross alpha activity	W-GAA-SCI	0.04	Bq/L	<0.04	---	<0.04	---	<0.04	---
Gross beta activity	W-GBA-PRO	0.1	Bq/L	<0.10	---	<0.10	---	<0.10	---



Sub-Matrix: DRINKING WATER				Client sample ID		SP 83		AW 070		AW 052	
				Laboratory sample ID		PR1701248-005		PR1701248-007		PR1701248-014	
				Client sampling date / time		21-Feb-2017 00:00		23-Feb-2017 00:00		20-Feb-2017 00:00	
Parameter	Method	LOR	Unit	Result	MU	Result	MU	Result	MU		
Total Metals / Major Cations											
Aluminium	W-METMSFX2	5	µg/L	46.7	± 10.0%	18.2	± 10.0%	21.7	± 10.0%		
Antimony	W-METMSFX1	1	µg/L	<1.0	---	<1.0	---	<1.0	---		
Arsenic	W-METMSFX1	1	µg/L	<1.0	---	<1.0	---	<1.0	---		
Barium	W-METMSFX2	1	µg/L	4.9	± 10.0%	11.9	± 10.0%	2.3	± 10.0%		
Beryllium	W-METMSFX1	0.2	µg/L	<0.20	---	<0.20	---	<0.20	---		
Bismuth	W-METMSFX2	1	µg/L	<1.0	---	<1.0	---	<1.0	---		
Boron	W-METAXFX1	0.01	mg/L	0.013	± 10.0%	0.014	± 10.0%	<0.010	---		
Cadmium	W-METMSFX1	0.5	µg/L	<0.50	---	<0.50	---	<0.50	---		
Calcium	W-METAXFX1	0.005	mg/L	16.7	± 10.0%	10.1	± 10.0%	7.34	± 10.0%		
Chromium	W-METMSFX1	5	µg/L	<5.0	---	<5.0	---	<5.0	---		
Cobalt	W-METMSFX2	0.5	µg/L	<0.50	---	<0.50	---	<0.50	---		
Copper	W-METMSFX2	1	µg/L	17.7	± 10.0%	<1.0	---	<1.0	---		
Iron	W-METAXFX1	0.002	mg/L	0.0274	± 10.0%	0.0181	± 10.0%	0.0252	± 10.0%		
Lead	W-METMSFX1	1	µg/L	1.1	± 10.0%	1.6	± 10.0%	<1.0	---		
Lithium	W-METMSFX2	1	µg/L	1.2	± 10.0%	<1.0	---	1.1	± 10.0%		
Magnesium	W-METMSFX2	10	µg/L	3980	± 10.0%	2390	± 10.0%	2280	± 10.0%		
Manganese	W-METMSFX2	0.5	µg/L	0.88	± 10.0%	0.63	± 10.0%	1.18	± 10.0%		
Mercury	W-HG-AFSFX	0.01	µg/L	<0.010	---	<0.010	---	<0.010	---		
Molybdenum	W-METMSFX1	1	µg/L	<1.0	---	<1.0	---	<1.0	---		
Nickel	W-METMSFX1	3	µg/L	<3.0	---	<3.0	---	<3.0	---		
Phosphorus	W-METAXFX1	0.01	mg/L	0.115	± 10.0%	0.061	± 10.0%	0.084	± 10.0%		
Potassium	W-METAXFX1	0.015	mg/L	2.69	± 10.0%	2.60	± 10.0%	2.83	± 10.0%		
Selenium	W-METMSFX1	1	µg/L	<1.0	---	<1.0	---	<1.0	---		
Silver	W-METMSFX2	1	µg/L	<1.0	---	<1.0	---	<1.0	---		
Sodium	W-METAXFX1	0.03	mg/L	6.00	± 10.0%	4.52	± 10.0%	4.49	± 10.0%		
Strontium	W-METMSFX2	1	µg/L	110	± 10.0%	56.4	± 10.0%	56.7	± 10.0%		
Tellurium	W-METMSFX2	5	µg/L	<5.0	---	<5.0	---	<5.0	---		
Thallium	W-METMSFX1	0.5	µg/L	<0.50	---	<0.50	---	<0.50	---		
Tin	W-METMSFX2	1	µg/L	<1.0	---	<1.0	---	<1.0	---		
Titanium	W-METMSFX2	5	µg/L	<5.0	---	<5.0	---	<5.0	---		
Uranium	W-METMSFX3	0.1	µg/L	0.18	± 10.0%	0.16	± 10.0%	<0.10	---		
Vanadium	W-METMSFX2	5	µg/L	13.8	± 10.0%	<5.0	---	8.6	± 10.0%		
Zinc	W-METMSFX2	2	µg/L	43.8	± 10.0%	5.4	± 10.0%	4.4	± 10.0%		
Dissolved Metals / Major Cations											
Aluminium	W-METAXFL1	0.01	mg/L	<0.010	---	0.012	± 10.0%	<0.010	---		
Antimony	W-METAXFL1	0.01	mg/L	<0.010	---	<0.010	---	<0.010	---		
Arsenic	W-METAXFL1	0.005	mg/L	<0.0050	---	<0.0050	---	<0.0050	---		
Barium	W-METAXFL1	0.0005	mg/L	0.00445	± 10.0%	0.0109	± 10.0%	0.00271	± 10.0%		
Beryllium	W-METAXFL1	0.0002	mg/L	<0.00020	---	<0.00020	---	<0.00020	---		
Boron	W-METAXFL1	0.01	mg/L	<0.010	---	<0.010	---	<0.010	---		
Cadmium	W-METAXFL1	0.0004	mg/L	<0.00040	---	<0.00040	---	<0.00040	---		
Calcium	W-METAXFL1	0.005	mg/L	14.3	± 10.0%	7.66	± 10.0%	5.09	± 10.0%		
Chromium	W-METAXFL1	0.001	mg/L	<0.0010	---	<0.0010	---	<0.0010	---		
Cobalt	W-METAXFL1	0.002	mg/L	<0.0020	---	<0.0020	---	<0.0020	---		
Copper	W-METAXFL1	0.001	mg/L	0.0135	± 10.0%	<0.0010	---	<0.0010	---		
Hexavalent Chromium - Soluble	W-CR6-IC	0.4	µg/L	<0.40	---	<0.40	---	<0.40	---		
Iron	W-METAXFL1	0.002	mg/L	<0.0020	---	0.0179	± 10.0%	0.0232	± 10.0%		
Lead	W-METAXFL1	0.005	mg/L	<0.0050	---	<0.0050	---	<0.0050	---		
Lithium	W-METAXFL1	0.001	mg/L	<0.0010	---	<0.0010	---	<0.0010	---		
Magnesium	W-METAXFL1	0.003	mg/L	3.78	± 10.0%	2.28	± 10.0%	2.15	± 10.0%		
Manganese	W-METAXFL1	0.0005	mg/L	<0.00050	---	0.00098	± 10.0%	<0.00050	---		
Molybdenum	W-METAXFL1	0.002	mg/L	<0.0020	---	<0.0020	---	<0.0020	---		
Nickel	W-METAXFL1	0.002	mg/L	<0.0020	---	<0.0020	---	<0.0020	---		
Phosphorus	W-METAXFL1	0.01	mg/L	0.095	± 10.0%	0.057	± 10.0%	0.072	± 10.0%		
Potassium	W-METAXFL1	0.015	mg/L	1.88	± 10.0%	1.62	± 10.0%	1.37	± 10.0%		
Selenium	W-METAXFL1	0.01	mg/L	<0.010	---	<0.010	---	<0.010	---		
Silver	W-METAXFL1	0.001	mg/L	<0.0010	---	<0.0010	---	<0.0010	---		
Sodium	W-METAXFL1	0.03	mg/L	4.97	± 10.0%	3.48	± 10.0%	3.07	± 10.0%		



Sub-Matrix: DRINKING WATER				Client sample ID		SP 83		AW 070		AW 052	
				Laboratory sample ID		PR1701248-005		PR1701248-007		PR1701248-014	
				Client sampling date / time		21-Feb-2017 00:00		23-Feb-2017 00:00		20-Feb-2017 00:00	
Parameter	Method	LOR	Unit	Result	MU	Result	MU	Result	MU		
Dissolved Metals / Major Cations - Continued											
Thallium	W-METAXFL1	0.01	mg/L	<0.010	---	<0.010	---	<0.010	---		
Vanadium	W-METAXFL1	0.001	mg/L	0.0106	± 10.0%	0.0032	± 10.0%	0.0060	± 10.0%		
Zinc	W-METAXFL1	0.002	mg/L	0.0322	± 10.0%	0.0175	± 10.0%	0.0046	± 10.0%		

