



REPORT

Review of H1 2021 Performance Reports

Iluka Resources Limited, Douglas Mine Pit 23 by-product disposal site

Submitted to:

Stuart Alexander

Iluka Resources Limited

Locked Bag 1001

Hamilton Vic 3000

Submitted by:

Golder Associates Pty Ltd

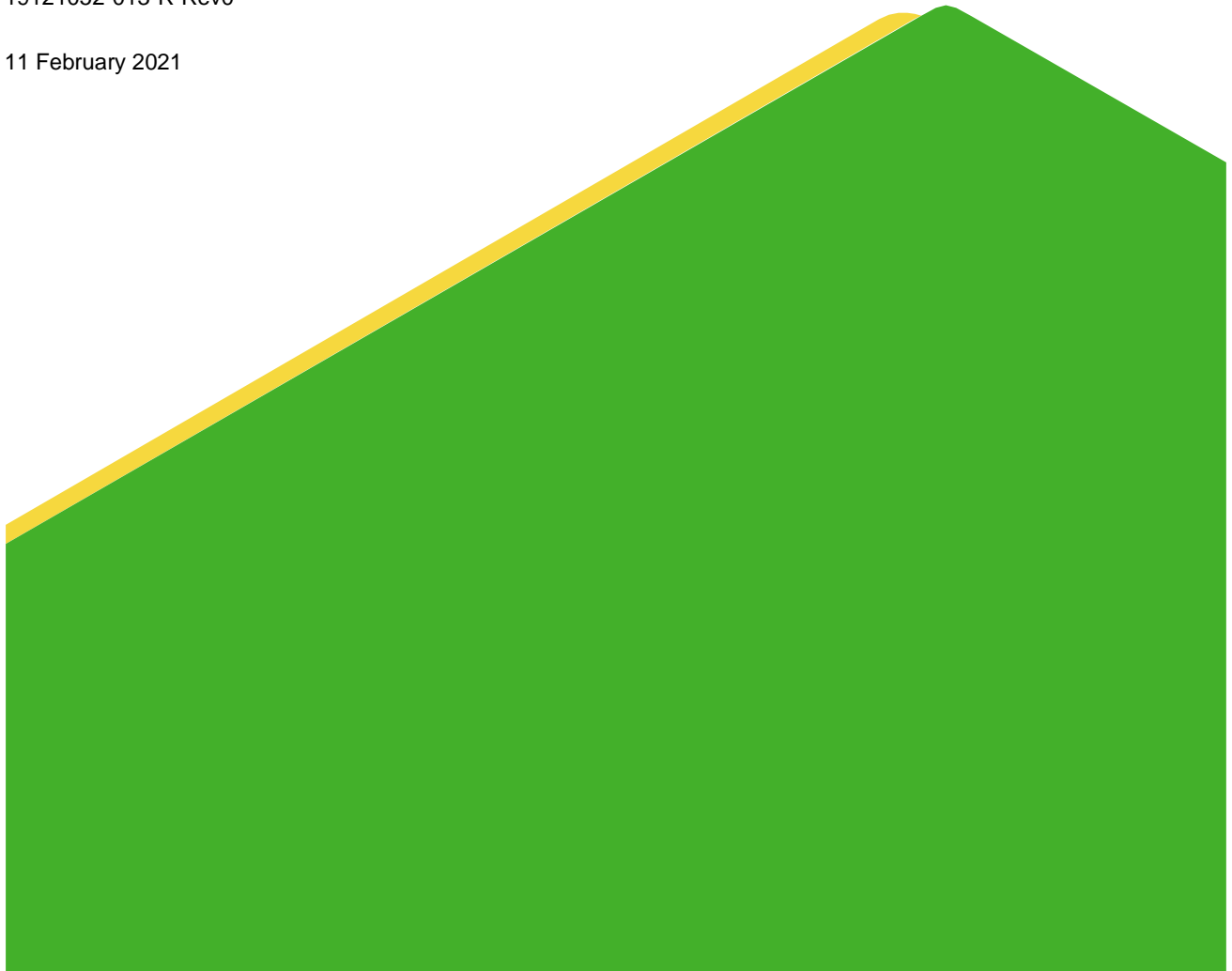
Building 7, Botanicca Corporate Park 570 – 588 Swan Street Richmond, Victoria 3121

Australia

+61 3 8862 3500

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1.0 INTRODUCTION

Golder Associates Pty Ltd (Golder) was engaged by Iluka Resources Limited (Iluka) to undertake an independent audit of the Performance Reports for the Pit 23 By-products Disposal Facility, located in the municipality of the Horsham Rural City in the Kanagulk area (the site). The independent audit (audit) is a requirement of Planning Permit 15-105 (the planning permit), issued by Horsham Rural City Council (Council). The Performance Reports, prepared by Iluka, provide a summary of the waste acceptance, monitoring and management undertaken at the site during the half year ended 30 June 2021. The two Performance Reports prepared by Iluka for H1 2021 are as follows:

- *Environmental Management Plan and Rehabilitation Performance Report (EMP Performance Report) H1 2021 (Iluka, 2021c); and,*
- *Incoming Waste Monitoring Plan Performance Report (IWMP Performance Report) H1 2021 (Iluka, 2021d).*

The EMP Performance Report is audited against the reporting requirements listed in Section 12 of Iluka's *Pit 23 Environmental Management Plan Rev 5.1 (EMP)* (Iluka, 2020). Section 13.1.2 of the EMP requires that:

"... the selected auditor will be required to audit EMP and Rehabilitation Performance Report to confirm its completeness and accuracy in terms of compliance of the implementation of the plan and compliance with established standards and limits.

In addition to these audit functions the selected auditor will be invited to recommend amendments to the EMP to ensure future compliance."

Similarly, the IWMP Performance Report requires in Section 5 of Iluka's *Pit 23 Incoming Waste Monitoring Plan Rev 5 (IWMP)* that *"Reports will be provided to a suitably qualified auditor who will complete an audit of the data provided and compliance with this IWMP"* (Iluka, 2019).

The H1 2021 Performance Reports are provided in Appendix C (IWMP) and Appendix D (EMP & RVMP).

The Performance Reports cover the period from 1 January 2021 to 30 June 2021.

2.0 PLANNING PERMIT REQUIREMENTS

Regarding the audit of the IWMP and EMP Performance Reports, the relevant conditions of the planning permit include:

14 (e): annual auditing of records to verify compliance with the requirements of the Incoming Waste Monitoring Plan (IWMP).

20: The annual performance report must be reviewed by an independent suitably qualified person with expertise in risk management plans in the context of mines and quarries, and is an environmental auditor appointed under the EP Act 1970.

31: The permit holder must submit an annual performance statement (within the wider EMP Annual Report).

42: The permit holder must prepare an EMP and Rehabilitation performance review report covering its compliance requirements under the various sub-components of the EMP and R&VMP [Rehabilitation and Vegetation Management Plan] for provision to a suitably qualified environmental auditor as agreed by the Responsible Authority annually or less frequently as agreed to in writing, by the Responsible Authority.

43: The environmental auditor must review the EMP and Rehabilitation performance review report and provide conclusions on the report's content against its key sub-components, and recommendations for any required amendments to the plans ('auditor's review').

2.1 Methodology

The Performance Reports were audited against the relevant requirements of Section 5 of the IWMP and Section 12 of the EMP. Additional documentation was sought from Iluka as needed to provide evidence of compliance with relevant sections of the IWMP and EMP.

Due to the limited activities occurring at the site, a site inspection was not conducted as part of the audit. Assessment was therefore limited to desktop review of the Performance Reports and supporting documentation.

The recommendations of the previous Performance Reports (2017-2021) were also considered and a review of Iluka's response to these recommendations is provided in Section 8.0.

The audit of the IWMP Performance Report, EMP Performance Report and actions undertaken regarding previous audit report recommendations assessed compliance according to:

- 'Compliant'. The information indicated that the relevant requirement of the planning permit or plan had been met.
- 'Not Compliant'. The information indicated that the relevant requirement of the planning permit or plan had not been met.
- 'Not Applicable'. The relevant requirement was not applicable due to the operational status of the plant or the Auditor was unable to determine compliance due to the requirement being outside the scope of the audit.

2.2 Incoming Waste Monitoring Plan

The IWMP has been prepared to satisfy the requirements of Condition 14 of the Planning permit, namely:

14. Within 90 days of the commencement of this permit operating, an Incoming Waste Monitoring Plan (IWMP) must be submitted to the satisfaction of the responsible authority and the Department of Health and Human Services for approval by the responsible authority. Three copies of the IWMP must be submitted to the responsible authority. When approved by the responsible authority the IWMP will be endorsed and it will then form part of this permit. The IWMP must provide for:

- a. A monitoring and reporting system for ensuring that materials disposed of to Pit 23 are limited to those permitted under the conditions of this permit;*
- b. Recording of the origin, per load weight and radioactive properties of each incoming load;*
- c. Monitoring to ensure all vehicles transporting waste have fully secured and contained loads and that all waste loads have been transported in compliance with licensed requirements under the Radiation Act 2005;*
- d. Records of any transport incidents or spills and remedial actions taken in the event of such incidents; and*
- e. Annual auditing of records to verify compliance with the requirements of the IWMP.*

This audit has reviewed the IWMP Performance Report against relevant planning permit criteria, and Section 6 of the IWMP.

2.3 Environmental Management Plan

The EMP has been prepared by Iluka to provide a framework for the management and monitoring of disposal operations at Pit 23. The EMP outlines:

- The operational, environmental and legal context for the permitted development;
- The operational methods to be used;
- Environmental issues that could compromise environmental performance if not managed appropriately; and,
- The monitoring program to be used for assessing the environmental performance and impact of Pit 23.

This audit has reviewed the EMP Performance Report against relevant planning permit criteria, and Section 12 and 13 of the EMP.

Previous Auditor recommendations to review the EMP have been considered and a revised EMP (Revision 5.1) developed, which has been adopted for the monitoring conducted in 2021 considered by this audit.

2.4 Rehabilitation and Vegetation Management Plan

The *Rehabilitation and Vegetation Management Plan 2017* (RVMP) has been prepared by Iluka to provide a detailed management framework for rehabilitation of Pit 23. The RVMP outlines:

- The end use and rehabilitation objectives for the subject land;
- The methods to be used for rehabilitation and revegetation;
- Key issues that may compromise rehabilitation outcomes; and,
- Completion criteria and further monitoring post completion.

In relation to the audit of the *Rehabilitation and Vegetation Management Plan 2017*, the relevant planning permit requirements are:

42: The permit holder must prepare an EMP and Rehabilitation performance review report covering its compliance requirements under the various sub-components of the EMP and RVMP for provision to a suitably qualified environmental auditor as agreed by the Responsible Authority annually or less frequently as agreed to in writing, by the Responsible Authority.

43: The environmental auditor must review the EMP and Rehabilitation performance review report and provide conclusions on the report's content against its key sub-components, and recommendations for any required amendments to the plans ('auditor's review').

As of the writing of this audit, Pit 23 was still accepting material and as such, rehabilitation or revegetation has not yet been undertaken by Iluka. There are therefore no findings regarding the RVMP.

3.0 ENVIRONMENTAL AUDITOR

This audit review was undertaken by Bruce Dawson who is appointed as an Environmental Auditor (Industrial Facilities) under the *Environment Protection Act 2017*.

Bruce has over 30 years' experience in environmental management issues, encompassing industrial planning and assessment, auditing and policy development. Bruce joined Golder in 2010 as a Principal Environmental Consultant leading the development of performance assurance and industry sustainability services in the Melbourne office.

Bruce has extensive experience in assessing environmental performance and impact and associated strategies for effective management of statutory obligations in waste management, industrial operations, land development and infrastructure development.

Bruce was previously employed with the Environment Protection Authority Victoria (EPA) for 24 years. He was part of EPA's executive leadership team for 8 years, providing a key role in leading operational and policy program areas and lead implementation of EPA's environmental audit program.

Bruce undertakes auditing and assessment of landfill design and construction and risks associated with landfill gas migration. Bruce has extensive experience in development of environmental management plans and environmental policy to reduce environmental impact and compliance risks.

In undertaking this review, Bruce was supported by the following Golder personnel:

- Stephen Makin, Senior Hydrogeologist,
- Coen Romalis, Environmental Scientist.

4.0 SITE LOCATION

The Douglas Mineral Sands Mine (shown in Figure 1) is located in the municipality of the Horsham Rural City in the Kanagulk area. Iluka produces a number of by-products from its heavy mineral processing operation at its mineral separation plant (MSP) in Hamilton. The by-products produced from this processing are transported by truck from the Hamilton site to the Douglas Mine Site, where it is then disposed of in a mining void known as Pit 23. Pit 23 is shown in Figure 1. The IWMP and EMP apply management controls specifically to Pit 23 and its associated operations.