Sub-Matrix: GROUNDWATER				Client sample ID		GGDW 007		GGDW 013		----	
				Laboratory sample ID		PR1701248-011		PR1701248-012		----	
				Client sampling date / time		21-Feb-2017 00:00		18-Feb-2017 00:00		----	
Parameter	Method	LOR	Unit	Result	MU	Result	MU	Result	MU		
Physical Parameters											
Colour (True)	W-COL-SPC	2	mgPt/l	25.1	± 30.0%	8.8	± 30.0%	----	----		
Electrical Conductivity @ 25°C	W-CON-PCT	0.1	mS/m	31.5	± 10.0%	41.0	± 10.0%	----	----		
pH Value	W-PH-PCT	1	-	7.81	± 1.0%	8.10	± 1.0%	----	----		
Agregate Parameters											
Hardness	W-HARD-FX	0.0002	mmol/L	1.17	---	0.916	---	----	----		
Calcium Hardness	W-HARD-FX	0.0002	mmol/L	1.03	---	0.460	---	----	----		
Magnesium Hardness	W-HARD-FX	0.02	mg CaCO3/L	14.3	---	45.6	---	----	----		
Hardness as CaCO3	W-HARD-FX	0.02	mg CaCO3/L	117	---	91.6	---	----	----		
Nonmetallic Inorganic Parameters											
Ammonia and ammonium ions as N	W-NH4-SPC	0.04	mg/L	1.84	± 15.0%	0.477	± 15.0%	----	----		
Ammonia and ammonium ions as NH4	W-NH4-SPC	0.05	mg/L	2.37	± 15.0%	0.614	± 15.0%	----	----		
Biochemical Oxygen Demand (BOD 5)	W-BOD5-OXY	1	mg/L	2.1	± 24.7%	<1.0	---	----	----		
Carbonates (CO3 2-)	W-CO2F-CC2	0	mg/L	0	---	0	---	----	----		
Chemical Oxygen Demand (COD-Cr)	W-COD-SPC	5	mg/L	74.0	± 15.7%	18.0	± 17.8%	----	----		
Chemical Oxygen Demand (COD-Mn)	W-CODMN-SPC	0.5	mg/L	1.94	± 30.0%	0.82	± 30.0%	----	----		
Chloride	W-CL-IC	1	mg/L	5.37	± 15.0%	4.12	± 15.0%	----	----		
Dissolved Oxygen	W-O2D-ELE	0.2	mg/L	11.5	± 30.0%	11.4	± 30.0%	----	----		
Dissolved silicate as SiO2	W-SIO3-SPC	0.08	mg/L	32.2	± 20.0%	33.8	± 20.0%	----	----		
Inorganic Nitrogen as N	W-NING-CC	0.5	mg/L	2.00	---	<0.500	---	----	----		
Nitrates	W-NO3-SPC	0.27	mg/L	0.36	---	<0.27	---	----	----		
Nitrite + Nitrate as N	W-NNO-SPC	0.06	mg/L	0.163	± 20.0%	<0.060	---	----	----		
Nitrites	W-NO2-SPC	0.005	mg/L	0.268	± 15.0%	0.0506	± 15.0%	----	----		
Orthophosphate	W-PO4O-SPC	0.04	mg/L	0.406	± 20.0%	0.044	± 20.0%	----	----		
Phosphorus (as P2O5)	W-PTOT-SPC	0.023	mg/L	0.322	± 20.0%	0.098	± 20.0%	----	----		
Sulfides as H2S	W-H2S-PHO	0.05	mg/L	<0.050	---	<0.050	---	----	----		
Sulphate as SO4 2-	W-SO4-IC	5	mg/L	6.82	± 15.0%	9.20	± 15.0%	----	----		
Total Phosphorus as P	W-PTOT-SPC	0.01	mg/L	0.141	± 20.0%	0.043	± 20.0%	----	----		
Total Phosphorus as PO4 3-	W-PTOT-SPC	0.04	mg/L	0.431	± 20.0%	0.131	± 20.0%	----	----		
Base neutralizing capacity (acidity) pH 8.3	W-ACID-PCT	0.15	mmol/L	<0.150	---	<0.150	---	----	----		
Dissolved silicate as SiO3	W-SIO3-SPC	0.1	mg/L	40.8	± 20.0%	42.8	± 20.0%	----	----		
Hydrogen carbonates (HCO3-)	W-CO2F-CC2	0	mg/L	184	± 12.0%	244	± 12.0%	----	----		
Nitrate as N	W-NO3-SPC	0.06	mg/L	0.081	---	<0.060	---	----	----		
Nitrite as N	W-NO2-SPC	0.002	mg/L	0.0817	± 15.0%	0.0154	± 15.0%	----	----		
Orthophosphate as P	W-PO4O-SPC	0.01	mg/L	0.132	± 20.0%	0.014	± 20.0%	----	----		
Oxygen Saturation	W-O2D-ELE	1	%	135	± 30.0%	131	± 30.0%	----	----		
Sulfide as S2-	W-H2S-PHO	0.05	mg/L	<0.050	---	<0.050	---	----	----		
Dissolved silicate as H2SiO3	W-SIO3-SPC	0.1	mg/L	41.9	---	44.0	---	----	----		
Total Carbon Dioxide as CO2	W-CO2F-CC2	0	mg/L	138	± 12.0%	179	± 12.0%	----	----		
Base neutralizing capacity (acidity) pH 4.5	W-ACID-PCT	0.15	mmol/L	<0.150	---	<0.150	---	----	----		
Free Carbon Dioxide as CO2	W-CO2F-CC2	0	mg/L	4.97	± 12.0%	2.42	± 12.0%	----	----		
Suspended solids dried at 105 °C	W-TSS-GR	5	mg/L	<5.0	---	10.9	± 11.4%	----	----		



Sub-Matrix: GROUNDWATER				Client sample ID		GGDW 007		GGDW 013		----	
				Laboratory sample ID		PR1701248-011		PR1701248-012		----	
				Client sampling date / time		21-Feb-2017 00:00		18-Feb-2017 00:00		----	
Parameter	Method	LOR	Unit	Result	MU	Result	MU	Result	MU		
Nonmetallic Inorganic Parameters - Continued											
Aggressive CO2	W-CO2F-CC2	0	mg/L	0	---	0	---	----	----		
Acid neutralizing capacity (alkalinity) pH 4.5	W-ALK-PCT	0.15	mmol/L	3.02	± 12.0%	4.01	± 12.0%	----	----		
Acid neutralizing capacity (alkalinity) pH 8.3	W-ALK-PCT	0.15	mmol/L	<0.150	---	<0.150	---	----	----		
Total Metals / Major Cations											
Aluminium	W-METMSFX2	5	µg/L	65.8	± 10.0%	92.8	± 10.0%	----	----		
Antimony	W-METMSFX1	1	µg/L	<1.0	---	<1.0	---	----	----		
Arsenic	W-METMSFX1	1	µg/L	2.3	± 10.0%	1.2	± 10.0%	----	----		
Barium	W-METMSFX2	1	µg/L	104	± 10.0%	37.3	± 10.0%	----	----		
Beryllium	W-METMSFX1	0.2	µg/L	<0.20	---	<0.20	---	----	----		
Bismuth	W-METMSFX2	1	µg/L	<1.0	---	<1.0	---	----	----		
Boron	W-METAXFX1	0.01	mg/L	0.065	± 10.0%	0.260	± 10.0%	----	----		
Cadmium	W-METMSFX1	0.5	µg/L	<0.50	---	<0.50	---	----	----		
Calcium	W-METAXFX1	0.005	mg/L	41.3	± 10.0%	18.4	± 10.0%	----	----		
Chromium	W-METMSFX1	5	µg/L	<5.0	---	<5.0	---	----	----		
Cobalt	W-METMSFX2	0.5	µg/L	<0.50	---	<0.50	---	----	----		
Copper	W-METMSFX2	1	µg/L	<1.0	---	1.8	± 10.0%	----	----		
Iron	W-METAXFX1	0.002	mg/L	0.760	± 10.0%	0.222	± 10.0%	----	----		
Lead	W-METMSFX1	1	µg/L	89.1	± 10.0%	46.5	± 10.0%	----	----		
Lithium	W-METMSFX2	1	µg/L	9.3	± 10.0%	11.5	± 10.0%	----	----		
Magnesium	W-METMSFX2	10	µg/L	2260	± 10.0%	7870	± 10.0%	----	----		
Manganese	W-METMSFX2	0.5	µg/L	56.4	± 10.0%	85.8	± 10.0%	----	----		
Mercury	W-HG-AFSFX	0.01	µg/L	<0.010	---	<0.010	---	----	----		
Molybdenum	W-METMSFX1	1	µg/L	35.4	± 10.0%	9.2	± 10.0%	----	----		
Nickel	W-METMSFX1	3	µg/L	<3.0	---	<3.0	---	----	----		
Phosphorus	W-METAXFX1	0.01	mg/L	0.134	± 10.0%	0.064	± 10.0%	----	----		
Potassium	W-METAXFX1	0.015	mg/L	3.44	± 10.0%	1.20	± 10.0%	----	----		
Selenium	W-METMSFX1	1	µg/L	<1.0	---	<1.0	---	----	----		
Silver	W-METMSFX2	1	µg/L	<1.0	---	<1.0	---	----	----		
Sodium	W-METAXFX1	0.03	mg/L	40.0	± 10.0%	74.5	± 10.0%	----	----		
Strontium	W-METMSFX2	1	µg/L	176	± 10.0%	196	± 10.0%	----	----		
Tellurium	W-METMSFX2	5	µg/L	<5.0	---	<5.0	---	----	----		
Thallium	W-METMSFX1	0.5	µg/L	<0.50	---	<0.50	---	----	----		
Tin	W-METMSFX2	1	µg/L	<1.0	---	<1.0	---	----	----		
Titanium	W-METMSFX2	5	µg/L	<5.0	---	<5.0	---	----	----		
Uranium	W-METMSFX3	0.1	µg/L	0.31	± 10.0%	0.22	± 10.0%	----	----		
Vanadium	W-METMSFX2	5	µg/L	<5.0	---	<5.0	---	----	----		
Zinc	W-METMSFX2	2	µg/L	11.6	± 10.0%	14.5	± 10.0%	----	----		
Dissolved Metals / Major Cations											
Aluminium	W-METAXFL1	0.01	mg/L	0.011	± 10.0%	<0.010	---	----	----		
Antimony	W-METAXFL1	0.01	mg/L	<0.010	---	<0.010	---	----	----		
Arsenic	W-METAXFL1	0.005	mg/L	<0.0050	---	<0.0050	---	----	----		
Barium	W-METAXFL1	0.0005	mg/L	0.107	± 10.0%	0.0330	± 10.0%	----	----		
Beryllium	W-METAXFL1	0.0002	mg/L	<0.00020	---	<0.00020	---	----	----		
Boron	W-METAXFL1	0.01	mg/L	0.058	± 10.0%	0.262	± 10.0%	----	----		
Cadmium	W-METAXFL1	0.0004	mg/L	<0.00040	---	<0.00040	---	----	----		
Calcium	W-METAXFL1	0.005	mg/L	34.4	± 10.0%	14.6	± 10.0%	----	----		
Chromium	W-METAXFL1	0.001	mg/L	<0.0010	---	<0.0010	---	----	----		
Cobalt	W-METAXFL1	0.002	mg/L	<0.0020	---	<0.0020	---	----	----		
Copper	W-METAXFL1	0.001	mg/L	<0.0010	---	<0.0010	---	----	----		
Hexavalent Chromium - Soluble	W-CR6-IC	0.4	µg/L	<0.40	---	<0.40	---	----	----		
Iron	W-METAXFL1	0.002	mg/L	0.722	± 10.0%	0.0561	± 10.0%	----	----		
Lead	W-METAXFL1	0.005	mg/L	0.0495	± 10.0%	0.0053	± 10.0%	----	----		
Lithium	W-METAXFL1	0.001	mg/L	0.0138	± 10.0%	0.0107	± 10.0%	----	----		
Magnesium	W-METAXFL1	0.003	mg/L	2.78	± 10.0%	8.59	± 10.0%	----	----		
Manganese	W-METAXFL1	0.0005	mg/L	0.00095	± 10.0%	0.0702	± 10.0%	----	----		
Molybdenum	W-METAXFL1	0.002	mg/L	0.0314	± 10.0%	0.0060	± 10.0%	----	----		



Sub-Matrix: GROUNDWATER				Client sample ID		GGDW 007		GGDW 013		----	
				Laboratory sample ID		PR1701248-011		PR1701248-012		----	
				Client sampling date / time		21-Feb-2017 00:00		18-Feb-2017 00:00		----	
Parameter	Method	LOR	Unit	Result	MU	Result	MU	Result	MU		
Dissolved Metals / Major Cations - Continued											
Nickel	W-METAXFL1	0.002	mg/L	0.0023	± 10.0%	<0.0020	----	----	----		
Phosphorus	W-METAXFL1	0.01	mg/L	0.105	± 10.0%	0.022	± 10.0%	----	----		
Potassium	W-METAXFL1	0.015	mg/L	2.24	± 10.0%	0.567	± 10.0%	----	----		
Selenium	W-METAXFL1	0.01	mg/L	<0.010	----	<0.010	----	----	----		
Silver	W-METAXFL1	0.001	mg/L	<0.0010	----	<0.0010	----	----	----		
Sodium	W-METAXFL1	0.03	mg/L	33.3	± 10.0%	60.9	± 10.0%	----	----		
Thallium	W-METAXFL1	0.01	mg/L	<0.010	----	<0.010	----	----	----		
Vanadium	W-METAXFL1	0.001	mg/L	<0.0010	----	<0.0010	----	----	----		
Zinc	W-METAXFL1	0.002	mg/L	0.0025	± 10.0%	<0.0020	----	----	----		

Sub-Matrix: SURFACE WATER				Client sample ID		AWJ 6		AWJ 5		AW 022	
				Laboratory sample ID		PR1701248-001		PR1701248-002		PR1701248-003	
				Client sampling date / time		17-Feb-2017 00:00		18-Feb-2017 00:00		19-Feb-2017 00:00	
Parameter	Method	LOR	Unit	Result	MU	Result	MU	Result	MU		
Physical Parameters											
Colour (True)	W-COL-SPC	2	mgPt/l	2.8	± 30.0%	5.1	± 30.0%	4.0	± 30.0%		
Electrical Conductivity @ 25°C	W-CON-PCT	0.1	mS/m	56.7	± 10.0%	12.9	± 10.0%	13.1	± 10.0%		
pH Value	W-PH-PCT	1	-	8.64	± 0.9%	7.64	± 1.0%	7.56	± 1.0%		
Agregate Parameters											
Hardness	W-HARD-FX	0.0002	mmol/L	3.08	----	0.438	----	0.432	----		
Calcium Hardness	W-HARD-FX	0.0002	mmol/L	2.49	----	0.269	----	0.267	----		
Magnesium Hardness	W-HARD-FX	0.02	mg CaCO3/L	59.9	----	16.9	----	16.4	----		
Hardness as CaCO3	W-HARD-FX	0.02	mg CaCO3/L	308	----	43.8	----	43.2	----		
Nonmetallic Inorganic Parameters											
Ammonia and ammonium ions as N	W-NH4-SPC	0.04	mg/L	<0.040	----	<0.040	----	<0.040	----		
Ammonia and ammonium ions as NH4	W-NH4-SPC	0.05	mg/L	<0.050	----	<0.050	----	<0.050	----		
Biochemical Oxygen Demand (BOD 5)	W-BOD5-OXY	1	mg/L	<1.0	----	<1.0	----	<1.0	----		
Carbonates (CO3 2-)	W-CO2F-CC2	0	mg/L	7.84	± 12.0%	0	----	0	----		
Chemical Oxygen Demand (COD-Cr)	W-COD-SPC	5	mg/L	18.0	± 17.8%	11.0	± 19.5%	<5.0	----		
Chemical Oxygen Demand (COD-Mn)	W-CODMN-SPC	0.5	mg/L	<0.50	----	<0.50	----	<0.50	----		
Chloride	W-CL-IC	1	mg/L	3.25	± 15.0%	1.88	± 15.0%	1.88	± 15.0%		
Dissolved Oxygen	W-O2D-ELE	0.2	mg/L	10.6	± 30.0%	11.6	± 30.0%	14.8	± 30.0%		
Dissolved silicate as SiO2	W-SIO3-SPC	0.08	mg/L	50.4	± 20.0%	43.7	± 20.0%	43.9	± 20.0%		
Inorganic Nitrogen as N	W-NING-CC	0.5	mg/L	<0.500	----	0.683	----	0.591	----		
Nitrates	W-NO3-SPC	0.27	mg/L	0.89	----	3.01	----	2.60	----		
Nitrite + Nitrate as N	W-NNO-SPC	0.06	mg/L	0.202	± 20.0%	0.683	± 20.0%	0.591	± 20.0%		
Nitrites	W-NO2-SPC	0.005	mg/L	<0.0050	----	0.0082	± 15.0%	0.0082	± 15.0%		
Orthophosphate	W-PO4O-SPC	0.04	mg/L	0.041	± 20.0%	0.161	± 20.0%	0.164	± 20.0%		
Phosphorus (as P2O5)	W-PTOT-SPC	0.023	mg/L	0.335	± 20.0%	0.097	± 20.0%	0.096	± 20.0%		
Sulfides as H2S	W-H2S-PHO	0.05	mg/L	<0.050	----	<0.050	----	<0.050	----		
Sulphate as SO4 2-	W-SO4-IC	5	mg/L	159	± 15.0%	8.43	± 15.0%	8.81	± 15.0%		
Total Phosphorus as P	W-PTOT-SPC	0.01	mg/L	0.146	± 20.0%	0.042	± 20.0%	0.042	± 20.0%		
Total Phosphorus as PO4 3-	W-PTOT-SPC	0.04	mg/L	0.448	± 20.0%	0.129	± 20.0%	0.129	± 20.0%		
Base neutralizing capacity (acidity) pH 8.3	W-ACID-PCT	0.15	mmol/L	<0.150	----	<0.150	----	<0.150	----		
Dissolved silicate as SiO3	W-SIO3-SPC	0.1	mg/L	63.8	± 20.0%	55.3	± 20.0%	55.6	± 20.0%		
Hydrogen carbonates (HCO3-)	W-CO2F-CC2	0	mg/L	113	± 12.0%	57.6	± 12.0%	58.2	± 12.0%		
Nitrate as N	W-NO3-SPC	0.06	mg/L	0.202	----	0.680	----	0.588	----		
Nitrite as N	W-NO2-SPC	0.002	mg/L	<0.0020	----	0.0025	± 15.0%	0.0025	± 15.0%		
Orthophosphate as P	W-PO4O-SPC	0.01	mg/L	0.013	± 20.0%	0.052	± 20.0%	0.053	± 20.0%		
Oxygen Saturation	W-O2D-ELE	1	%	95	± 30.0%	134	± 30.0%	174	± 30.0%		
Sulfide as S2-	W-H2S-PHO	0.05	mg/L	<0.050	----	<0.050	----	<0.050	----		