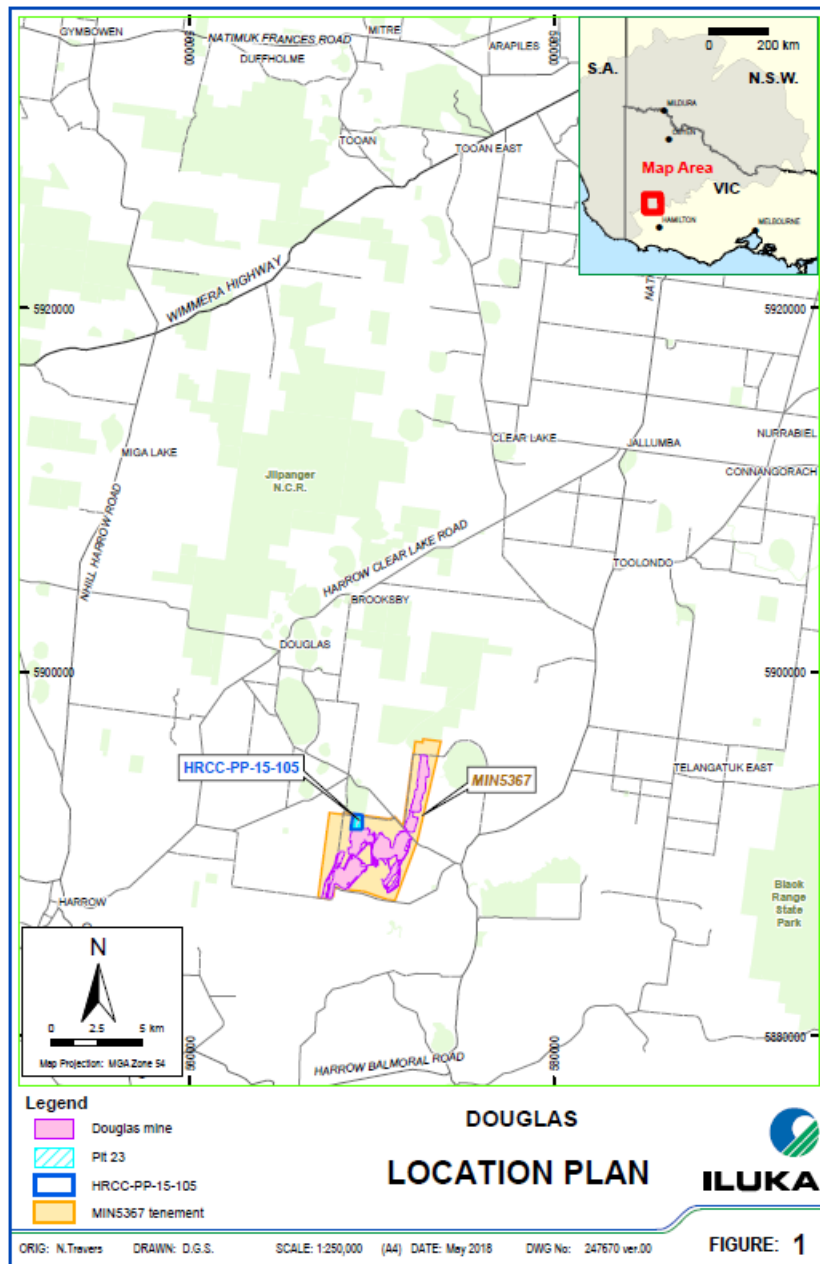


Figure 1: Site Location Plan

5.0 INCOMING WASTE MONITORING PLAN PERFORMANCE REPORT

The Auditor’s review of the IWMP Performance Report is attached as Appendix C. The review found that the Performance Report is in accordance with Section 6 of the IWMP.

6.0 ENVIRONMENTAL MANAGEMENT PLAN AND REHABILITATION PERFORMANCE REPORT

The Auditor’s review of the EMP Performance Report is attached as Appendix D. The review found that the Performance Report is generally in accordance with Section 12 of the EMP. The Auditor makes the following recommendations:

- Considering the variation in groundwater flow direction, it is recommended to screen analysis results from wells BW36A and WRK300 against the groundwater quality objectives applied to compliance wells.

- Future revisions of the EMP should reflect regulatory changes associated with the introduction of the *Environment Protection Act 2017* (the Act) from 1 July 2021. Under the Act, the State Environment Protection Policy (SEPP Waters) was superseded by the Environment Reference Standard (ERS). However, the elements of the SEPP referenced in the EMP have been maintained in the ERS, so the change does not require changes to the monitoring and assessment program, and updates may be made at the next required 3-year interval.

7.0 REHABILITATION AND VEGETATION MANAGEMENT PLAN

The RVMP reporting requirements are listed in Section 2.4 of this report. Iluka's Performance Report for the RVMP was included in the EMP Performance Report.

Due to the current and continued operation of Pit 23, no actions required by the RVMP were undertaken during the H1 2021 reporting period.

8.0 OTHER PREVIOUS AUDIT FINDINGS

The audit of 2017 Mineral Sands By-product disposal reports (AECOM, 2017) was the first audit of the IWMP and EMP undertaken. Further audits were undertaken for the 2018, H1 2019, H2 2019, H1 2020 and H2 2020 reporting periods by Golder (Golder, 2018; Golder, 2019; Golder, 2020a; Golder, 2020b; Golder, 2021). Iluka has responded to recommendations in the 2018, 2019 and 2020 reporting periods. Outstanding recommendations from subsequent reports are provided below.

Table 1: Response to previous audit recommendations

Previous Audit Recommendation	Observation	Action Completed in H1 2021?	Recommendations
General Recommendations			
<p>Golder 2021</p> <p>QAQC data quality validation should be included in the performance report.</p>	<p>QAQC measures for sampling and laboratory analysis are given in Section 7.5.6 of the revised EMP. QAQC data should be evaluated promptly after sampling to give confidence in the data and enable any issues to be addressed.</p>	<p>Laboratory reports were supplied, indicating some blank and duplicate samples were analysed. For the H1 2021 reporting period, Golder has prepared QAQC data validation in Table A below.</p> <p>Iluka has advised that the QAQC data validation will be provided in the Q2 2021 report.</p>	<p>N/A</p>

9.0 REFERENCES

AECOM Audit of 2017 Mineral Sands By-product Disposal Annual Reports.

Golder Associates, 2018. Audit of 2018 Mineral Sands By-product Disposal EMP and IWMP Annual Reports (19121052-001-Rev0).

Golder Associates, 2019. Audit of H1 2019 Mineral Sands By-product Disposal EMP and IWMP Annual Reports (19121052-003-Rev1).

Golder Associates, 2020a. Audit of H2 2019 EMP and IWMP Performance Reports, Douglas Mine Pit 23 by-product disposal site (19121052-006-Rev1).

Golder Associates, 2020b. Audit of H1 2020 EMP and IWMP Performance Reports, Douglas Mine Pit 23 by-product disposal site (19121052-009-Rev0).

Golder Associates, 2020c. Review of Updated EMP and IWMP (19121052-004-L-Rev0).

Golder Associates, 2021a. Audit of H2 2020 Performance Reports, Iluka Resources Limited, Douglas Mine Pit 23 by-product disposal site (19121052-011-Rev0).

Iluka Resources Ltd, 2016. Radiation Management Plan- Murray Basin Operations (Rev2) August 2016.

Iluka Resources Ltd, 2017. Rehabilitation and Vegetation Management Plan (Rev3) 12 April 2017.

Iluka Resources Ltd, 2019. Incoming Waste Monitoring Plan (Rev 5). (UDOCS 0058-1414587248-851) 29 October 2019.

Iluka Resources Ltd, 2020. Environment Management Plan (Rev 5.1) (UDOCS 0058-1414587248-1228) 14 August 2020.

Iluka Resources Ltd, 2021a. Planning Permit 15-105, EMP & Rehabilitation Performance Report – H2 2020. (UDOCS 0058-1414587248-1098, Final Rev0).

Iluka Resources Ltd, 2021b. Planning Permit 15-105, Incoming Waste Monitoring Plan Report H2 – 2020 (UDOCS 0090-426461582-2341, Final Rev0).

Iluka Resources Ltd, 2021c. Planning Permit 15-105, EMP & Rehabilitation Performance Report – H1 2021. (UDOCS 0058-1414587248-2780, Final Rev0).

Iluka Resources Ltd, 2021d. Planning Permit 15-105, Incoming Waste Monitoring Plan Report H1 – 2021 (UDOCS 0090-426461582-2769, Final Rev0).

Iluka Analytic Sampling Procedures

Analytical - Analysis using XRF 11/6/15.

Analytical - Moisture Determination 10/9/15.

Analytical - Sample Preparation - Fusion of Heavy Mineral 4/12/08.

Analytical - Sample Preparation - Pulverising Grinding Samples 18/10/14.

Analytical - Sample Preparation - Riffle Splitting 23/10/14.

Analytical - XRF QA 23/7/18.

High Volume Air Sampler, Sampling Procedure 26/7/17.

Trucking Procedures

Work Instruction for Loading of Monazite & Ilmenite CL product at Iluka MSP V8 Kalari P/L 28/09/2015.

Emergency Response Procedure for Non Conductor Magnetics V2 Kalari P/L 8/02/2011.

Work Instruction for unloading MSP rejects at Pit 23 V2 Kalari P/L 13/08/2015.

10.0 IMPORTANT INFORMATION

Your attention is drawn to the document titled - "Important Information Relating to this Report", which is included in Appendix E of this report. The statements presented in that document are intended to inform a reader of the report about its proper use. There are important limitations as to who can use the report and how it can be used. It is important that a reader of the report understands and has realistic expectations about those matters. The Important Information document does not alter the obligations Golder Associates has under the contract between it and its client.

11.0 CLOSING


If you have any queries about this report, please contact Bruce Dawson on 03 8862 3774 or at bdawson@golder.com.au.

Signature Page

Golder Associates Pty Ltd



Coen Romalis
Environmental Scientist



Bruce Dawson
Principal Environmental Consultant

CER-SLM/BED/cer

A.B.N. 64 006 107 857

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Tables

Table A - Duplicate and Blank Analytical Results - H1 2021

Sample Description			Field Blank	Field Blank	Field Blank (Decant)	GW_02 (Decant)	Blind	RPD	GW_04A (Decant)	Blind (Decant)	RPD
Sample Collection Method			Received	Received	Received	Received	Received		Received	Received	
Sample Taken Date/Time			19/01/2021 08:59am	19/05/2021 08:59am	16/06/2021 08:59am	19/05/2021 10:40am	19/05/2021 08:59am		16/06/2021 11:25am	16/06/2021 08:59am	
Lab. Received Date/Time			21/01/2021 09:00am	20/05/2021 09:00am	17/06/2021 09:00am	20/05/2021 09:00am	20/05/2021 09:00am		17/06/2021 09:00am	17/06/2021 09:00am	
EML Lab. No.			EML-1079	EML-8803	EML-10446	EML-8800	EML-8804		EML-10443	EML-10445	
Analyte	Unit	Method									
Total Dissolved Solids @ 180C	mg/L	1001G	<20	<20	<20	4200	4400	4.7	4900	4800	2.1
Conductivity at 25C	uS/cm	COND-M	2.7	2.8	2.3	7600	7500	1.3	8500	8500	0.0
pH		PH	6.4	5.8	6.2	5.7	5.6	1.8	6.2	6.2	0.0
Total Alkalinity as CaCO3	mg/L	ALK	<1	<1	<1	30	29	3.4	51	51	0.0
Bicarbonate Alkalinity as CaCO3	mg/L	ALK	<1	<1	<1	30	29	3.4	51	51	0.0
Carbonate Alkalinity as CaCO3	mg/L	ALK	0	0	0	0	0	0.0	0	0	0.0
Hydroxide Alkalinity as CaCO3	mg/L	ALK	0	0	0	0	0	0.0	0	0	0.0
Sulphate as SO4	mg/L	SO4	<2	<2	<2	420	390	7.4	380	370	2.7
Ammonia Nitrogen as N	mg/L	NH3-LL-DA	<0.004	<0.004	<0.004	0.045	0.049	8.5	0.036	0.030	18.2
Nitrate Nitrogen as N	mg/L	TON-HR-DA	<0.005	<0.005	<0.005	6.2	6.3	1.6	4.2	4.2	0.0
Nitrite Nitrogen as N	mg/L	TON-HR-DA	<0.001	<0.001	<0.001	0.021	0.021	0.0	0.009	0.010	10.5
Orthophosphate as P	mg/L	ORTP-LL-DA	<0.004	<0.004	<0.004	<0.004	<0.004	0.0	0.004	0.005	22.2
Chloride as Cl	mg/L	CHLORIDE	<1	<1	<1	2100	2200	4.7	2500	2500	0.0
Fluoride as F	mg/L	FLUORIDE	<0.1	<0.1	<0.1	<0.1	<0.1	0.0	0.21	0.21	0.0
Calcium as Ca	mg/L	CATIONS	0.39	<0.03	0.26	22	23	4.4	120	130	8.0
Magnesium as Mg	mg/L	CATIONS	0.06	<0.02	<0.02	140	140	0.0	150	160	6.5
Sodium as Na	mg/L	CATIONS	0.14	0.29	0.51	1300	1300	0.0	1400	1400	0.0
Potassium as K	mg/L	CATIONS	<0.02	0.02	<0.02	26	26	0.0	14	13	7.4
Total Cations	meq/L	MISC	0.03	<0.02	<0.05	71	70	1.4	78	79	1.3
Total Anions	meq/L	MISC	<0.01	<0.1	<0.05	70	70	0.0	79	78	1.3
Total Aluminium as Al	mg/L	ECO-METALS	<0.01	<0.01	<0.01	0.01	0.01	0.0	<0.01	<0.01	0.0
Total Antimony as Sb	mg/L	ECO-METALS	<0.001	<0.001	<0.001	<0.001	<0.001	0.0	<0.001	<0.001	0.0
Total Arsenic as As	mg/L	ECO-METALS	<0.001	<0.001	<0.001	<0.001	<0.001	0.0	0.002	0.002	0.0
Total Barium as Ba	mg/L	ECO-METALS	<0.001	<0.001	<0.001	0.032	0.033	3.1	0.048	0.045	6.5
Total Beryllium as Be	mg/L	ECO-METALS	<0.001	<0.001	<0.001	<0.001	<0.001	0.0	<0.001	<0.001	0.0
Total Boron as B	mg/L	ECO-METALS	0.05	0.03	0.04	0.09	0.09	0.0	0.39	0.40	2.5
Total Cadmium as Cd	mg/L	ECO-METALS	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	0.0	<0.0002	<0.0002	0.0
Total Chromium as Cr	mg/L	ECO-METALS	<0.001	<0.001	<0.001	<0.001	<0.001	0.0	0.002	0.002	0.0
Total Cobalt as Co	mg/L	ECO-METALS	<0.001	<0.001	<0.001	0.018	0.018	0.0	0.005	0.005	0.0
Total Copper as Cu	mg/L	ECO-METALS	0.020	0.015	0.016	<0.001	<0.001	0.0	0.001	0.001	0.0
Total Iron as Fe	mg/L	ECO-METALS	<0.01	<0.01	<0.01	<0.01	<0.01	0.0	0.02	0.02	0.0
Total Lead as Pb	mg/L	ECO-METALS	<0.001	<0.001	<0.001	<0.001	<0.001	0.0	<0.001	<0.001	0.0
Total Manganese as Mn	mg/L	ECO-METALS	<0.001	<0.001	<0.001	0.420	0.44	4.7	0.060	0.065	8.0
Total Molybdenum as Mo	mg/L	ECO-METALS	<0.001	<0.001	<0.001	<0.001	<0.001	0.0	<0.001	<0.001	0.0
Total Nickel as Ni	mg/L	ECO-METALS	<0.001	<0.001	<0.001	0.005	0.005	0.0	0.008	0.007	13.3
Total Selenium as Se	mg/L	ECO-METALS	<0.001	<0.001	<0.001	0.002	0.002	0.0	0.013	0.013	0.0
Total Silver as Ag	mg/L	ECO-METALS	<0.001	<0.001	<0.001	<0.001	<0.001	0.0	<0.001	<0.001	0.0
Total Strontium as Sr	mg/L	ECO-METALS	<0.001	<0.001	<0.001	0.49	0.50	2.0	1.5	1.5	0.0
Total Thallium as Tl	mg/L	ECO-METALS	<0.001	<0.001	<0.001	<0.001	<0.001	0.0	<0.001	<0.001	0.0
Total Thorium as Th	mg/L	ECO-METALS	<0.002	<0.002	<0.002	<0.002	<0.002	0.0	<0.002	<0.002	0.0
Total Tin as Sn	mg/L	ECO-METALS	<0.001	<0.001	<0.001	<0.001	<0.001	0.0	<0.001	<0.001	0.0
Total Titanium as Ti	mg/L	ECO-METALS	<0.001	<0.001	<0.001	<0.001	<0.001	0.0	<0.001	<0.001	0.0
Total Uranium as U	mg/L	ECO-METALS	<0.001	<0.001	<0.001	<0.001	<0.001	0.0	<0.001	<0.001	0.0
Total Vanadium as V	mg/L	ECO-METALS	<0.001	<0.001	<0.001	<0.001	<0.001	0.0	0.002	0.003	40.0
Total Zinc as Zn	mg/L	ECO-METALS	0.006	0.004	0.005	0.010	0.010	0.0	0.036	0.031	14.9
Total Mercury as Hg	mg/L	ECO-METALS	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	0.0	<0.0001	<0.0001	0.0

APPENDIX A

**IWMP Performance Report
Review**

Table 2: IWMP Performance Report Audit

Source & Requirement	Observations (H1 2021)	Compliance	Recommendations
<p>Planning Permit Clause 14. Within 90 days of the commencement of this permit operating, an Incoming Waste Monitoring Plan (IWMP) must be submitted to the satisfaction of the responsible authority and the Department of Health and Human Services for approval by the responsible authority. Three copies of the IWMP must be submitted to the responsible authority. When approved by the responsible authority the IWMP will be endorsed and it will then form part of this permit. The IWMP must provide for:</p>		Compliant	
<p>a) A monitoring and reporting system for ensuring that materials disposed of to Pit 23 are limited to those permitted under the conditions of this permit</p>	<p>Section 3.1 of the IWMP Performance Report provides a spreadsheet summary record stating material to be disposed of is permitted.</p>	Compliant	
<p>b) Recording the origin, per load weight and radioactive properties of each incoming load.</p>	<p>Section 3.1 of the IWMP Performance Report provides a spreadsheet summary recording the origin and load weight of each material load.</p> <p>Section 3.2 of the IWMP Performance Report provides a summary of the radioactive properties of each material load.</p> <p>The IWMP states that a total of 760.4 tonnes (t) of dry rejects were accepted from the MSP into Pit 23 during the H1 2021 reporting period.</p>	Compliant	

Source & Requirement	Observations (H1 2021)	Compliance	Recommendations
c) Monitoring to ensure all vehicles transporting waste have fully secured and contained loads and that all waste loads have been transported in compliance with licensed requirements under the Radiation Act 2005;	Work instruction for <i>Loading of Monazite and Ilmenite CL product at the Iluka MSP- Hamilton site</i> identifies that load are to be secured and contained.	Compliant	
d) Records of any transport incidents or spills and remedial actions taken in the event of such incidents.	Section 3.3.1 of the IWMP Performance Report states that no transport incidents or spillages occurred over H1 2021 period.	Compliant	
e) Annual auditing of records to verify compliance with the requirements of the IWMP	This audit fulfils this requirement.	Compliant	
Amendments to the IWMP must be to the satisfaction of the responsible authority and Department of Health and Human Services and must only be made on written approval of the responsible authority.		NA	
IWMP Section 2 Acceptance Criteria			
<p>Source Site. Disposal into Pit 23 is restricted to materials from the following source sites;</p> <ul style="list-style-type: none"> ■ the Hamilton MSP; ■ the Douglas mineral sands mine; ■ the Kulwin mineral sands mine site (located 28 kilometres east of Ouyen); 	Section 3.1 states that all deposits into Pit 23 were sourced from the Hamilton MSP.	Compliant	

Source & Requirement	Observations (H1 2021)	Compliance	Recommendations
<ul style="list-style-type: none"> ■ the Woonack Rownack and Pirro mineral sands mine site (located 20 km southwest of Ouyen); ■ Facilities operated by transport contractors associated with the Port of Portland including the heavy mineral concentrate (HMC) storage and train loading facilities at Hopetoun; and ■ storage facilities in Portland used for storage of the Hamilton MSP products 			
<p>Radioactivity. Disposal to Pit 23 is restricted to materials that contain and are contaminated with naturally occurring radioactive material (NORM), which are:</p> <ul style="list-style-type: none"> ■ mineral by-products from the Hamilton MSP, including gypsum produced at the MSP; ■ used Bag-house dust filter bags (used filter bags); and ■ concrete or steel from the sites listed in Section 2.1 above. 	<p>Section 3.2 of the IWMP Performance Report provides a summary of the radioactive properties of each material load.</p> <p>Dry circuit rejects constituted 100% of deposits into Pit 23 during the reporting period.</p>	Compliant	
<p>By-products for disposal. The Hamilton MSP by-products to disposed into Pit 23 are;</p> <ul style="list-style-type: none"> ■ Wet circuit rejects ■ Dry circuit rejects; ■ Gypsum 	<p>During the H1 2021 reporting period, only dry circuit rejects were disposed into Pit 23.</p>	Compliant	

Source & Requirement	Observations (H1 2021)	Compliance	Recommendations
<ul style="list-style-type: none"> ■ Bag hose dust filter bags ■ Contaminated concrete and steel 			
<p>Material Description and physical form. Import for disposal into Pit 23 is restricted to the following materials:</p> <ul style="list-style-type: none"> ■ non-liquid waste by-products associated with or sourced though mineral sands processing undertaken at the Hamilton MSP containing or contaminated with NORM; ■ used dust filter bags from the Hamilton MSP containing or contaminated with NORM; and ■ NORM-contaminated concrete and steel associated with plant and infrastructure from the sites listed in Section 2.1 above 	<p>During the H1 2021 reporting period, only dry circuit rejects were disposed into Pit 23.</p>	<p>Compliant</p>	
<p>IWMP Section 3. Monitoring</p>			
<p>In accordance with heavy vehicle mass management requirements under Chain of Responsibility legislation administered by the Department of Economic Development, Jobs, Transport and Resources (DEDJTR), the weight of every truck load of material to be disposed of will be measured at the point of loading, or the nearest possible location, prior to transport to the Douglas mine site. The load weight shall be measured by one of the following means;</p>	<p>Section 3.1 of the IWMP Performance Report lists the load weight of each delivery to Pit23.</p> <p>Iluka has advised that a public commercial calibrated weighbridge is used to weigh material disposed into Pit23.</p>	<p>Compliant</p>	

Source & Requirement	Observations (H1 2021)	Compliance	Recommendations
<ul style="list-style-type: none"> ■ calibrated weighbridge ■ calibrated on-board weighing systems (such as airbag weightometers) ■ any other mass measurement system or methodology approved by the DEDJTR for demonstrating compliance with heavy vehicle mass management requirement 			
<p>For each individual load, the following information shall be recorded in an electronic data management system:</p> <ul style="list-style-type: none"> ■ load weight ■ material description ■ radioactive properties, being <ul style="list-style-type: none"> ■ concentrations of uranium and thorium in MSP by-products based on the weekly average of the by products produced ■ measured concentrations of uranium and thorium in used filter bags, concrete and steel 	<p>Section 3.1 of the IWMP Performance Report provides information on load weight and material description.</p> <p>Section 3.2 of the IWMP Performance Report provides a summary of the radioactive properties of each material load, which include both Thorium and Uranium.</p>	Compliant	
IWMP Section 4 Control of access for disposal			

Source & Requirement	Observations (H1 2021)	Compliance	Recommendations
<p>Prior to transport of materials to be disposed of in Pit 23, vehicles will be checked:</p> <ul style="list-style-type: none"> ■ for compliance with the ARPANSA Code of Practice for Safe Transport of Radioactive Material; and ■ to confirm and ensure loads are fully secured and contained. <p>Deliveries must enter the site via Elliotts Road and the mine access road shown on the site plan (Figure 2).</p> <p>All vehicles entering the site, including those carrying materials for disposal to Pit 23, must be authorised and must pass through a boom gate that may only be opened with a swipe card issued to authorised personnel or by an authorised Iluka employee at the site office. Each vehicle must then stop at the site office to:</p> <ul style="list-style-type: none"> ■ provide a record of the load being delivered (origin, material type, load weight); and ■ comply with any site-specific requirements that apply for entering the site. <p>Vehicles carrying materials for disposal for which the required information is not provided or is not in conformance with the permitted use will not be allowed to dispose of their loads to Pit 23.</p>	<p>Work instruction for Loading of Monazite and Ilmenite CL product at the Iluka MSP- Hamilton site reviewed. Deliveries were not observed as part of this audit.</p> <p>Figure 2 displays single access point from Elliotts Road and truck wash circuit.</p> <p>Load record is provided for each delivery in Section 3.1.</p>	<p>Compliant</p>	

Source & Requirement	Observations (H1 2021)	Compliance	Recommendations																											
IWMP Section 5 Monitoring Program																														
<p>In order to confirm the presence of NORM within the MSP by-products, Table 2 in the IWMP specifies the samples collected and quantity measurements made:</p> <p>Table 2: MSP by-product sampling and quantity measurement</p> <table border="1" data-bbox="159 544 840 1066"> <thead> <tr> <th></th> <th>Sampling Method</th> <th>Quantity</th> </tr> </thead> <tbody> <tr> <td colspan="3">Wet Circuits Rejects</td> </tr> <tr> <td>FPC Sand Tailing</td> <td>Automatic Sampler within plant producing daily composite from frequent cuts</td> <td>Continuous flow and density measurement to provide daily solids tonnage</td> </tr> <tr> <td>FPC Fines</td> <td>Manual sample from thickener underflow collected daily</td> <td>Continuous density measurement and volume measurement from positive displacement pump operation to provide daily solids tonnage</td> </tr> <tr> <td>ZWC Sand Tailings</td> <td>Automatic Sampler within plant producing daily composite from frequent cuts</td> <td>Continuous flow and density measurement to provide daily solids tonnage</td> </tr> <tr> <td colspan="3">Dry Circuits Rejects</td> </tr> <tr> <td>PDC Non-Conductor magnetics</td> <td>Automatic Sampler within plant producing daily composite from frequent cuts</td> <td>Weightometer integrated to provide daily tonnage.</td> </tr> <tr> <td>DCC Magnetics</td> <td>Automatic Sampler within plant producing daily composite from frequent cuts</td> <td>Weightometer integrated to provide daily tonnage.</td> </tr> <tr> <td>Gypsum</td> <td>Manual sample from bunker collected daily</td> <td>Continuous density measurement and volume measurement from positive displacement pump operation to provide daily solids tonnage</td> </tr> </tbody> </table> <p>Under non-routine MSP operations (e.g. maintenance shut-downs and idle periods), sampling and measurement of by-products occurs through representative manual sampling as/when required.</p>		Sampling Method	Quantity	Wet Circuits Rejects			FPC Sand Tailing	Automatic Sampler within plant producing daily composite from frequent cuts	Continuous flow and density measurement to provide daily solids tonnage	FPC Fines	Manual sample from thickener underflow collected daily	Continuous density measurement and volume measurement from positive displacement pump operation to provide daily solids tonnage	ZWC Sand Tailings	Automatic Sampler within plant producing daily composite from frequent cuts	Continuous flow and density measurement to provide daily solids tonnage	Dry Circuits Rejects			PDC Non-Conductor magnetics	Automatic Sampler within plant producing daily composite from frequent cuts	Weightometer integrated to provide daily tonnage.	DCC Magnetics	Automatic Sampler within plant producing daily composite from frequent cuts	Weightometer integrated to provide daily tonnage.	Gypsum	Manual sample from bunker collected daily	Continuous density measurement and volume measurement from positive displacement pump operation to provide daily solids tonnage	<p>Iluka have advised that representative manual sampling was undertaken for dry circuit rejects (one sample per load).</p>	<p>Compliant</p>	
	Sampling Method	Quantity																												
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<p>Bag-house dust filter bags.</p> <p>Prior to transport, sections of used filter bag cloth of approximately 100 x 100 mm will be cut from at least five</p>	<p>No Bag-house dust filter bags were disposed to Pit 23 during the reporting period.</p>	<p>Compliant</p>																												