Sub-Matrix: SURFACE WATER				Client sample ID		AWJ 6		AWJ 5		AW 022	
				Laboratory sample ID		PR1701248-001		PR1701248-002		PR1701248-003	
				Client sampling date / time		17-Feb-2017 00:00		18-Feb-2017 00:00		19-Feb-2017 00:00	
Parameter	Method	LOR	Unit	Result	MU	Result	MU	Result	MU		
Nonmetallic Inorganic Parameters - Continued											
Dissolved silicate as H ₂ SiO ₃	W-SIO3-SPC	0.1	mg/L	65.5	---	56.8	---	57.0	---		
Total Carbon Dioxide as CO ₂	W-CO2F-CC2	0	mg/L	87.2	± 12.0%	44.3	± 12.0%	45.2	± 12.0%		
Base neutralizing capacity (acidity) pH 4.5	W-ACID-PCT	0.15	mmol/L	<0.150	---	<0.150	---	<0.150	---		
Free Carbon Dioxide as CO ₂	W-CO2F-CC2	0	mg/L	0	---	2.77	± 12.0%	3.26	± 12.0%		
Suspended solids dried at 105 °C	W-TSS-GR	5	mg/L	<5.0	---	<5.0	---	<5.0	---		
Aggressive CO ₂	W-CO2F-CC2	0	mg/L	0	---	2.50	± 12.0%	2.96	± 12.0%		
Acid neutralizing capacity (alkalinity) pH 4.5	W-ALK-PCT	0.15	mmol/L	2.11	± 12.0%	0.944	± 12.0%	0.954	± 12.0%		
Acid neutralizing capacity (alkalinity) pH 8.3	W-ALK-PCT	0.15	mmol/L	<0.150	---	<0.150	---	<0.150	---		
Total Metals / Major Cations											
Aluminium	W-METMSFX2	5	µg/L	30.9	± 10.0%	27.8	± 10.0%	35.4	± 10.0%		
Antimony	W-METMSFX1	1	µg/L	<1.0	---	<1.0	---	<1.0	---		
Arsenic	W-METMSFX1	1	µg/L	8.5	± 10.0%	5.7	± 10.0%	5.0	± 10.0%		
Barium	W-METMSFX2	1	µg/L	19.8	± 10.0%	11.6	± 10.0%	11.3	± 10.0%		
Beryllium	W-METMSFX1	0.2	µg/L	<0.20	---	<0.20	---	<0.20	---		
Bismuth	W-METMSFX2	1	µg/L	<1.0	---	<1.0	---	<1.0	---		
Boron	W-METAXFX1	0.01	mg/L	0.074	± 10.0%	0.042	± 10.0%	0.041	± 10.0%		
Cadmium	W-METMSFX1	0.5	µg/L	<0.50	---	<0.50	---	<0.50	---		
Calcium	W-METAXFX1	0.005	mg/L	99.7	± 10.0%	10.8	± 10.0%	10.7	± 10.0%		
Chromium	W-METMSFX1	5	µg/L	<5.0	---	<5.0	---	<5.0	---		
Cobalt	W-METMSFX2	0.5	µg/L	<0.50	---	<0.50	---	<0.50	---		
Copper	W-METMSFX2	1	µg/L	<1.0	---	<1.0	---	<1.0	---		
Iron	W-METAXFX1	0.002	mg/L	0.349	± 10.0%	0.0600	± 10.0%	0.0627	± 10.0%		
Lead	W-METMSFX1	1	µg/L	<1.0	---	1.1	± 10.0%	1.0	± 10.0%		
Lithium	W-METMSFX2	1	µg/L	5.0	± 10.0%	8.5	± 10.0%	8.5	± 10.0%		
Magnesium	W-METMSFX2	10	µg/L	10300	± 10.0%	3420	± 10.0%	3140	± 10.0%		
Manganese	W-METMSFX2	0.5	µg/L	4.15	± 10.0%	15.8	± 10.0%	14.4	± 10.0%		
Mercury	W-HG-AFSFX	0.01	µg/L	<0.010	---	<0.010	---	<0.010	---		
Molybdenum	W-METMSFX1	1	µg/L	4.4	± 10.0%	<1.0	---	<1.0	---		
Nickel	W-METMSFX1	3	µg/L	<3.0	---	<3.0	---	<3.0	---		
Phosphorus	W-METAXFX1	0.01	mg/L	0.155	± 10.0%	0.060	± 10.0%	0.060	± 10.0%		
Potassium	W-METAXFX1	0.015	mg/L	4.15	± 10.0%	2.96	± 10.0%	2.88	± 10.0%		
Selenium	W-METMSFX1	1	µg/L	<1.0	---	<1.0	---	<1.0	---		
Silver	W-METMSFX2	1	µg/L	<1.0	---	<1.0	---	<1.0	---		
Sodium	W-METAXFX1	0.03	mg/L	33.4	± 10.0%	12.0	± 10.0%	11.8	± 10.0%		
Strontium	W-METMSFX2	1	µg/L	919	± 10.0%	102	± 10.0%	105	± 10.0%		
Tellurium	W-METMSFX2	5	µg/L	<5.0	---	<5.0	---	<5.0	---		
Thallium	W-METMSFX1	0.5	µg/L	<0.50	---	<0.50	---	<0.50	---		
Tin	W-METMSFX2	1	µg/L	<1.0	---	<1.0	---	<1.0	---		
Titanium	W-METMSFX2	5	µg/L	<5.0	---	<5.0	---	<5.0	---		
Uranium	W-METMSFX3	0.1	µg/L	0.60	± 10.0%	<0.10	---	<0.10	---		
Vanadium	W-METMSFX2	5	µg/L	9.0	± 10.0%	7.0	± 10.0%	6.6	± 10.0%		
Zinc	W-METMSFX2	2	µg/L	7.4	± 10.0%	7.8	± 10.0%	5.1	± 10.0%		
Dissolved Metals / Major Cations											
Aluminium	W-METAXFL1	0.01	mg/L	0.019	± 10.0%	<0.010	---	<0.010	---		
Antimony	W-METAXFL1	0.01	mg/L	<0.010	---	<0.010	---	<0.010	---		
Arsenic	W-METAXFL1	0.005	mg/L	<0.0050	---	<0.0050	---	<0.0050	---		
Barium	W-METAXFL1	0.0005	mg/L	0.0191	± 10.0%	0.0102	± 10.0%	0.0101	± 10.0%		
Beryllium	W-METAXFL1	0.0002	mg/L	<0.00020	---	<0.00020	---	<0.00020	---		
Boron	W-METAXFL1	0.01	mg/L	0.066	± 10.0%	0.040	± 10.0%	0.040	± 10.0%		
Cadmium	W-METAXFL1	0.0004	mg/L	<0.00040	---	<0.00040	---	<0.00040	---		
Calcium	W-METAXFL1	0.005	mg/L	76.8	± 10.0%	9.38	± 10.0%	9.92	± 10.0%		
Chromium	W-METAXFL1	0.001	mg/L	<0.0010	---	<0.0010	---	<0.0010	---		
Cobalt	W-METAXFL1	0.002	mg/L	<0.0020	---	<0.0020	---	<0.0020	---		
Copper	W-METAXFL1	0.001	mg/L	<0.0010	---	<0.0010	---	<0.0010	---		
Hexavalent Chromium - Soluble	W-CR6-IC	0.4	µg/L	<0.40	---	<0.40	---	<0.40	---		



Sub-Matrix: SURFACE WATER				Client sample ID		AWJ 6		AWJ 5		AW 022	
				Laboratory sample ID		PR1701248-001		PR1701248-002		PR1701248-003	
				Client sampling date / time		17-Feb-2017 00:00		18-Feb-2017 00:00		19-Feb-2017 00:00	
Parameter	Method	LOR	Unit	Result	MU	Result	MU	Result	MU		
Dissolved Metals / Major Cations - Continued											
Iron	W-METAXFL1	0.002	mg/L	0.0142	± 10.0%	0.0058	± 10.0%	0.0070	± 10.0%		
Lead	W-METAXFL1	0.005	mg/L	<0.0050	---	<0.0050	---	<0.0050	---		
Lithium	W-METAXFL1	0.001	mg/L	0.0088	± 10.0%	<0.0010	---	<0.0010	---		
Magnesium	W-METAXFL1	0.003	mg/L	10.8	± 10.0%	3.48	± 10.0%	3.60	± 10.0%		
Manganese	W-METAXFL1	0.0005	mg/L	0.00187	± 10.0%	0.0105	± 10.0%	0.00955	± 10.0%		
Molybdenum	W-METAXFL1	0.002	mg/L	0.0024	± 10.0%	<0.0020	---	<0.0020	---		
Nickel	W-METAXFL1	0.002	mg/L	<0.0020	---	<0.0020	---	<0.0020	---		
Phosphorus	W-METAXFL1	0.01	mg/L	0.104	± 10.0%	0.042	± 10.0%	0.036	± 10.0%		
Potassium	W-METAXFL1	0.015	mg/L	2.79	± 10.0%	2.22	± 10.0%	2.32	± 10.0%		
Selenium	W-METAXFL1	0.01	mg/L	<0.010	---	<0.010	---	<0.010	---		
Silver	W-METAXFL1	0.001	mg/L	<0.0010	---	<0.0010	---	<0.0010	---		
Sodium	W-METAXFL1	0.03	mg/L	25.3	± 10.0%	10.4	± 10.0%	11.0	± 10.0%		
Thallium	W-METAXFL1	0.01	mg/L	<0.010	---	<0.010	---	<0.010	---		
Vanadium	W-METAXFL1	0.001	mg/L	0.0073	± 10.0%	0.0054	± 10.0%	0.0054	± 10.0%		
Zinc	W-METAXFL1	0.002	mg/L	<0.0020	---	<0.0020	---	<0.0020	---		

Sub-Matrix: SURFACE WATER				Client sample ID		FM 10		AW 003		AFF 1	
				Laboratory sample ID		PR1701248-004		PR1701248-006		PR1701248-008	
				Client sampling date / time		20-Feb-2017 00:00		22-Feb-2017 00:00		18-Feb-2017 00:00	
Parameter	Method	LOR	Unit	Result	MU	Result	MU	Result	MU		
Physical Parameters											
Colour (True)	W-COL-SPC	2	mgPt/l	8.5	± 30.0%	2.4	± 30.0%	<2.0	---		
Electrical Conductivity @ 25°C	W-CON-PCT	0.1	mS/m	13.2	± 10.0%	7.12	± 10.0%	30.0	± 10.0%		
pH Value	W-PH-PCT	1	-	7.60	± 1.0%	7.60	± 1.0%	8.09	± 1.0%		
Agregate Parameters											
Hardness	W-HARD-FX	0.0002	mmol/L	0.683	---	0.279	---	1.72	---		
Calcium Hardness	W-HARD-FX	0.0002	mmol/L	0.472	---	0.173	---	1.29	---		
Magnesium Hardness	W-HARD-FX	0.02	mg CaCO3/L	21.1	---	10.6	---	43.0	---		
Hardness as CaCO3	W-HARD-FX	0.02	mg CaCO3/L	68.3	---	27.9	---	172	---		
Nonmetallic Inorganic Parameters											
Ammonia and ammonium ions as N	W-NH4-SPC	0.04	mg/L	<0.040	---	<0.040	---	<0.040	---		
Ammonia and ammonium ions as NH4	W-NH4-SPC	0.05	mg/L	<0.050	---	<0.050	---	<0.050	---		
Biochemical Oxygen Demand (BOD 5)	W-BOD5-OXY	1	mg/L	<1.0	---	<1.0	---	<1.0	---		
Carbonates (CO3 2-)	W-CO2F-CC2	0	mg/L	0	---	0	---	0	---		
Chemical Oxygen Demand (COD-Cr)	W-COD-SPC	5	mg/L	19.0	± 17.6%	6.0	± 23.3%	11.0	± 19.5%		
Chemical Oxygen Demand (COD-Mn)	W-CODMN-SPC	0.5	mg/L	1.51	± 30.0%	0.56	± 30.0%	<0.50	---		
Chloride	W-CL-IC	1	mg/L	<1.00	---	<1.00	---	2.48	± 15.0%		
Dissolved Oxygen	W-O2D-ELE	0.2	mg/L	15.5	± 30.0%	7.00	± 30.0%	14.4	± 30.0%		
Dissolved silicate as SiO2	W-SIO3-SPC	0.08	mg/L	45.6	± 20.0%	46.5	± 20.0%	48.1	± 20.0%		
Inorganic Nitrogen as N	W-NING-CC	0.5	mg/L	0.692	---	0.635	---	2.51	---		
Nitrates	W-NO3-SPC	0.27	mg/L	3.05	---	2.80	---	11.1	---		
Nitrite + Nitrate as N	W-NNO-SPC	0.06	mg/L	0.692	± 20.0%	0.635	± 20.0%	2.51	± 20.0%		
Nitrites	W-NO2-SPC	0.005	mg/L	0.0128	± 15.0%	0.0095	± 15.0%	<0.0050	---		
Orthophosphate	W-PO4O-SPC	0.04	mg/L	0.281	± 20.0%	0.252	± 20.0%	0.168	± 20.0%		
Phosphorus (as P2O5)	W-PTOT-SPC	0.023	mg/L	0.216	± 20.0%	0.149	± 20.0%	0.179	± 20.0%		
Sulfides as H2S	W-H2S-PHO	0.05	mg/L	<0.050	---	<0.050	---	<0.050	---		
Sulphate as SO4 2-	W-SO4-IC	5	mg/L	7.31	± 15.0%	<5.00	---	11.5	± 15.0%		
Total Phosphorus as P	W-PTOT-SPC	0.01	mg/L	0.094	± 20.0%	0.065	± 20.0%	0.078	± 20.0%		
Total Phosphorus as PO4 3-	W-PTOT-SPC	0.04	mg/L	0.289	± 20.0%	0.199	± 20.0%	0.240	± 20.0%		
Base neutralizing capacity (acidity) pH 8.3	W-ACID-PCT	0.15	mmol/L	<0.150	---	<0.150	---	<0.150	---		
Dissolved silicate as SiO3	W-SIO3-SPC	0.1	mg/L	57.7	± 20.0%	58.9	± 20.0%	60.9	± 20.0%		