Source & Requirement	Observations (H1 2021)	Compliance	Recommendations
used filter bags per consignment and each section submitted for analysis			
<p>NORM contaminated concrete and steel.</p> <p>The sampling method applied will be dependent on the precise nature of the material and will be developed and applied on a case-by-case basis. Representative samples of each consignment will be collected and submitted for analysis</p>	No NORM contaminated concrete and steel were disposed to Pit 23 during the reporting period.	Compliant	
<p>Mineral separation plant by-products. Analysis of MSP by-products is undertaken as follows:</p> <ul style="list-style-type: none"> ■ desiccation within the MSP laboratory oven to remove moisture; ■ pulverisation (as required) to produce a fine granular matrix; ■ splitting to produce a representative sample of appropriate size; ■ fusion of the sample to produce a glass bead; and ■ assay of the bead using an X-Ray Fluorescence Spectrophotometer to determine the concentrations of uranium and thorium. <p>The assay results are uploaded into Iluka's production statistics database as are the results of tonnage measurements of the various streams. The data is then used</p>	Analytical procedures were provided and reviewed.	Compliant	

Source & Requirement	Observations (H1 2021)	Compliance	Recommendations
to calculate the uranium and thorium concentrations in each of the wet circuits rejects, dry circuits rejects and gypsum.			
Analysis of filter bag samples will be undertaken at either Iluka's Hamilton laboratory or an external laboratory to determine the concentrations of uranium and thorium.	No Bag-house dust filter bags were disposed to Pit 23 during the reporting period.	Compliant	
Samples of NORM contaminated concrete and steel will be analysed at either Iluka's MSP lab or an external laboratory to determine the concentrations of uranium and thorium.	No NORM contaminated concrete and steel were disposed to Pit 23 during the reporting period.	Compliant	
IWMP Reporting			
All data generated from the monitoring described above will be recorded electronically in a data base managed by Iluka. On an annual basis a report will be prepared showing the following:			
For each load: <ul style="list-style-type: none"> ■ Source site ■ Load weight ■ Radioactive properties being: <ul style="list-style-type: none"> ■ assigned concentration of uranium and thorium in MSP mineral byproducts, based on weekly averages of by-products produced; and 	Section 3.1 and 3.2 of the IWMP Performance report provides the source, weight and radioactive properties of the received material. Section 3.2 of the IWMP Performance Report provides information on the radioactivity analysis of MSP by-products disposed.	Compliant	

Source & Requirement	Observations (H1 2021)	Compliance	Recommendations
<ul style="list-style-type: none"> ■ measured concentrations of uranium and thorium in used filter bags, concrete or steel. 			
<p>For the report period:</p> <ul style="list-style-type: none"> ■ average concentration of uranium and thorium for the MSP by-products, used filter bags, concrete and steel; ■ total quantities of materials disposed of to Pit 23; and ■ records of any transport incidents or spills and remedial actions taken in the event of such incidents. 	<p>Section 3.2 of the IWMP Performance Report provides information on the radioactivity analysis of MSP by-products disposed.</p> <p>Section 3.3 of the IWMP Performance Report states no transport incidents or spillages occurred during the reporting period.</p>	Compliant	
<p>The Performance Report will be provided to a suitably qualified auditor who will complete an audit of the data provided and compliance with this IWMP.</p>	<p>This report is provided in accordance with the requirement of the IWMP.</p>	Compliant	
<p>Copies of the Performance Report and the audit report will be submitted to the Responsible Authority.</p>	<p>As the Auditor understands that Iluka will submit the performance reports and the audit report when complete, compliance with this requirement cannot be verified. Iluka has advised that the previous performance report has been submitted to Council.</p>	Compliant	
IWMP Review			
<p>This IWMP shall be reviewed and amended if necessary, to take account of:</p> <ul style="list-style-type: none"> ■ advances in knowledge and technology pertaining to by-product disposal; included in this report. 	<p>A review of the IWMP (Rev 4) was undertaken in 2020 with the revised plan (Rev 5) submitted to HRCC for review and approval on the 16th December 2020. HRCC provided formal endorsement of the plans on the 29th September 2021.</p>	Compliant	

Source & Requirement	Observations (H1 2021)	Compliance	Recommendations
<ul style="list-style-type: none"> ■ any significant change in operations; ■ changes in applicable legislation or standards; ■ changes in Iluka's EHS standards; or every two (2) years, which-ever occurs soonest.			
Proposals for amendment of this plan will be prepared to the satisfaction of the Responsible Authority and the Department of Health and Human Services.	No amendments to the IWMP have been submitted in H1 2021.	Compliant	

APPENDIX B

**EMP & RVMP Performance
Report Review**

Table 3: EMP Performance Report Audit

Requirement	Observations (H1 2021)	Compliance	Recommendations
General			
Applicable Reporting Period <ul style="list-style-type: none"> Time period covered by report 	The H1 2021 EMP Performance Report covers the H1 reporting period from 1 January 2021 to 30 June 2021.	Compliant	
Executive Summary <ul style="list-style-type: none"> Summary of compliance to environmental objectives. Summary of rehabilitation activities and performance. 	Section 1 contains an Executive Summary which includes a summary of compliance with environmental objectives.	Compliant	
Waste Disposal Summary			
Waste Disposed <ul style="list-style-type: none"> Summary of waste volumes disposed in the reporting period. 	Section 3 states that a total of 760.4 tonnes of wastes were disposed into Pit 23.	Compliant	
Pit Backfill Status <ul style="list-style-type: none"> The maximum elevation of the upper surface of materials disposed of at the end of the reporting period. 	Section 5.3 of the EMP Performance Report states that the elevation of capped material remains unchanged at 193 mAHD.	Compliant	
Environmental Performance			

Requirement	Observations (H1 2021)	Compliance	Recommendations
<p>Groundwater</p> <p>Routine reporting as detailed in GWMMP (Table 19*).</p> <ul style="list-style-type: none"> ■ groundwater quality monitoring results (screened against GWQOs), including discussion on any relevant trends or trigger exceedances; ■ issues with monitoring bore integrity and accessibility, including any actions undertaken to resolve; ■ if applicable, information on the outcome of any groundwater model reviews or other groundwater studies pertinent to Pit 23 and the GWMMP. This includes modelling/studies undertaken: <ul style="list-style-type: none"> ■ for routine purposes; and ■ in response to previous reported exceedances and exception reporting. <p>*Correct reference for reporting requirements is Table 18.</p>	<p>Correct reference for reporting requirements is Table 18.</p> <p>Section 4.1.3 and 4.1.4 of the EMP Performance Report discuss groundwater level gauging, and groundwater quality monitoring respectively. Groundwater level gauging and sampling was conducted as required by the EMP, with monthly monitoring at four bores and six-monthly monitoring at the remainder of the nominated bores, in January 2021. Exceptions were:</p> <ul style="list-style-type: none"> ■ U₂₃₈ was not analysed as required for the four bores sampled in February 2021 and March 2021 (GW01, GW02, GW03, GW04A). ■ U₂₃₈ was not reported for bore GW03 in April 2021 due to laboratory issues. <p>Other analytes tested and subsequent monitoring for U₂₃₈ at these wells did not indicate changes in groundwater conditions at these bores.</p> <p>Groundwater gauging results indicate generally stable water levels over the period of monitoring. An exception is observed at background bore WRK302, located upgradient of Pit 23, which has indicated generally rising groundwater level since 2015, particularly in late 2018, and continuing a rising trend through 2020.</p> <p>Groundwater quality results were only tabulated for the four compliance bores (GW01, GW02, GW03, GW04A). Results for other wells were listed as an appendix. One groundwater quality trigger level at a compliance well was exceeded, at GW01 for</p>	<p>Compliant</p>	<p>As previously recommended,</p> <p>Considering the variation in groundwater flow direction, it is recommended to screen analysis results from wells BW36A and WRK300 against the groundwater quality objectives applied to compliance wells.</p>

Requirement	Observations (H1 2021)	Compliance	Recommendations
	<p>selenium in January 2021. Follow-up sampling in February 2021 indicated concentrations below the objective.</p> <p>Data quality was not discussed in detail but results for some samples labelled as field blanks and blind duplicates were supplied. Results for three field blanks (January 2021, May 2021, June 2021) and two blind duplicate samples (May 2021, June 2021) were supplied. The Auditor made an assessment of these results (attached Table A), which indicated:</p> <ul style="list-style-type: none"> ■ Various cations (calcium, magnesium, sodium) and metals (boron, copper, zinc) were detected in each of the three blank samples. 17 of 129 blank results (5.4%) had detections. This may indicate cross-contamination from sampling equipment, or these elements may have been present as impurities in the water used. However, concentrations were generally close to the laboratory limit of reporting, so do not indicate gross contamination. ■ Blind duplicate samples had acceptable repeatability, with all results within 50% relative percentage difference (RPD). <p>Section 4.1.1 reports that there were no issues with bore integrity.</p> <p>Section 5.1 includes groundwater contours drawn based on June 2021 contours, although water level gauging results for June 2021 were not reported or required for the full monitoring network. Contours indicate groundwater flow to the northwest in the area of Pit 23. The model inferred a local groundwater high beneath the on-site fresh water dam to the south-east of Pit 23. However, the measured water levels indicate a groundwater high to the south of</p>		

Requirement	Observations (H1 2021)	Compliance	Recommendations
	<p>Pit 23, in the area of the former Pit 21. Monitoring wells BW36A and WRK300 may be down-gradient from Pit 23 based on the inferred flow direction.</p> <p>Section 5.2 notes that the numerical groundwater flow model was not required to be updated.</p>		
<p>Surface Water</p> <p>Routine reporting as detailed in SWMMP (Table 28).</p> <ul style="list-style-type: none"> ■ surface water quality monitoring results (screened against SWQOs), including discussion on any relevant trends or trigger exceedances. ■ if applicable, information on the outcome of any surface water exceedances or uncontrolled off-site discharges and status of any corrective/preventative actions planned or completed. 	<p>Reference for reporting requirements should be to Table 27.</p> <p>Section 4.2 reports on surface water quality monitoring. No water discharge from the Pit 23 area to surface water was reported, so sampling of run-off fed surface water sites was not required during the monitoring period.</p> <p>Due to dry conditions during the monitoring period, no samples at nominated groundwater-fed surface water sites could be collected.</p>	Compliant	
<p>Air Quality</p> <p>Routine reporting as detailed in AQMP (Table 35)</p> <ul style="list-style-type: none"> ■ Results of dust (PM₁₀) monitoring undertaken in the reporting period, including discussion of any relevant trends and any exceedances attributed to Pit 23 activities; ■ Results of Radionuclides (Radon and Thorium) undertaken during the Reporting period, 	<p>Section 4.7 of the EMP Performance Report states that no results above the PM₁₀ concentration limit (0.06mg/m³) were recorded during the H1 2021 reporting period. It is noted that the hi-vol monitoring station at The Rises is no longer part of the monitoring program as outlined in EMP v5.1.</p> <p>Section 4.8 of the EMP Performance Report states that no results above the reportable levels for Radon (100 Bq/M³) and Thoron (1000 Bq/m³).</p>	Compliant	

Requirement	Observations (H1 2021)	Compliance	Recommendations
<p>including discussion of any relevant trends and any exceedances attributed to Pit 23 activities.</p> <ul style="list-style-type: none"> ■ Summary of any dust complaints received; and ■ For dust complaints or PM10 exceedances linked to Pit 23 activities, the actions undertaken to resolve. 	<p>Section 5.5 of the EMP Performance Report states that no complaints or comments were received during the H1 2021 reporting period.</p>		
<p>Noise Routine reporting as detailed in Table 39.</p> <ul style="list-style-type: none"> ■ Summary of any complaints received and results of noise monitoring/investigation; and ■ For noise events deemed as site-related, the outcomes of any Action Plan(s) that were implemented. 	<p>Section 4.3 of the EMP Performance Report states that no noise related complaints or comments were received during the H1 2021 reporting period.</p>	Compliant	
<p>Weeds Routine Reporting as detailed in Table 42</p> <ul style="list-style-type: none"> ■ Summary of any declared weed incursions; and ■ Actions undertaken to resolve. 	<p>Section 4.4 of the EMP Performance Report states that no Weeds of National Significance were Identified during the Reporting Period.</p>	Compliant	
<p>Vehicle Hygiene Routine reporting as detailed in Table 45</p>	<p>Section 4.5 of the EMP Performance Report states that no vehicle hygiene incidents were Identified during the Reporting Period</p>	Compliant	