Sub-Matrix: SURFACE WATER				Client sample ID		FM 10		AW 003		AFF 1	
				Laboratory sample ID		PR1701248-004		PR1701248-006		PR1701248-008	
				Client sampling date / time		20-Feb-2017 00:00		22-Feb-2017 00:00		18-Feb-2017 00:00	
Parameter	Method	LOR	Unit	Result	MU	Result	MU	Result	MU		
Nonmetallic Inorganic Parameters - Continued											
Hydrogen carbonates (HCO ₃ ⁻)	W-CO2F-CC2	0	mg/L	63.7	± 12.0%	37.6	± 12.0%	152	± 12.0%		
Nitrate as N	W-NO3-SPC	0.06	mg/L	0.688	---	0.632	---	2.51	---		
Nitrite as N	W-NO2-SPC	0.002	mg/L	0.0039	± 15.0%	0.0029	± 15.0%	<0.0020	---		
Orthophosphate as P	W-PO4O-SPC	0.01	mg/L	0.092	± 20.0%	0.082	± 20.0%	0.055	± 20.0%		
Oxygen Saturation	W-O2D-ELE	1	%	175	± 30.0%	81	± 30.0%	167	± 30.0%		
Sulfide as S2-	W-H2S-PHO	0.05	mg/L	<0.050	---	<0.050	---	<0.050	---		
Dissolved silicate as H ₂ SiO ₃	W-SIO3-SPC	0.1	mg/L	59.3	---	60.4	---	62.6	---		
Total Carbon Dioxide as CO ₂	W-CO2F-CC2	0	mg/L	48.8	± 12.0%	29.3	± 12.0%	111	± 12.0%		
Base neutralizing capacity (acidity) pH 4.5	W-ACID-PCT	0.15	mmol/L	<0.150	---	<0.150	---	<0.150	---		
Free Carbon Dioxide as CO ₂	W-CO2F-CC2	0	mg/L	2.86	± 12.0%	2.16	± 12.0%	2.11	± 12.0%		
Suspended solids dried at 105 °C	W-TSS-GR	5	mg/L	<5.0	---	<5.0	---	<5.0	---		
Aggressive CO ₂	W-CO2F-CC2	0	mg/L	2.49	± 12.0%	2.11	± 12.0%	0	---		
Acid neutralizing capacity (alkalinity) pH 4.5	W-ALK-PCT	0.15	mmol/L	1.04	± 12.0%	0.616	± 12.0%	2.48	± 12.0%		
Acid neutralizing capacity (alkalinity) pH 8.3	W-ALK-PCT	0.15	mmol/L	<0.150	---	<0.150	---	<0.150	---		
Total Metals / Major Cations											
Aluminium	W-METMSFX2	5	µg/L	96.2	± 10.0%	88.1	± 10.0%	7.1	± 10.0%		
Antimony	W-METMSFX1	1	µg/L	<1.0	---	<1.0	---	<1.0	---		
Arsenic	W-METMSFX1	1	µg/L	<1.0	---	<1.0	---	2.3	± 10.0%		
Barium	W-METMSFX2	1	µg/L	9.3	± 10.0%	7.1	± 10.0%	7.0	± 10.0%		
Beryllium	W-METMSFX1	0.2	µg/L	<0.20	---	<0.20	---	<0.20	---		
Bismuth	W-METMSFX2	1	µg/L	<1.0	---	<1.0	---	<1.0	---		
Boron	W-METAXFX1	0.01	mg/L	0.014	± 10.0%	<0.010	---	0.042	± 10.0%		
Cadmium	W-METMSFX1	0.5	µg/L	<0.50	---	<0.50	---	<0.50	---		
Calcium	W-METAXFX1	0.005	mg/L	18.9	± 10.0%	6.95	± 10.0%	51.7	± 10.0%		
Chromium	W-METMSFX1	5	µg/L	<5.0	---	<5.0	---	<5.0	---		
Cobalt	W-METMSFX2	0.5	µg/L	<0.50	---	<0.50	---	<0.50	---		
Copper	W-METMSFX2	1	µg/L	<1.0	---	1.3	± 10.0%	<1.0	---		
Iron	W-METAXFX1	0.002	mg/L	0.212	± 10.0%	0.0767	± 10.0%	0.0096	± 10.0%		
Lead	W-METMSFX1	1	µg/L	1.1	± 10.0%	<1.0	---	<1.0	---		
Lithium	W-METMSFX2	1	µg/L	<1.0	---	1.7	± 10.0%	4.8	± 10.0%		
Magnesium	W-METMSFX2	10	µg/L	3530	± 10.0%	1950	± 10.0%	8930	± 10.0%		
Manganese	W-METMSFX2	0.5	µg/L	37.4	± 10.0%	8.11	± 10.0%	<0.50	---		
Mercury	W-HG-AFSFX	0.01	µg/L	<0.010	---	<0.010	---	<0.010	---		
Molybdenum	W-METMSFX1	1	µg/L	<1.0	---	<1.0	---	1.2	± 10.0%		
Nickel	W-METMSFX1	3	µg/L	<3.0	---	<3.0	---	<3.0	---		
Phosphorus	W-METAXFX1	0.01	mg/L	0.102	± 10.0%	0.080	± 10.0%	0.059	± 10.0%		
Potassium	W-METAXFX1	0.015	mg/L	2.99	± 10.0%	2.21	± 10.0%	1.79	± 10.0%		
Selenium	W-METMSFX1	1	µg/L	<1.0	---	<1.0	---	<1.0	---		
Silver	W-METMSFX2	1	µg/L	<1.0	---	<1.0	---	<1.0	---		
Sodium	W-METAXFX1	0.03	mg/L	6.61	± 10.0%	4.15	± 10.0%	10.4	± 10.0%		
Strontium	W-METMSFX2	1	µg/L	109	± 10.0%	53.7	± 10.0%	261	± 10.0%		
Tellurium	W-METMSFX2	5	µg/L	<5.0	---	<5.0	---	<5.0	---		
Thallium	W-METMSFX1	0.5	µg/L	<0.50	---	<0.50	---	<0.50	---		
Tin	W-METMSFX2	1	µg/L	<1.0	---	<1.0	---	<1.0	---		
Titanium	W-METMSFX2	5	µg/L	<5.0	---	<5.0	---	<5.0	---		
Uranium	W-METMSFX3	0.1	µg/L	0.14	± 10.0%	<0.10	---	2.04	± 10.0%		
Vanadium	W-METMSFX2	5	µg/L	9.6	± 10.0%	6.9	± 10.0%	24.2	± 10.0%		
Zinc	W-METMSFX2	2	µg/L	9.1	± 10.0%	5.7	± 10.0%	5.2	± 10.0%		
Dissolved Metals / Major Cations											
Aluminium	W-METAXFL1	0.01	mg/L	<0.010	---	0.030	± 10.0%	<0.010	---		
Antimony	W-METAXFL1	0.01	mg/L	<0.010	---	<0.010	---	<0.010	---		
Arsenic	W-METAXFL1	0.005	mg/L	<0.0050	---	<0.0050	---	<0.0050	---		
Barium	W-METAXFL1	0.0005	mg/L	0.00819	± 10.0%	0.00648	± 10.0%	0.00076	± 10.0%		
Beryllium	W-METAXFL1	0.0002	mg/L	<0.00020	---	<0.00020	---	<0.00020	---		
Boron	W-METAXFL1	0.01	mg/L	<0.010	---	<0.010	---	0.044	± 10.0%		



Sub-Matrix: SURFACE WATER				Client sample ID		FM 10		AW 003		AFF 1	
				Laboratory sample ID		PR1701248-004		PR1701248-006		PR1701248-008	
				Client sampling date / time		20-Feb-2017 00:00		22-Feb-2017 00:00		18-Feb-2017 00:00	
Parameter	Method	LOR	Unit	Result	MU	Result	MU	Result	MU		
Dissolved Metals / Major Cations - Continued											
Cadmium	W-METAXFL1	0.0004	mg/L	<0.00040	---	<0.00040	---	<0.00040	---		
Calcium	W-METAXFL1	0.005	mg/L	14.9	± 10.0%	6.12	± 10.0%	28.6	± 10.0%		
Chromium	W-METAXFL1	0.001	mg/L	<0.0010	---	<0.0010	---	<0.0010	---		
Cobalt	W-METAXFL1	0.002	mg/L	<0.0020	---	<0.0020	---	<0.0020	---		
Copper	W-METAXFL1	0.001	mg/L	<0.0010	---	<0.0010	---	<0.0010	---		
Hexavalent Chromium - Soluble	W-CR6-IC	0.4	µg/L	<0.40	---	<0.40	---	<0.40	---		
Iron	W-METAXFL1	0.002	mg/L	0.0054	± 10.0%	0.0120	± 10.0%	<0.0020	---		
Lead	W-METAXFL1	0.005	mg/L	<0.0050	---	<0.0050	---	<0.0050	---		
Lithium	W-METAXFL1	0.001	mg/L	<0.0010	---	<0.0010	---	<0.0010	---		
Magnesium	W-METAXFL1	0.003	mg/L	3.90	± 10.0%	2.19	± 10.0%	10.7	± 10.0%		
Manganese	W-METAXFL1	0.0005	mg/L	0.00862	± 10.0%	0.00455	± 10.0%	<0.00050	---		
Molybdenum	W-METAXFL1	0.002	mg/L	<0.0020	---	<0.0020	---	<0.0020	---		
Nickel	W-METAXFL1	0.002	mg/L	<0.0020	---	<0.0020	---	<0.0020	---		
Phosphorus	W-METAXFL1	0.01	mg/L	0.067	± 10.0%	0.059	± 10.0%	0.048	± 10.0%		
Potassium	W-METAXFL1	0.015	mg/L	2.04	± 10.0%	1.67	± 10.0%	1.46	± 10.0%		
Selenium	W-METAXFL1	0.01	mg/L	<0.010	---	<0.010	---	<0.010	---		
Silver	W-METAXFL1	0.001	mg/L	<0.0010	---	<0.0010	---	<0.0010	---		
Sodium	W-METAXFL1	0.03	mg/L	5.08	± 10.0%	3.60	± 10.0%	11.0	± 10.0%		
Thallium	W-METAXFL1	0.01	mg/L	<0.010	---	<0.010	---	<0.010	---		
Vanadium	W-METAXFL1	0.001	mg/L	0.0074	± 10.0%	0.0053	± 10.0%	0.0229	± 10.0%		
Zinc	W-METAXFL1	0.002	mg/L	<0.0020	---	<0.0020	---	<0.0020	---		

Sub-Matrix: SURFACE WATER				Client sample ID		AW 010		AW 009		AW 023	
				Laboratory sample ID		PR1701248-009		PR1701248-010		PR1701248-013	
				Client sampling date / time		19-Feb-2017 00:00		20-Feb-2017 00:00		19-Feb-2017 00:00	
Parameter	Method	LOR	Unit	Result	MU	Result	MU	Result	MU		
Physical Parameters											
Colour (True)	W-COL-SPC	2	mgPt/l	4.4	± 30.0%	9.1	± 30.0%	2.1	± 30.0%		
Electrical Conductivity @ 25°C	W-CON-PCT	0.1	mS/m	19.7	± 10.0%	21.4	± 10.0%	0.43	± 10.0%		
pH Value	W-PH-PCT	1	-	8.22	± 1.0%	7.90	± 1.0%	5.58	± 1.4%		
Agregate Parameters											
Hardness	W-HARD-FX	0.0002	mmol/L	0.750	---	0.850	---	0.00158	---		
Calcium Hardness	W-HARD-FX	0.0002	mmol/L	0.504	---	0.573	---	0.00115	---		
Magnesium Hardness	W-HARD-FX	0.02	mg CaCO3/L	24.6	---	27.6	---	0.043	---		
Hardness as CaCO3	W-HARD-FX	0.02	mg CaCO3/L	75.0	---	85.0	---	0.158	---		
Nonmetallic Inorganic Parameters											
Ammonia and ammonium ions as N	W-NH4-SPC	0.04	mg/L	<0.040	---	<0.040	---	0.129	± 15.0%		
Ammonia and ammonium ions as NH4	W-NH4-SPC	0.05	mg/L	<0.050	---	<0.050	---	0.166	± 15.0%		
Biochemical Oxygen Demand (BOD 5)	W-BOD5-OXY	1	mg/L	<1.0	---	<1.0	---	2.9	± 21.9%		
Carbonates (CO3 2-)	W-CO2F-CC2	0	mg/L	0	---	0	---	0	---		
Chemical Oxygen Demand (COD-Cr)	W-COD-SPC	5	mg/L	13.0	± 18.8%	16.0	± 18.1%	18.0	± 17.8%		
Chemical Oxygen Demand (COD-Mn)	W-CODMN-SPC	0.5	mg/L	0.59	± 30.0%	0.76	± 30.0%	0.59	± 30.0%		
Chloride	W-CL-IC	1	mg/L	5.07	± 15.0%	5.63	± 15.0%	<1.00	---		
Dissolved Oxygen	W-O2D-ELE	0.2	mg/L	10.2	± 30.0%	14.4	± 30.0%	12.0	± 30.0%		
Dissolved silicate as SiO2	W-SIO3-SPC	0.08	mg/L	41.4	± 20.0%	40.1	± 20.0%	0.205	± 20.0%		
Inorganic Nitrogen as N	W-NING-CC	0.5	mg/L	1.05	---	1.10	---	<0.500	---		
Nitrates	W-NO3-SPC	0.27	mg/L	4.60	---	4.82	---	<0.27	---		
Nitrite + Nitrate as N	W-NNO-SPC	0.06	mg/L	1.05	± 20.0%	1.10	± 20.0%	<0.060	---		
Nitrites	W-NO2-SPC	0.005	mg/L	0.0257	± 15.0%	0.0238	± 15.0%	<0.0050	---		
Orthophosphate	W-PO4O-SPC	0.04	mg/L	0.235	± 20.0%	0.209	± 20.0%	<0.040	---		
Phosphorus (as P2O5)	W-PTOT-SPC	0.023	mg/L	0.143	± 20.0%	0.128	± 20.0%	<0.023	---		
Sulfides as H2S	W-H2S-PHO	0.05	mg/L	<0.050	---	<0.050	---	<0.050	---		