Requirement	Observations (H1 2021)	Compliance	Recommendations
<ul style="list-style-type: none"> ■ Summary of any vehicle hygiene non-compliance events in the reporting period; and ■ Actions undertaken to resolve. 			
<p>Public Safety</p> <p>Reporting as detailed in Table 48</p> <ul style="list-style-type: none"> ■ Summary of any public safety incidents in the reporting period; and ■ Actions undertaken to resolve. ■ Summary of any geotechnical incidents in the reporting period; and ■ Actions undertaken to resolve. 	<p>Section 4.6 of the EMP Performance Report states that no vehicle hygiene incidents were Identified during the Reporting Period</p>	<p>Compliant</p>	
Rehabilitation Performance			
<p>Rehabilitation Summary</p> <ul style="list-style-type: none"> ■ Detailed summary of rehabilitation activities undertaken in the reporting period (e.g. decommissioning, overburden return, revegetation activities). 	<p>Section 2.5 of the EMP Performance Report details Rehabilitation activities undertaken during the reporting period.</p> <p>Due to continued operations within Pit 23 no actions relevant to rehabilitation and vegetation management were undertaken in the H1 2021 reporting period.</p>	<p>Compliant</p>	
Other			

Requirement	Observations (H1 2021)	Compliance	Recommendations
<p>Comments / Complaints</p> <ul style="list-style-type: none"> ■ Summary of comments / complaints received and resulting actions 	<p>Section 5.5 of the EMP Performance Report states that no complaints or comments were received during the H1 2021 reporting period.</p>	Compliant	
<p>Outlook</p> <ul style="list-style-type: none"> ■ Completed actions during the current ■ Plans for the next reporting period. 	<p>Section 5.6 of the EMP Performance Report details actions completed during the reporting period. For H1 2020, this included 'implementation of the ongoing monitoring requirements as per the EMP (Revision 5.1)'.</p> <p>Section 5.7 of the EMP Performance Report describes proposed actions for the next reporting period. For H2 2021, this includes:</p> <ul style="list-style-type: none"> ■ Review of Pit 23 Risk Register; and, ■ Completion of the geotechnical audit of Pit 23. 	Compliant	
<p>Other Matters</p> <ul style="list-style-type: none"> ■ Discussion on other matters considered relevant by the Responsible Authority or Iluka. 	<p>Section 5.8 of the EMP Performance Report details other matters considered relevant by Iluka or the Responsible Authority. For the H1 2021 Reporting Period, this included scheduling of the Geotechnical Audit and Pit 23 Risk Register annual Review.</p>	Compliant	
<p>Plan Amendment(s)</p> <ul style="list-style-type: none"> ■ Summary of any amendments/updates to the EMP, IWMP or R&VWMP in the reporting period (if applicable) 	<p>Section 7 of the EMP performance Report details amendments/updates to the EMP, IWMP or R&VWMP in the reporting period.</p> <p>A review of the EMP was undertaken in 2020 with the revised plan (Rev 5.1) submitted to HRCC for review and approval on the 16th December 2020. HRCC provided formal endorsement of the plans on the 23rd September 2021.</p>	Compliant	<p>Future revisions of the EMP should reflect regulatory changes associated with the introduction of the <i>Environment Protection Act 2017</i> from 1 July 2021. Under the new Act,</p>

Requirement	Observations (H1 2021)	Compliance	Recommendations
			the State Environment Protection Policy (SEPP Waters) was superseded by the Environment Reference Standard (ERS).

APPENDIX C

**Iluka IWMP Performance Report
H1 2021**



Iluka Resources Limited Mineral Sands By-Product Disposal

Planning Permit 15-105

**Crown Allotments 91, 94, 95, 96
Parish of Telangatuk**

Incoming Waste Monitoring Plan Report H2– 2020

Iluka Ref: UDOCS 0090-426461582-2769

Contact:
Ian Williams
Environment Superintendent, Murray Basin
ian.Williams@iluka.com

Document control

Revision	Details of review or changes	Prepared by	Date
0	Final	S. Alexander	15-11-2021

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1 Executive Summary

Iluka Resources Limited (Iluka) operates the Pit 23 by-products disposal facility located at the Douglas Mine in the Kanagulk area and within the municipality of the Horsham Rural City. Pursuant to Planning Permit 15-105 issued by Horsham Rural City Council (HRCC), and the subsidiary Pit 23 Incoming Waste Monitoring Plan (IWMP), the Pit 23 facility is approved for the disposal of:

- non-liquid waste by-products associated with or sourced through mineral sands processing undertaken at the Iluka Hamilton Mineral Separation Plant (MSP) containing or contaminated with Naturally Occurring Radioactive Material (NORM);
- used dust filter bags from the Hamilton MSP containing or contaminated with NORM; and
- NORM-contaminated concrete and steel associated with plant and infrastructure from nominated Iluka sites within Victoria.

This report is submitted in accordance with Section 5 of the IWMP and provides a summary of the wastes received into Pit 23 (origin, volumes/weights and radioactive properties) and records of incidents and remedial actions applicable to the reporting period of 1st January 2021 to 30th June 2021.

Key commentary on monitoring outcomes and performance against compliance objectives in the IWMP for the H1 2021 reporting period:

- a total of twenty seven (27) loads of MSP By-products were disposed into Pit 23 between the 3rd and 7th May 2021, totalling 760.4 tonnes;
- the average concentration for Uranium (U) and Thorium (Th) for the by-product waste received into Pit 23 was 1.4ppm and 21.8ppm, respectively; and
- No transport incidents or spillages occurred.

A summary of incoming waste data and incident information is provided in Section 3.

2 Introduction

Iluka Resources Limited (Iluka) operates the Pit 23 by-products disposal facility located at the Douglas Mine in the Kanagulk area and within the municipality of the Horsham Rural City (Figure 1 and Figure 2).

Pursuant to Planning Permit 15-105 issued by Horsham Rural City Council (HRCC), and the subsidiary Pit 23 Incoming Waste Monitoring Plan (IWMP), the Pit 23 facility is approved for the disposal of mineral separation by-products and used dust filter bags from the Iluka Hamilton Mineral Separation (MSP) which contain or are contaminated with Naturally Occurring Radioactive Material (NORM), and concrete and steel which contains or is contaminated with NORM associated with plant and infrastructure from nominated Iluka sites within Victoria.

2.1 Planning Permit 15-105

Under the Horsham Planning Scheme the subject land is in the Farming Zone and under the provisions of that zone a permit is required for use and development for Industry (Refuse Disposal). On 25th February 2017 Planning Permit 15-105, (the Permit) was issued by the Horsham Rural City Council as the Responsible Authority to allow:

Use and development of the land for the disposal of waste by-products associated with or sourced through mineral sands processing undertaken at the Hamilton Mineral Separation Plant (MSP), including waste by-products and contaminated materials resulting from the processing and transport operations as follows:

- *By-products from the processing of heavy mineral concentrate at the Hamilton MSP;*
- *used dust filter bags from the Hamilton MSP; and*
- *Other chemically inert material contaminated with naturally occurring radioactive material.*

in accordance with the endorsed plans.

2.2 Commencement of the Permit

Condition 1 of the Permit states:

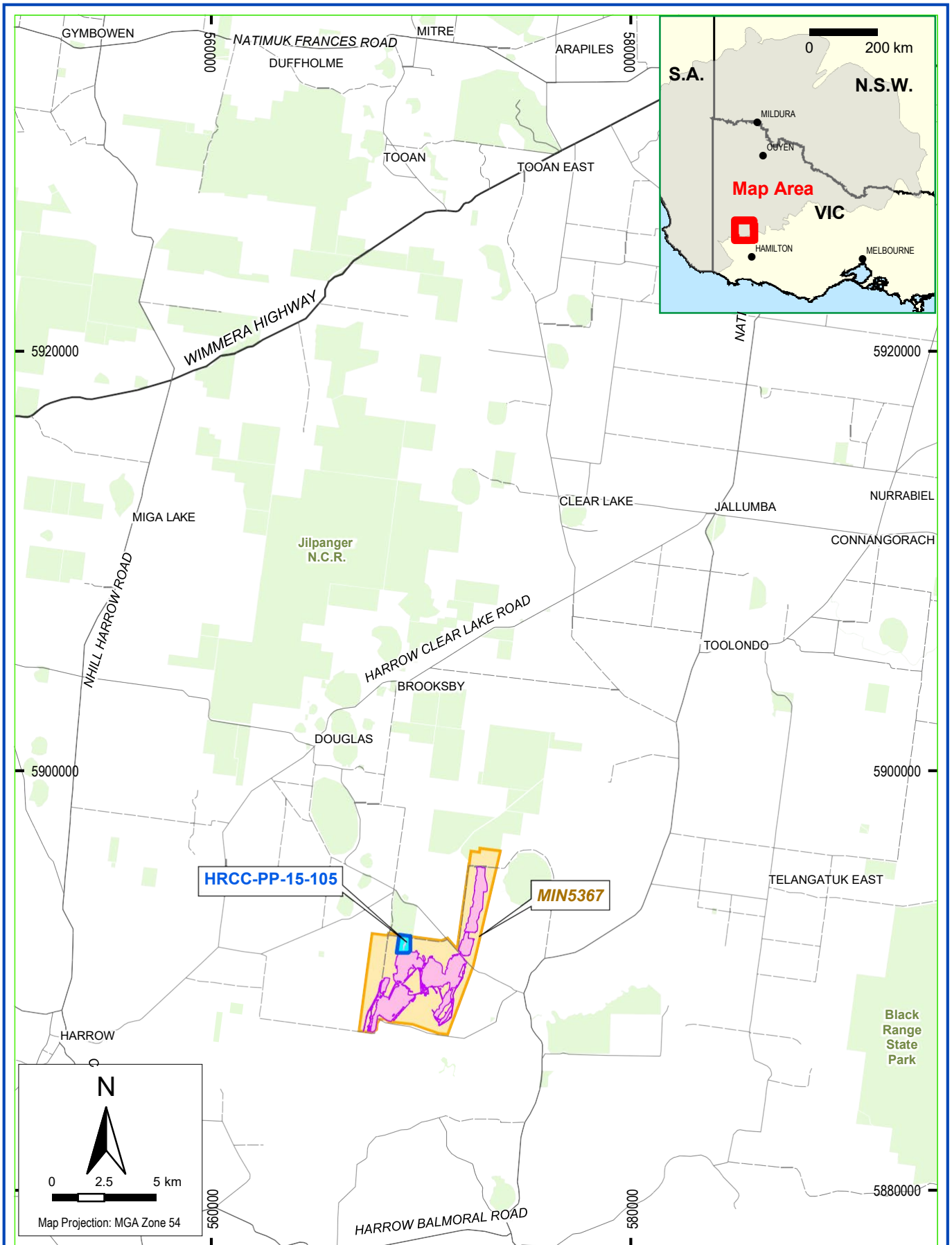
This permit does not come into operation until:

- a. Iluka has applied to the Department of Economic Development, Jobs, Transport and Resources to vary the 2003 Work Plan to identify a new end uses utilisation of Pit 23 and to vary the rehabilitation plan; and*
- b. Iluka has applied to the Minister to surrender part of MIN 5367¹ (Pit 23); and*
- c. The Department of Economic Development, Jobs, Transport and Resources has approved the Work Plan Variation; and*
- d. The Minister has registered the partial surrender of MIN 5367.*

The permit comes into operation on the same day the Work Plan Variation is approved, and the partial surrender of MIN 5367 is registered.

The Variation to the 2003 Douglas Mine Work Plan was approved on the 13th April 2017, and the partial surrender of MIN 5367 was registered on 11th May 2017, this being the date of commencement of the Permit.