Sub-Matrix: SURFACE WATER				Client sample ID		AW 010		AW 009		AW 023	
				Laboratory sample ID		PR1701248-009		PR1701248-010		PR1701248-013	
				Client sampling date / time		19-Feb-2017 00:00		20-Feb-2017 00:00		19-Feb-2017 00:00	
Parameter	Method	LOR	Unit	Result	MU	Result	MU	Result	MU		
Nonmetallic Inorganic Parameters - Continued											
Sulphate as SO4 2-	W-SO4-IC	5	mg/L	12.5	± 15.0%	13.9	± 15.0%	589	± 15.0%		
Total Phosphorus as P	W-PTOT-SPC	0.01	mg/L	0.062	± 20.0%	0.056	± 20.0%	<0.010	---		
Total Phosphorus as PO4 3-	W-PTOT-SPC	0.04	mg/L	0.191	± 20.0%	0.171	± 20.0%	<0.040	---		
Base neutralizing capacity (acidity) pH 8.3	W-ACID-PCT	0.15	mmol/L	<0.150	---	<0.150	---	<0.150	---		
Dissolved silicate as SiO3	W-SIO3-SPC	0.1	mg/L	52.4	± 20.0%	50.7	± 20.0%	0.260	± 20.0%		
Hydrogen carbonates (HCO3-)	W-CO2F-CC2	0	mg/L	83.4	± 12.0%	90.8	± 12.0%	0.38	± 12.0%		
Nitrate as N	W-NO3-SPC	0.06	mg/L	1.04	---	1.09	---	<0.060	---		
Nitrite as N	W-NO2-SPC	0.002	mg/L	0.0078	± 15.0%	0.0072	± 15.0%	<0.0020	---		
Orthophosphate as P	W-PO4O-SPC	0.01	mg/L	0.077	± 20.0%	0.068	± 20.0%	<0.010	---		
Oxygen Saturation	W-O2D-ELE	1	%	121	± 30.0%	164	± 30.0%	142	± 30.0%		
Sulfide as S2-	W-H2S-PHO	0.05	mg/L	<0.050	---	<0.050	---	<0.050	---		
Dissolved silicate as H2SiO3	W-SIO3-SPC	0.1	mg/L	53.8	---	52.1	---	0.266	---		
Total Carbon Dioxide as CO2	W-CO2F-CC2	0	mg/L	61.1	± 12.0%	67.6	± 12.0%	2.17	± 12.0%		
Base neutralizing capacity (acidity) pH 4.5	W-ACID-PCT	0.15	mmol/L	<0.150	---	<0.150	---	<0.150	---		
Free Carbon Dioxide as CO2	W-CO2F-CC2	0	mg/L	0.97	± 12.0%	2.07	± 12.0%	1.89	± 12.0%		
Suspended solids dried at 105 °C	W-TSS-GR	5	mg/L	<5.0	---	<5.0	---	<5.0	---		
Aggressive CO2	W-CO2F-CC2	0	mg/L	0.29	± 12.0%	1.10	± 12.0%	1.89	± 12.0%		
Acid neutralizing capacity (alkalinity) pH 4.5	W-ALK-PCT	0.15	mmol/L	1.37	± 12.0%	1.49	± 12.0%	<0.150	---		
Acid neutralizing capacity (alkalinity) pH 8.3	W-ALK-PCT	0.15	mmol/L	<0.150	---	<0.150	---	<0.150	---		
Total Metals / Major Cations											
Aluminium	W-METMSFX2	5	µg/L	27.5	± 10.0%	27.4	± 10.0%	<5.0	---		
Antimony	W-METMSFX1	1	µg/L	<1.0	---	<1.0	---	<1.0	---		
Arsenic	W-METMSFX1	1	µg/L	6.8	± 10.0%	7.0	± 10.0%	<1.0	---		
Barium	W-METMSFX2	1	µg/L	13.8	± 10.0%	14.8	± 10.0%	<1.0	---		
Beryllium	W-METMSFX1	0.2	µg/L	<0.20	---	<0.20	---	<0.20	---		
Bismuth	W-METMSFX2	1	µg/L	<1.0	---	<1.0	---	<1.0	---		
Boron	W-METAXFX1	0.01	mg/L	0.077	± 10.0%	0.091	± 10.0%	<0.010	---		
Cadmium	W-METMSFX1	0.5	µg/L	<0.50	---	<0.50	---	<0.50	---		
Calcium	W-METAXFX1	0.005	mg/L	20.2	± 10.0%	23.0	± 10.0%	0.0460	± 10.0%		
Chromium	W-METMSFX1	5	µg/L	<5.0	---	<5.0	---	<5.0	---		
Cobalt	W-METMSFX2	0.5	µg/L	<0.50	---	<0.50	---	<0.50	---		
Copper	W-METMSFX2	1	µg/L	<1.0	---	<1.0	---	<1.0	---		
Iron	W-METAXFX1	0.002	mg/L	0.103	± 10.0%	0.161	± 10.0%	0.0085	± 10.0%		
Lead	W-METMSFX1	1	µg/L	<1.0	---	<1.0	---	<1.0	---		
Lithium	W-METMSFX2	1	µg/L	15.4	± 10.0%	16.3	± 10.0%	<1.0	---		
Magnesium	W-METMSFX2	10	µg/L	4500	± 10.0%	5030	± 10.0%	<10	---		
Manganese	W-METMSFX2	0.5	µg/L	14.8	± 10.0%	21.0	± 10.0%	<0.50	---		
Mercury	W-HG-AFSFX	0.01	µg/L	<0.010	---	<0.010	---	<0.010	---		
Molybdenum	W-METMSFX1	1	µg/L	<1.0	---	<1.0	---	<1.0	---		
Nickel	W-METMSFX1	3	µg/L	<3.0	---	<3.0	---	<3.0	---		
Phosphorus	W-METAXFX1	0.01	mg/L	0.082	± 10.0%	0.090	± 10.0%	0.022	± 10.0%		
Potassium	W-METAXFX1	0.015	mg/L	3.69	± 10.0%	3.57	± 10.0%	0.089	± 10.0%		
Selenium	W-METMSFX1	1	µg/L	<1.0	---	<1.0	---	<1.0	---		
Silver	W-METMSFX2	1	µg/L	<1.0	---	<1.0	---	<1.0	---		
Sodium	W-METAXFX1	0.03	mg/L	16.8	± 10.0%	17.6	± 10.0%	0.089	± 10.0%		
Strontium	W-METMSFX2	1	µg/L	150	± 10.0%	164	± 10.0%	<1.0	---		
Tellurium	W-METMSFX2	5	µg/L	<5.0	---	<5.0	---	<5.0	---		
Thallium	W-METMSFX1	0.5	µg/L	<0.50	---	<0.50	---	<0.50	---		
Tin	W-METMSFX2	1	µg/L	<1.0	---	<1.0	---	<1.0	---		
Titanium	W-METMSFX2	5	µg/L	<5.0	---	<5.0	---	<5.0	---		
Uranium	W-METMSFX3	0.1	µg/L	0.37	± 10.0%	0.46	± 10.0%	<0.10	---		
Vanadium	W-METMSFX2	5	µg/L	6.5	± 10.0%	6.5	± 10.0%	<5.0	---		
Zinc	W-METMSFX2	2	µg/L	6.7	± 10.0%	10.4	± 10.0%	78.1	± 10.0%		
Dissolved Metals / Major Cations											



Sub-Matrix: SURFACE WATER				Client sample ID		AW 010		AW 009		AW 023	
				Laboratory sample ID		PR1701248-009		PR1701248-010		PR1701248-013	
				Client sampling date / time		19-Feb-2017 00:00		20-Feb-2017 00:00		19-Feb-2017 00:00	
Parameter	Method	LOR	Unit	Result	MU	Result	MU	Result	MU		
Dissolved Metals / Major Cations - Continued											
Aluminium	W-METAXFL1	0.01	mg/L	<0.010	---	<0.010	---	<0.010	---		
Antimony	W-METAXFL1	0.01	mg/L	<0.010	---	<0.010	---	<0.010	---		
Arsenic	W-METAXFL1	0.005	mg/L	<0.0050	---	<0.0050	---	<0.0050	---		
Barium	W-METAXFL1	0.0005	mg/L	0.0134	± 10.0%	0.0148	± 10.0%	<0.00050	---		
Beryllium	W-METAXFL1	0.0002	mg/L	<0.00020	---	<0.00020	---	<0.00020	---		
Boron	W-METAXFL1	0.01	mg/L	0.075	± 10.0%	0.089	± 10.0%	<0.010	---		
Cadmium	W-METAXFL1	0.0004	mg/L	<0.00040	---	<0.00040	---	<0.00040	---		
Calcium	W-METAXFL1	0.005	mg/L	17.2	± 10.0%	20.1	± 10.0%	0.0235	± 10.0%		
Chromium	W-METAXFL1	0.001	mg/L	<0.0010	---	<0.0010	---	<0.0010	---		
Cobalt	W-METAXFL1	0.002	mg/L	<0.0020	---	<0.0020	---	<0.0020	---		
Copper	W-METAXFL1	0.001	mg/L	<0.0010	---	<0.0010	---	<0.0010	---		
Hexavalent Chromium - Soluble	W-CR6-IC	0.4	µg/L	<0.40	---	<0.40	---	<0.40	---		
Iron	W-METAXFL1	0.002	mg/L	0.0094	± 10.0%	0.0088	± 10.0%	<0.0020	---		
Lead	W-METAXFL1	0.005	mg/L	<0.0050	---	<0.0050	---	<0.0050	---		
Lithium	W-METAXFL1	0.001	mg/L	0.0171	± 10.0%	0.0186	± 10.0%	<0.0010	---		
Magnesium	W-METAXFL1	0.003	mg/L	4.84	± 10.0%	5.75	± 10.0%	<0.0030	---		
Manganese	W-METAXFL1	0.0005	mg/L	<0.00050	---	<0.00050	---	<0.00050	---		
Molybdenum	W-METAXFL1	0.002	mg/L	<0.0020	---	<0.0020	---	<0.0020	---		
Nickel	W-METAXFL1	0.002	mg/L	<0.0020	---	<0.0020	---	<0.0020	---		
Phosphorus	W-METAXFL1	0.01	mg/L	0.054	± 10.0%	0.053	± 10.0%	<0.010	---		
Potassium	W-METAXFL1	0.015	mg/L	2.50	± 10.0%	2.52	± 10.0%	<0.015	---		
Selenium	W-METAXFL1	0.01	mg/L	<0.010	---	<0.010	---	<0.010	---		
Silver	W-METAXFL1	0.001	mg/L	<0.0010	---	<0.0010	---	<0.0010	---		
Sodium	W-METAXFL1	0.03	mg/L	14.0	± 10.0%	15.4	± 10.0%	0.038	± 10.0%		
Thallium	W-METAXFL1	0.01	mg/L	<0.010	---	<0.010	---	<0.010	---		
Vanadium	W-METAXFL1	0.001	mg/L	0.0050	± 10.0%	0.0052	± 10.0%	<0.0010	---		
Zinc	W-METAXFL1	0.002	mg/L	<0.0020	---	<0.0020	---	0.0547	± 10.0%		

If no sampling time is provided, the sampling time will default 00:00 on the date of sampling. If no sampling date is provided, delivery date in brackets without a time component will be displayed instead. Measurement uncertainty is expressed as expanded measurement uncertainty with coverage factor k = 2, representing 95% confidence level.

Key: LOR = Limit of reporting; MU = Measurement Uncertainty

The end of result part of the certificate of analysis

Brief Method Summaries

Analytical Methods	Method Descriptions
<i>Location of test performance: Bendlova 1687/7 Ceska Lipa Czech Republic 470 01</i>	
W-GAA-SCI	CSN 75 7611 chapter 4 Determination of gross alpha activity by measuring of evaporated residue in a mixture with ZnS (Ag) scintillator.
W-GBA-PRO	CZ_SOP_D06_07_361 (CSN 75 7612; Recommendation of SÚJB Measurement and assessment of the content of natural radionuclides in drinking water from public sources Rev. 1, SUJB 2012). Determination of gross beta activity by measuring of evaporated residue by means of proportional detector and determination of gross beta activity corrected for potassium 40 by calculation from measured values.
W-H2S-PHO	CZ_SOP_D06_07_015.A (CSN 83 0520:1978-part 16, CSN 83 0530:1980-part 31, SM 4500-S2- D) Determination of sum of sulfan and sulfide by spectrophotometry and determination of free sulfan by calculation from measured values.
<i>Location of test performance: Na Harfe 336/9 Prague 9 - Vysocany Czech Republic 190 00</i>	
W-ACID-PCT	CZ_SOP_D06_02_073 (CSN 75 73 72) Determination of base neutralizing capacity (acidity) by potentiometric titration.
W-ALK-PCT	CZ_SOP_D06_02_072 (CSN EN ISO 9963-1, CSN EN ISO 9963-2, CSN 75 7373, SM2320) Determination of acid neutralizing capacity (alkalinity) by potentiometric titration and determination of the carbonate hardness and determination of CO2 forms by calculation from measured values including the calculation of total mineralization.
W-BOD5-OXY	CZ_SOP_D06_02_077/CZ_SOP_D06_07_042 Determination of biochemical oxygen demand after n days (BODn)-by dilution method with allylthiourea addition (based on CSN EN 1899-1). CZ_SOP_D06_02_078/CZ_SOP_D06_07_043 Determination of biochemical oxygen demand after n days (BODn) by method for undiluted samples (based on CSN EN 1899-2).
W-CL-IC	CZ_SOP_D06_02_068 (CSN ISO 10304-1, CSN EN 16192) Determination of dissolved fluoride, chloride, nitrite, bromide, nitrate and sulphate by ion liquid chromatography and determination of nitrite nitrogen and nitrate nitrogen and sulfate sulfur by calculation from measured values including the calculation of total mineralization.



Analytical Methods	Method Descriptions
W-CO2F-CC2	CZ_SOP_D06_02_072 (CSN EN ISO 9963-1, CSN 75 7373) Determination of acid neutralizing capacity (alkalinity) by potentiometric titration and determination of the carbonate hardness and determination of CO ₂ forms by calculation from measured values including the calculation of total mineralization.
W-CODMN-SPC	CZ_SOP_D06_02_092 / CZ_SOP_D06_07_041 Determination of chemical oxygen demand using permanganate (CODMn) by titration (based on CSN ISO 8467, Z1).
W-COD-SPC	CZ_SOP_D06_02_076 Determination of chemical oxygen demand using dichromate (COD-Cr) by photometry (based on CSN ISO 15705) / CZ_SOP_D06_02_076.A / CZ_SOP_D06_07_040 Determination of chemical oxygen demand using dichromate (COD-Cr) by titration (based on CSN ISO 6060, CSN ISO 15705).
W-COL-SPC	CZ_SOP_D06_02_079 Determination of colour by spectrometry (based on CSN EN ISO 7887).
W-CON-PCT	CZ_SOP_D06_02_075 Determination of electrical conductivity (based on CSN EN 27 888, SM 2520 B, CSN EN 16192).
W-CR6-IC	CZ_SOP_D06_02_122 except chap. 10.2; 11.3.2; 11.5; 12.2.2; 15.5 (CSN EN 16192, EPA 7199, SM 3500-Cr) Determination of hexavalent chromium by ion chromatography with spectrophotometric detection and trivalent chromium determination by calculation from measured values.
W-HARD-FX	CZ_SOP_D06_02_001 (US EPA 200.7, ISO 11885, CSN EN 16192, US EPA 6010, SM 3120, samples prepared as per CZ_SOP_D06_02_J02 chap. 10.1 and 10.2) Determination of elements by atomic emission spectrometry with inductively coupled plasma and stoichiometric calculations of compounds concentration from measured values including the calculation of total mineralization and calculating the sum of Ca+Mg. Sample was fixed by nitric acid addition prior to analysis.
W-HG-AFSFX	CZ_SOP_D06_02_096 (US EPA 245.7, US EPA 1631, CSN EN ISO 178 52, CSN EN 16192, samples prepared as per CZ_SOP_D06_02_J02 chap. 10.1 and 10.2.) Determination of Mercury by Fluorescence Spectrometry. Sample was fixed by nitric acid addition prior to analysis.
W-METAXFL1	CZ_SOP_D06_02_001 (US EPA 200.7, ISO 11885, CSN EN 16192, US EPA 6010, SM 3120, samples prepared as per CZ_SOP_D06_02_J02 chap. 10.1 and 10.2) Determination of elements by atomic emission spectrometry with inductively coupled plasma and stoichiometric calculations of compounds concentration from measured values including the calculation of total mineralization and calculating the sum of Ca+Mg. Sample was filtered by microfilter with porosity 0.45 μm followed by nitric acid addition prior to analysis.
W-METAFX1	CZ_SOP_D06_02_001 (US EPA 200.7, ISO 11885, CSN EN 16192, US EPA 6010, SM 3120, samples prepared as per CZ_SOP_D06_02_J02 chap. 10.1 and 10.2) Determination of elements by atomic emission spectrometry with inductively coupled plasma and stoichiometric calculations of compounds concentration from measured values including the calculation of total mineralization and calculating the sum of Ca+Mg. Sample was fixed by nitric acid addition prior to analysis.
W-METMSFX1	CZ_SOP_D06_02_002 (US EPA 200.8, CSN EN ISO 17294-2, US EPA 6020A, samples prepared as per CZ_SOP_D06_02_J02 chap. 10.1 and 10.2) Determination of elements by mass spectrometry with inductively coupled plasma and stoichiometric calculations of compounds concentration from measured values including the calculation of total mineralization and calculating the sum of Ca+Mg. Sample was fixed by nitric acid addition prior to analysis.
W-METMSFX2	CZ_SOP_D06_02_002 (US EPA 200.8, CSN EN ISO 17294-2, US EPA 6020A, samples prepared as per CZ_SOP_D06_02_J02 chap. 10.1 and 10.2) Determination of elements by mass spectrometry with inductively coupled plasma and stoichiometric calculations of compounds concentration from measured values including the calculation of total mineralization and calculating the sum of Ca+Mg. Sample was fixed by nitric acid addition prior to analysis.
W-METMSFX3	CZ_SOP_D06_02_002 (US EPA 200.8, CSN EN ISO 17294-2, US EPA 6020A, samples prepared as per CZ_SOP_D06_02_J02 chap. 10.1 and 10.2) Determination of elements by mass spectrometry with inductively coupled plasma and stoichiometric calculations of compounds concentration from measured values including the calculation of total mineralization and calculating the sum of Ca+Mg. Sample was fixed by nitric acid addition prior to analysis.
W-NH4-SPC	CZ_SOP_D06_02_019 (CSN EN ISO 11732, CSN EN ISO 13395, CSN EN 16192, SM 4500-NO ₂ (-), SM 4500-NO ₃ (-)) Determination of sum of ammonium and ammonium ions, nitrite and the sum of nitrite and nitrate ions by discrete spectrophotometry and determination of nitrite, nitrate, ammonia, inorganic, organic, total nitrogen, free ammonia and dissociated ammonium ions by calculation from measured values including the calculation of total mineralization.
W-NING-CC	CZ_SOP_D06_02_019 (CSN EN ISO 11732, CSN EN ISO 13395, CSN EN 16192, SM 4500-NO ₂ (-), SM 4500-NO ₃ (-)) Determination of sum of ammonium and ammonium ions, nitrite and the sum of nitrite and nitrate ions by discrete spectrophotometry and determination of nitrite, nitrate, ammonia, inorganic, organic, total nitrogen, free ammonia and dissociated ammonium ions by calculation from measured values including the calculation of total mineralization.
W-NNO-SPC	CZ_SOP_D06_02_019 (CSN EN ISO 11732, CSN EN ISO 13395, CSN EN 16192, SM 4500-NO ₂ (-), SM 4500-NO ₃ (-)) Determination of sum of ammonium and ammonium ions, nitrite and the sum of nitrite and nitrate ions by discrete spectrophotometry and determination of nitrite, nitrate, ammonia, inorganic, organic, total nitrogen, free ammonia and dissociated ammonium ions by calculation from measured values including the calculation of total mineralization.
W-NO2-SPC	CZ_SOP_D06_02_019 (CSN EN ISO 11732, CSN EN ISO 13395, CSN EN 16192, SM 4500-NO ₂ (-), SM 4500-NO ₃ (-)) Determination of sum of ammonium and ammonium ions, nitrite and the sum of nitrite and nitrate ions by discrete spectrophotometry and determination of nitrite, nitrate, ammonia, inorganic, organic, total nitrogen, free ammonia and dissociated ammonium ions by calculation from measured values including the calculation of total mineralization.
W-NO3-SPC	CZ_SOP_D06_02_019 (CSN EN ISO 11732, CSN EN ISO 13395, CSN EN 16192, SM 4500-NO ₂ (-), SM 4500-NO ₃ (-)) Determination of sum of ammonium and ammonium ions, nitrite and the sum of nitrite and nitrate ions by discrete spectrophotometry and determination of nitrite, nitrate, ammonia, inorganic, organic, total nitrogen, free ammonia and dissociated ammonium ions by calculation from measured values including the calculation of total mineralization.
W-O2D-ELE	CZ_SOP_D06_07_044 (CSN EN ISO 5814) Determination of dissolved oxygen by electrochemical method.
W-PH-PCT	CZ_SOP_D06_02_105 Determination of pH by potentiometry (based on CSN ISO 10523, US EPA 150.1, CSN EN 16192, SM 4500-H(+)) B).



<i>Analytical Methods</i>	<i>Method Descriptions</i>
W-PO4O-SPC	CZ_SOP_D06_02_022 (CSN EN ISO 6878 SM 4500-P) Determination of orthophosphate by discrete spectrophotometry and determination of orthophosphate's phosphorus by calculation from measured values including the calculation of total mineralization.
W-PTOT-SPC	CZ_SOP_D06_02_080 Determination of total phosphorus by discrete spectrophotometry and determination of phosphorus as P2O5 and PO4 3- by calculation from measured values (based on CSN EN ISO 6878 and CSN ISO 15681-1).
W-SIO3-SPC	CZ_SOP_D06_02_109 Determination of dissolved silicates by discrete spectrophotometry and determination of H2SiO3 and total mineralization by calculation from measured values (CSN EN ISO 16264, EPA 370.1).
W-SO4-IC	CZ_SOP_D06_02_068 (CSN ISO 10304-1, CSN EN 16192) Determination of dissolved fluoride, chloride, nitrite, bromide, nitrate and sulphate by ion liquid chromatography and determination of nitrite nitrogen and nitrate nitrogen and sulfate sulfur by calculation from measured values including the calculation of total mineralization.
W-TSS-GR	CZ_SOP_D06_02_070 Determination of dry suspended solids and annealed suspended solids by gravimetry and determination of loss of ignition of suspended solids and total solids by calculation from measured values (glass microfibre filter of porosity 1,5 µm - Environmental Express) (based on CSN EN 872, CSN 757350)

A `*` symbol preceding any method indicates non-accredited test. In the case when a procedure belonging to an accredited method was used for non-accredited matrix, would apply that the reported results are non-accredited. Please refer to General Comment section on front page for information.

The calculation methods of summation parameters are available on request in the client service.