¹ Iluka Resources Douglas Mine – Mining Licence No. 5367 ('MIN 5367')

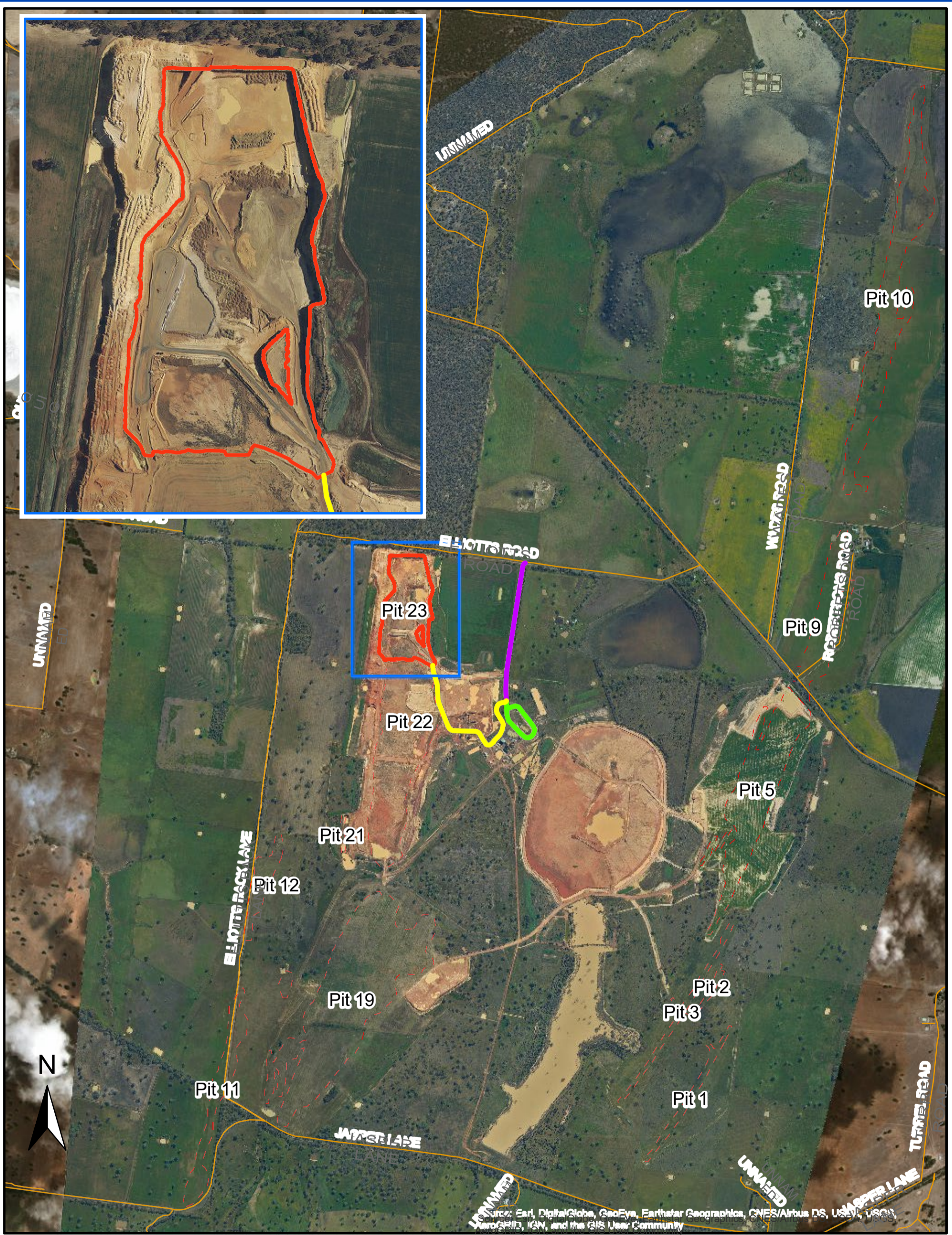


Legend

- Douglas mine
- Pit 23
- HRCC-PP-15-105
- MIN5367 tenement

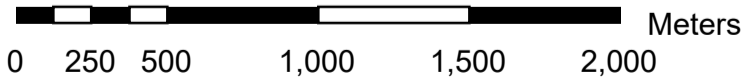
DOUGLAS
LOCATION PLAN





Legend

- Pit 23 haul road
- Mine Access Road
- Truck wash circuit
- Pit 23 crest
- - - Pit Crests
- Roads



LOCATION OF PIT 23



2.3 Endorsed Plans

Conditions 2, 3, 9, 14, 16 and 34 of the Permit relate to various management plans that once approved by the Responsible Authority will be endorsed to form part of the Permit, which includes:

- Incoming Waste Monitoring Plan (IWMP);
- Environmental Management Plan (EMP), incorporating;
 - Groundwater Monitoring and Management Plan (GWMMP);
 - Surface Water Monitoring and Management Plan (SWMMP);
 - Air Quality/Dust Control Plan (AQMP); and
- Rehabilitation and Vegetation Management Plan (R&VMP)

A review of the EMP (Rev 4) and IWMP (Rev 4) was undertaken in 2020 with the revised plans (Rev 5.1 and 5 respectively) submitted to HRCC for review and approval on the 16th of December 2020. HRCC provided formal endorsement of the plans on the 29th September 2021. A summary of amendments to the EMP and IWMP is provided in **Appendix A**.

2.4 Permit condition requirement for an IWMP

To ensure compliance with the permitted use (Section 2.1) the Permit includes the following condition concerning the requirement for and content of an IWMP:

Incoming Waste Monitoring Plan

14. *Within 90 days of the commencement of this permit operation, an Incoming Waste Management Plan (IWMP) must be prepared to the satisfaction of the Responsible Authority in consultation with the Department of Health and Human Services for the approval by the responsible authority. Three copies of the plan must be provided to the responsible authority. When approved by the responsible authority the IWMP will be endorsed and it will then form part of this permit. The IWMP must provide for*
- a) *A monitoring and reporting system for ensuring that materials disposed of to Pit 23 are limited to those approved under the conditions of this permit;*
 - b) *Recording of the origin, per load weight and radioactive properties of each incoming load;*
 - c) *Monitoring to ensure all vehicles transporting waste have fully secured and contained loads and that all waste loads have been transported in compliance with licence requirements under the Radiation Act 2005;*
 - d) *Records of any transport incidents or spill and remedial actions taken in the event of such incidents; and*
 - e) *Annual audits of records to verify compliance with the requirements of the IWMP*

2.5 IWMP reporting requirements

Section 5 of the IWMP states the following reporting requirements:

On an annual basis a report will be provided showing the following:

- *For each load:*
 - *source site;*
 - *load weight; and*
 - *material description; and*
- *For the report period:*
 - *radioactivity of by-products on a monthly basis; and*
 - *total quantities of by-products disposed of to Pit 23.*

The annual report will be provided to a suitably qualified auditor who will complete an audit of the data provided and compliance with this IWMP. Copies of the annual report and the audit report will be submitted to the Responsible Authority

These reporting requirements are addressed in the following sections.

3 Monitoring Results

3.1 Per load monitoring data

In accordance with Section 5 of the endorsed IWMP, data associated with each load of incoming waste is shown in Table 1.

Table 1: Individual load data for incoming wastes to Pit 23, H1 2021

Date	Week No.	Source site	Location Code	Material Code	Load weight (t)
3/05/2021	18	MSP	Pit 23	Dry Rejects	26.88
3/05/2021	18	MSP	Pit 23	Dry Rejects	25.0
3/05/2021	18	MSP	Pit 23	Dry Rejects	28.18
4/05/2021	18	MSP	Pit 23	Dry Rejects	28.16
4/05/2021	18	MSP	Pit 23	Dry Rejects	27.78
4/05/2021	18	MSP	Pit 23	Dry Rejects	28.76
4/05/2021	18	MSP	Pit 23	Dry Rejects	28.1
4/05/2021	18	MSP	Pit 23	Dry Rejects	27.9
4/05/2021	18	MSP	Pit 23	Dry Rejects	27.76
5/05/2021	18	MSP	Pit 23	Dry Rejects	28.4
5/05/2021	18	MSP	Pit 23	Dry Rejects	28.5
5/05/2021	18	MSP	Pit 23	Dry Rejects	27.84
5/05/2021	18	MSP	Pit 23	Dry Rejects	29.5
5/05/2021	18	MSP	Pit 23	Dry Rejects	28.22
5/05/2021	18	MSP	Pit 23	Dry Rejects	28.4
6/05/2021	18	MSP	Pit 23	Dry Rejects	28.8
6/05/2021	18	MSP	Pit 23	Dry Rejects	28.58
6/05/2021	18	MSP	Pit 23	Dry Rejects	27.72
6/05/2021	18	MSP	Pit 23	Dry Rejects	28.9
6/05/2021	18	MSP	Pit 23	Dry Rejects	29.22
6/05/2021	18	MSP	Pit 23	Dry Rejects	26.52
7/05/2021	18	MSP	Pit 23	Dry Rejects	28.14
7/05/2021	18	MSP	Pit 23	Dry Rejects	28.76
7/05/2021	18	MSP	Pit 23	Dry Rejects	28.46
7/05/2021	18	MSP	Pit 23	Dry Rejects	28.72
7/05/2021	18	MSP	Pit 23	Dry Rejects	29.84
7/05/2021	18	MSP	Pit 23	Dry Rejects	27.36
Total					760.4

3.2 Reporting period monitoring data

In accordance with Section 5 of the endorsed IWMP, average radioactivity of MSP by- products is shown in Table 2.

Table 2: Quantities and radioactivity results for disposed MSP by-products, H1 2021

Product	Product (tonnes)	Th (ppm)	U (ppm)
Dry circuit rejects	760.4	21.8	1.4
Wet circuit rejects	0	n/a	n/a
Baghouse dust filter bags	0	n/a	n/a
Total	760.4		

3.3 Incidents and remedial actions

3.3.1 Incidents or spills

No transport incidents or spillages occurred during the reporting period.

3.3.2 Remedial actions taken

None required.

3.4 Other matters

None identified.

4 Appendices

Appendix A: Amendments to EMP and IWMP

Iluka Resources Ltd – Pit 23 Facility (HRCC Planning Permit 15-105) List of Amendments to Pit 23 Environmental Management Plan (EMP)

Plan Name		Environmental Management Plan (EMP)	
Previous Endorsed Revision		Rev 4 (5 th April 2017)	
Current Endorsed Revision		Rev 5.1 (23 rd September 2021)	

Section (Page)	Amendment	Reason for Amendment	Change in Risk Profile
Maps	All maps updated. Regional and site location maps standardised across all three management plans.	General update only	N/A
1.3.1 (11)	Added section to clearly specify matters outside the scope of the EMP: <ul style="list-style-type: none"> - all compliance matters associated with the adjacent Douglas mine; - matters of radiation protection 	To remove ambiguity as to application of the EMP (to radiation protection and management in particular).	No – Iluka’s compliance obligations for radiological monitoring of groundwaters (as required by Condition 24(b)(ii) of the Permit) is still satisfied through other regulatory mechanisms (i.e. the Iluka Murray Basin Radiation Management Plan and Radiation Management Licence)
3.5 (20)	Re-structured this section to include sub-sections for hydrogeology (Section 3.5.1) and hydrochemistry (Section 3.5.2).	Contextual info on hydrogeology and hydrochemistry previously included in the risk assessment section of the GWMMP in the prior iteration of the EMP (Rev 4, July 2017). More appropriate to include this	N/A

Plan Name	Environmental Management Plan (EMP)
Previous Endorsed Revision	Rev 4 (5 th April 2017)
Current Endorsed Revision	Rev 5.1 (23 rd September 2021)

Section (Page)	Amendment	Reason for Amendment	Change in Risk Profile
		information in the environmental context section of plan.	
3.6 (24)	Expanded to incorporate contextual text taken from the SWMMP.	Some contextual info on Pit 23 hydrology previously included in the risk assessment section of the SWMMP in the prior iteration of the EMP (Rev 4, July 2017).	N/A
4 (27) Table 2	Updated objective descriptions and added links to relevant sections of plan. Added objective IDs which are cross-referenced in monitoring program, trigger and contingency sections within the plan.	Clearer structure in document and alignment of objectives to risks (per the RARP) and associated monitoring, trigger and contingency sections later in document.	No
5 (28) Table 3	Amendment Table 3 to indicate that roles associated with the Hamilton MSP are contingent on the operating status of the MSP facility.	To reflect current idle setting of the MSP, effective as of October 2017	No
6 (29) RARP	Major update and re-structure. Updated RARP (presented as Appendix) updated by internal Iluka personnel and aligned to the risk assessment framework of the Victorian Department of Jobs, Precincts and Regions (DJPR, 2019).	The Permit requires the RARP to be developed by suitably qualified persons. This does not imply external (non-Iluka) persons only. Adoption of the DJPR risk framework is appropriate to the Pit 23 site/facility and has been applied in assessing risks for the adjacent Douglas Mine.	No – No material change in risk rankings of environmental aspects considered in the EMP when comparing the prior RARP (from EMP Revision 4, 2017) to the updated RARP presented in EMP (Revision 5,

Plan Name	Environmental Management Plan (EMP)
Previous Endorsed Revision	Rev 4 (5 th April 2017)
Current Endorsed Revision	Rev 5.1 (23 rd September 2021)

Section (Page)	Amendment	Reason for Amendment	Change in Risk Profile
		Considered logical and sensible to have a consistent risk framework across the two operations given their shared history, site location and overlap in risks and receptors.	October 2019).
7 (39) GWMMP	<p>Major update and re-structure.</p> <p>Updated references SEPP (Waters) and applicable groundwater segments.</p> <p>Completed comprehensive review of groundwater chemistry including derivation of updated trigger levels which apply trend-based assessment and reporting (per the ANZECC guidelines, 'control charting'). This includes derivation of updated groundwater quality objectives (GWQOs – Table 11) better representative of background conditions.</p> <p>Updated the risk analysis section to incorporate results of updated groundwater modelling (EMM, 2019).</p> <p>Added latest maps of groundwater contours and particle tracks (flow paths), and groundwater travel times.</p> <p>Updated bore network list (Table 16) to reflect current status of bores, including new and replacement bores.</p> <p>Added a new section "<i>Objectives, monitoring program, triggers and contingency</i>" (formerly captured as Appendix B in Revision 4 of the EMP) aligned to the management objectives in Section 4 and the new trend-based GWQOs/trigger levels.</p>	<p>Prior iteration of the EMP (Rev 4) required updated groundwater modelling within 2 years of endorsement of that plan. Modelling was commissioned through EMM Consulting in December 2018 and finalized in September 2019. This modelling also considered results of false seepage exceedances in McGlashin Swamp as reported to HRCC in 2018.</p> <p>Groundwater quality trigger levels in the prior iteration of the EMP were based on limited available bore data and did not adequately account for natural background variation.</p> <p>Updated trigger levels are based</p>	<p>No –</p> <p>The assessment of risk to groundwater in the GWMMP is more robust taking into account updated modelling by EMM (2019). Updated trigger levels (GWQOs) better account for the natural variability in groundwater chemistry and are now trend-based. i.e. less sensitive to point-in-time fluctuations in groundwater quality.</p> <p>This reduces the likelihood that 'false flag' exceedances are reported, and provides</p>

Plan Name	Environmental Management Plan (EMP)
Previous Endorsed Revision	Rev 4 (5 th April 2017)
Current Endorsed Revision	Rev 5.1 (23 rd September 2021)

Section (Page)	Amendment	Reason for Amendment	Change in Risk Profile
		on the grouping of chemistry data from a wider network of Douglas site bores to derive trigger levels which better account for this natural variability. The updated GWQOs are also based on trends (rather than single 'exceedances') and are therefore less sensitive to point-in-time fluctuations in bore chemistry, potential data/measurement errors and seasonality.	for better early warning of adverse trends in groundwater chemistry down-gradient of Pit 23.
8 (72) SWMMP	<p>Major update and re-structure.</p> <p>SWMMP now considers the difference in surface water risk in the operations vs. rehab phase.</p> <p>Updated reference to SEPP (Waters) and classed receptors into feature type for purposes of identifying the correct default SEPP objectives applicable in each case.</p> <p>Defined 'battery limits' relevant to the management of runoff (i.e. the point of transfer and liability for runoff transferred from Pit 23 to the Douglas Mine).</p> <p>Developed site-specific surface water quality objectives (SWQOs) to be applied to each receptor, developed using reference site data (per the methodologies outlined in the SEPP and ANZECC guidelines). As with groundwater, these are trend-based.</p> <p>Updated the surface water monitoring program inc. new map of monitoring locations (receptor monitoring points and reference site monitoring points).</p> <p>Delineated sampling suite based on the receptor type (GW-fed vs. SW-fed). The groundwater-fed analytical suite aligns to the groundwater monitoring suite.</p> <p>Added a new section "<i>Objectives, monitoring program, triggers and contingency</i>" (formerly captured as Appendix B in Revision 4 of the EMP) aligned to the management objectives in Section 4 and new trend-based SWQOs.</p>	<p>Surface water quality trigger levels in the prior iteration of the EMP were based on limited available data for sites of interest and were therefore overly sensitive to wide fluctuations in natural background water quality. This was a critical flaw identified by EMM (2018) in their investigation into reported surface water quality exceedances for McGlashin Swamp.</p> <p>The updated SWQOs group data from appropriate reference sites as per the methodology in</p>	<p>No – Updated trigger levels (GWQOs) better account for the natural variability in surface water and are now trend-based. i.e. less sensitive to point-in-time fluctuations and seasonality in surface water quality.</p> <p>This reduces the likelihood that false (non-valid) exceedances are reported, and provides for better early warning of adverse trends in the</p>

Plan Name	Environmental Management Plan (EMP)
Previous Endorsed Revision	Rev 4 (5 th April 2017)
Current Endorsed Revision	Rev 5.1 (23 rd September 2021)

Section (Page)	Amendment	Reason for Amendment	Change in Risk Profile
		<p>the ANZECC guidelines. As with the groundwater GWQOs, the SWQOs are also trend-based to better account for natural variability in background water quality, which is inherent in surface waters and particularly those which are ephemeral as applies to the Pit 23/Douglas catchments.</p> <p>The designation of battery limits is important – this provides for a clear transfer of compliance ownership of managed runoff between Pit 23 and the Douglas Mine. This was not clear in the prior iteration of the EMP (Rev 4, July 2017).</p>	water quality at receptor sites down-gradient / downstream of Pit 23.
9 (100) AQMP	<p>Major update and re-structure.</p> <p>AQMP now considers the difference in dust and air-quality risk and based on a detailed assessment of life-of-mine air quality data proposes that PM10 monitoring is only warranted in the rehabilitation phase (when earthmoving operations are in effect) and in summer months when weather conditions are potentially conducive to impacts on sensitive receptors.</p> <p>Added a new section “<i>Objectives, monitoring program, triggers and contingency</i>” (formerly captured as Appendix B in Revision 4 of the EMP) aligned to the management objectives in Section 4 and proposed timing of air quality (PM10) monitoring.</p>	<p>Life-of-mine PM10 data for the Douglas Mine indicates an extremely low risk of adverse air quality impacts to sensitive receptors (occupied private residences within a 5km radius of Pit 23).</p> <p>The implementation of PM10 monitoring only in the Pit 23 rehabilitation phase is justified</p>	No

Plan Name	Environmental Management Plan (EMP)
Previous Endorsed Revision	Rev 4 (5 th April 2017)
Current Endorsed Revision	Rev 5.1 (23 rd September 2021)

Section (Page)	Amendment	Reason for Amendment	Change in Risk Profile
		based on the extensive monitoring history for the Douglas site and represents a legitimate risk-based approach whilst still satisfying Condition 33(b) of the Permit. (i.e. there is no dust/PM10 impact pathway during the Pit 23 operations phase).	
10.1 (111) Noise	Minor restructure consistent with other risk management sections of the EMP (e.g. GWMMP, SWMMP). Added a new section “ <i>Objectives, monitoring program, triggers and contingency</i> ” (formerly captured as Appendix B in Revision 4 of the EMP) aligned to the management objectives in Section 4.	---	No
10.2 (115) Weeds	Minor restructure consistent with other risk management sections of the EMP (e.g. GWMMP, SWMMP). Weeds section of EMP now differentiates between the risks posed by weeds between the operations and rehabilitation phases, and only proposes monitoring and management in the latter phase. Added a new section “ <i>Objectives, monitoring program, triggers and contingency</i> ” (formerly captured as Appendix B in Revision 4 of the EMP) aligned to the management objectives in Section 4.	Weed monitoring and management not justified in the operations phase on basis of risk.	No
10.3 (119) Vehicle Hygiene	Restructure consistent with other risk management sections. No material amendments from prior EMP (Rev 4)	N/A	N/A
10.4 (123) Public Safety	Restructure consistent with other risk management sections. Updated risk assessment commentary to reflect learnings from geotechnical audits undertaken post-issue of the Planning Permit. No material amendments from prior EMP (Rev 4)	N/A – minor edits only to reflect prior audit outcomes	No

Plan Name	Environmental Management Plan (EMP)
Previous Endorsed Revision	Rev 4 (5 th April 2017)
Current Endorsed Revision	Rev 5.1 (23 rd September 2021)

Section (Page)	Amendment	Reason for Amendment	Change in Risk Profile
12.1 (128) Routine Reporting	Updated proposed structure of EMP and Rehabilitation Performance Reports	The updated structure for reports reflects feedback received from EPA Accredited Auditors on previous performance reports.	N/A
12.2 (128) Exception Reporting	This section revised to refer back to other sections of the plan where trigger responses, contingency actions and exception reporting requirements are specified.	This is an improvement aimed to minimize duplication and avoid misunderstanding as to when exception reports are required. Duplication of content regarding trigger responses, contingency measures and exception reporting was identified in the prior iteration of the EMP (Rev 4).	N/A
13 (130)	Minor restructure only to improve clarity	N/A	N/A
14 (132)	Changed plan review and amendment frequency from two (2) to three (3) years	Considered that this revision of the EMP (Rev 5.1) represents a major update and incorporates updated understanding of the environmental setting and risk (notably for groundwater and surface water. Likewise the document now aligns to updated legislation and SEPP policies which are unlikely	N/A

Plan Name	Environmental Management Plan (EMP)
Previous Endorsed Revision	Rev 4 (5 th April 2017)
Current Endorsed Revision	Rev 5.1 (23 rd September 2021)

Section (Page)	Amendment	Reason for Amendment	Change in Risk Profile
		to change in the foreseeable future, On this basis a 3-year default review cycle is appropriate.	
APPENDIX A (138) RARP Risk Register	Major update – refer commentary herein regarding revised approach to the RARP and the risk framework applied.	---	---

Iluka Resources Ltd – Pit 23 Facility (HRCC Planning Permit 15-105) List of Amendments to Incoming Waste Monitoring Plan (IWMP)

Plan Name	Incoming Waste Monitoring Plan (IWMP)
Previous Endorsed Revision	Rev 4 (5 th April 2017)
Current Endorsed Revision	Rev 5 (29 th October 2019)

Section (Page)	Amendment	Reason for Amendment	Change in Risk Profile
Maps	All maps updated to show latest aerial imagery. Regional and site location maps standardised across all three management plans.	General update only	N/A
1.4 (7)	Added text summarising approved waste streams and source sites as per Condition 6 of the Permit. Revised text regarding constraints on disposal of material – re-worded to ' <i>minimum cap depth of 5m</i> ' to align with wording of the R&VMP, and wording of Condition 36(e) in the Planning Permit.	Alignment of wording in the Planning Permit and the R&VMP.	N/A
1.4.1 (7)	Added section to clearly specify: <ul style="list-style-type: none"> - wastes not approved for disposal to Pit 23; - wastes and other materials approved for disposal to, or used for Pit 23 disposal and 	To remove ambiguity as to application of the IWMP to miscellaneous waste streams, interim cover / capping material and rehabilitation resources.	N/A

Plan Name	Incoming Waste Monitoring Plan (IWMP)
Previous Endorsed Revision	Rev 4 (5 th April 2017)
Current Endorsed Revision	Rev 5 (29 th October 2019)

Section (Page)	Amendment	Reason for Amendment	Change in Risk Profile
	rehabilitation, but outside the scope of the IWMP		
2.2.1 (11)	Added point that MSP by-products also includes any combination of wet circuit, dry circuit and gypsum waste streams	Blending of waste streams may be required to improve material handling and to satisfy 'spadeability' requirements for disposal to Pit 23	N/A
2.2.3 (12)	Added text noting that NORM-contaminated concrete and steel typically presents as fixed surface-contamination within paints, coatings and scale.	Followings learnings from demolition of the Iluka WRP and Douglas Mine mineral concentrating plants completed in 2019, including results of sampling and analysis of surface coatings.	N/A – Contextual information only
3.1.1 (12)	Added paragraph outlining alternative sampling procedures that will apply to MSP by-products under non-routine operations (e.g. maintenance shutdown and plant idle periods). Specific reference added to representative sampling as the method to apply for sampling of MSP by-products under non-routine operations based on the EPA IWRG Publication 702 as best practice guideline on number of samples required relative to the volume of material sampled.	Under normal MSP operations most sampling and measurement systems relevant to by-products are automated – these systems are not available in shutdown or idle periods (non-routine operations). The shutdown or idle of the MSP does not preclude the consignment of by-products to Pit 23 (e.g. remaining stockpiled material, material generated through maintenance activities). Alternative means of sampling by-products and demonstrating compliance with the IWMP and Pit 23 acceptance criteria therefore required.	No – Alternative sampling procedures generate equivalent analytical data required to satisfy the IWMP and incoming waste acceptance criteria. Representative sampling is standard practice and will follow EPA guidelines.
3.1.2 (13)	Revised to reference that internal Iluka laboratories or external NATA-accredited laboratories may be used for analysis of MSP by-products.	Previous iteration of IWMP noted only the Hamilton MSP as the laboratory to be used for such analysis, however the MSP laboratory ceased on idling of the Hamilton MSP in October 2017. The use of external laboratories is therefore required where internal laboratories are not available.	No – The analytical method used for by-product analysis is the same irrespective of the laboratory used.

Plan Name	Incoming Waste Monitoring Plan (IWMP)
Previous Endorsed Revision	Rev 4 (5 th April 2017)
Current Endorsed Revision	Rev 5 (29 th October 2019)

Section (Page)	Amendment	Reason for Amendment	Change in Risk Profile
3.3 (14)	Included key notation that the classification of contaminated objects as radioactive per the <i>Radiation Regulations 2017</i> is based on the overall mass of the material.	The classification of surface-contaminated objects as radioactive considering the overall mass of the object is supported by DHHS. This approach is in accord with the Regulations and optimizes the recovery of scrap material in the recycling stream and avoids unnecessary disposal to Pit 23.	No – Improves recovery of waste steel and concrete for re-use or recycling
3.2.1 (13)	Added reference to sampling every dust filter bag where the number of filter bags numbers five (5) or less	Limited quantities of used filter bags may be generated – i.e. during plant idle periods. The existing reference to sampling from “ <i>at least five filter bags per consignment</i> ” assumes that all consignments of used filter bags will be large with >5 samples referring to an appropriate representative sample size to account for statistical variation in analytical results. Representative sampling only applies to large volume or quantity of material.	No – Sampling of every filter bag (when applicable) is appropriate for smaller consignments.
3.3.2 (14)	Expanded on the basis for disposal of NORM-contaminated concrete and steel into Pit 23, including further detail on methodologies that may be used to analyse and characterise the radiological contamination and radionuclides comprising such contamination.	Adopts learnings from demolition of the Iluka WRP and Douglas Mine concentrating plants in 2019. Also adopts guidance from DHHS on the process for material classification and basis for material disposal to Pit 23.	No – Process to classify material for disposal to Pit 23 aligns to the Permit and Radiation Regulations
6 (18)	Changed plan review and amendment frequency from two (2) to three (3) years	Considered that the plan is now robust having applied key learnings from the idling of the Hamilton MSP (as it relates to alternative processes for by-product sampling and analysis) and demolition projects (as it relates to NORM-contaminated steel and concrete analysis and classification for disposal). On this basis a 3-year default review cycle is appropriate.	N/A
4.4 (12 – 14) Table 3	Updated table to more closely align with text descriptions in main body of plan.	Formatting only	N/A

APPENDIX D

**Iluka EMP & RVMP Performance
Report H1 2021**



Iluka Resources Limited Mineral Sands By-Product Disposal

Planning Permit 15-105

**Crown Allotments 91, 94, 95, 96
Parish of Telangatuk**

Environmental Management Plan and Rehabilitation Performance Report – H1 2021

Iluka Ref: UDOCS 0090-426461582-2780

Contact:
Ian Williams
Environment Superintendent, Murray Basin
ian.williams@iluka.com

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1 Executive Summary

Iluka Resources Limited (Iluka) operates the Pit 23 by-products disposal facility located at the Douglas Mine in the Kanagulk area and within the municipality of the Horsham Rural City.

Pursuant to Planning Permit 15-105 issued by Horsham Rural City Council (HRCC), and the subsidiary Pit 23 Incoming Waste Monitoring Plan (IWMP), the Pit 23 facility is approved for the disposal of mineral separation by-products and used dust filter bags from the Iluka Hamilton Mineral Separation (MSP) which contain or are contaminated with Naturally Occurring Radioactive Material (NORM), and concrete and steel which contains or is contaminated with NORM associated with plant and infrastructure from nominated Iluka sites within Victoria.

Complementing the IWMP are the endorsed Pit 23 Environmental Management Plan (EMP) which addresses the identification, management and monitoring of environmental risks associated with the approved development and use; and the endorsed Rehabilitation and Vegetation Management Plan (R&VMP) which addresses the future rehabilitation of the Pit 23 facility including infrastructure decommissioning, landform reinstatement and end land use.

This report is submitted in accordance with Section 12.2 of the endorsed Iluka Pit 23 EMP and outlines the results of monitoring and management actions undertaken during the period 1st January 2021 to 30th June 2021.

Key commentary on environmental monitoring outcomes and performance against compliance objectives in the Pit 23 EMP for the H1 2021 reporting period:

- There were no exceedances of applicable limits for radionuclides or any other analytes in groundwater in compliance bores down-gradient of Pit 23 attributable to disposal activities;
- There were no surface water discharges from the Pit 23 disturbance area;
- There were no exceedances of applicable limits for radionuclides or any other analytes in groundwater-fed surface water sites down-gradient of Pit 23 attributable to disposal activities;
- No noise complaints were received;
- There were no exceedances of the PM₁₀ limit attributable to Pit 23 operations;
- There were no exceedances of the air concentration limits for radon or thoron;
- Measured concentrations of gross alpha radiation in airborne dust were within the range of historical values;
- Updated groundwater level contours and flow-paths show no material change from the hydrogeological model contours developed in 2019 by EMM and
- An administrative non-compliance was reported for excluded Uranium₂₃₈ analysis during February and March.

Detailed assessment of compliance, key results and management actions are provided in Section 4 and 5 of the enclosed report.

2 Introduction

Iluka Resources Limited (Iluka) operates the Pit 23 by-products disposal facility located at the Douglas Mine in the Kanagulk area and within the municipality of the Horsham Rural City (Figure 1 and Figure 2).

Pursuant to Planning Permit 15-105 issued by Horsham Rural City Council (HRCC), and the subsidiary Pit 23 Incoming Waste Monitoring Plan (IWMP), the Pit 23 facility is approved for the disposal of mineral separation by-products and used dust filter bags from the Iluka Hamilton Mineral Separation (MSP) which contain or are contaminated with Naturally Occurring Radioactive Material (NORM), and concrete and steel which contains or is contaminated with NORM associated with plant and infrastructure from nominated Iluka sites within Victoria.

2.1 Planning Permit 15-105

Under the Horsham Planning Scheme the subject land is in the Farming Zone and under the provisions of that zone a permit is required for use and development for Industry (Refuse Disposal). On 25th February 2017 Planning Permit 15-105, (the Permit) was issued by the Horsham Rural City Council as the Responsible Authority to allow:

Use and development of the land for the disposal of waste by-products associated with or sourced through mineral sands processing undertaken at the Hamilton Mineral Separation Plant (MSP), including waste by-products and contaminated materials resulting from the processing and transport operations as follows:

- *By-products from the processing of heavy mineral concentrate at the Hamilton MSP;*
- *used dust filter bags from the Hamilton MSP; and*
- *Other chemically inert material contaminated with naturally occurring radioactive material.*

in accordance with the endorsed plans.

2.2 Commencement of the Permit

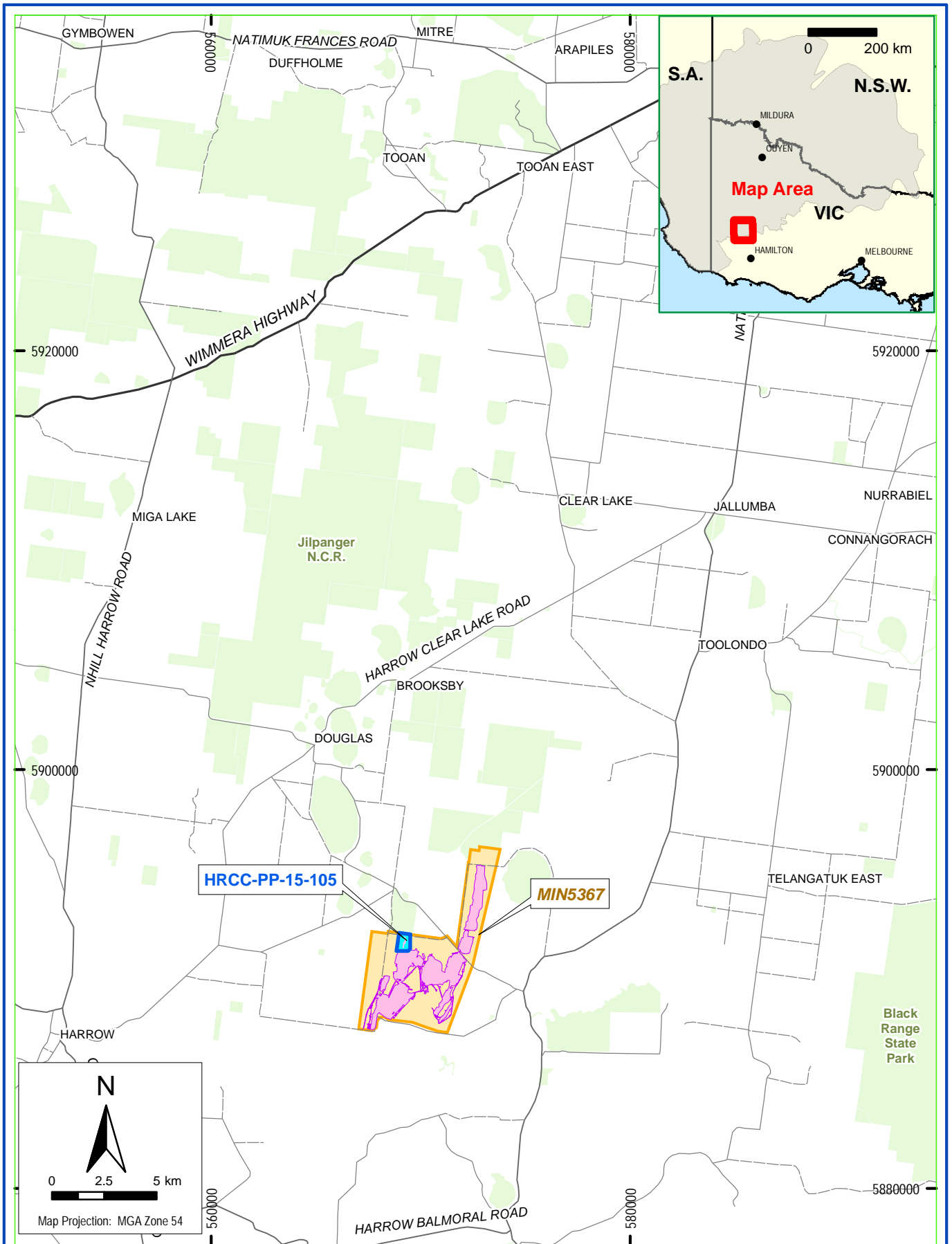
Condition 1 of the Permit states:

This permit does not come into operation until:

- a. *Iluka has applied to the Department of Economic Development, Jobs, Transport and Resources to vary the 2003 Work Plan to identify a new endues utilisation of Pit 23 and to vary the rehabilitation plan; and*
- b. *Iluka has applied to the Minister to surrender part of MIN 5367 (Pit 23); and*
- c. *The Department of Economic Development, Jobs, Transport and Resources has approved the Work Plan Variation; and*
- d. *The Minister has registered the partial surrender of MIN 5367.*

The permit comes into operation on the same day the Work Plan Variation is approved, and the partial surrender of MIN 5367 is registered.

The Variation to the 2003 Douglas Mine Work Plan was approved on the 13th April 2017, and the partial surrender of MIN5367 was registered on 11th May 2017, this being the date of commencement of the Permit.



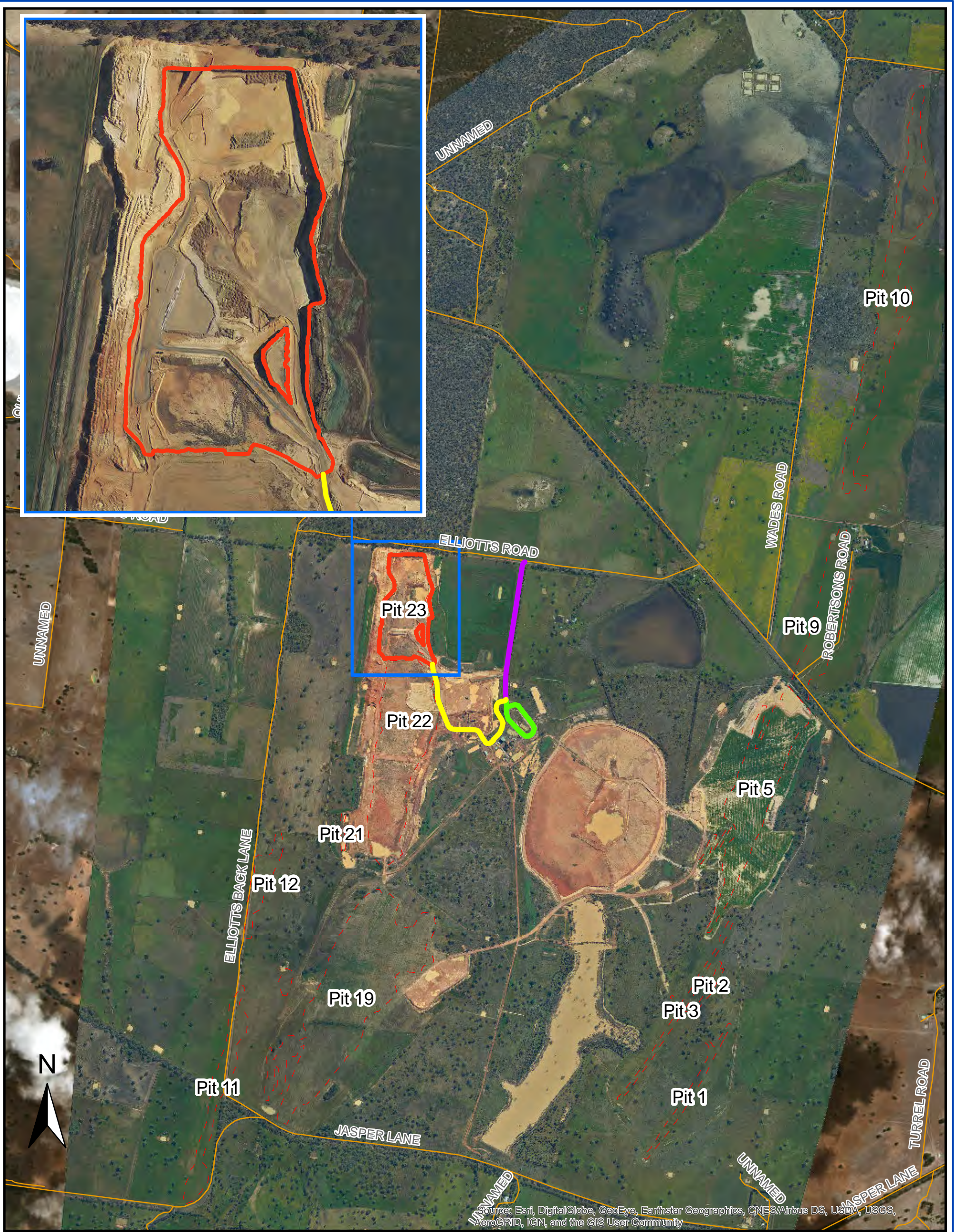
Legend

- Douglas mine
- Pit 23
- HRCC-PP-15-105
- MIN5367 tenement

DOUGLAS

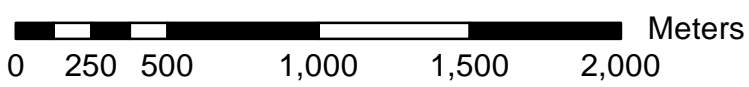
LOCATION PLAN





Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community

Legend	
	Pit 23 haul road
	Mine Access Road
	Truck wash circuit
	Pit 23 crest
	Pit Crests
	Roads



LOCATION OF PIT 23



2.3 Endorsed Plans

Conditions 2, 3, 9, 14, 16 and 34 of the Permit relate to various management plans that once approved by the Responsible Authority will be endorsed to form part of the Permit, which includes:

- Incoming Waste Monitoring Plan (IWMP);
- Environmental Management Plan (EMP), incorporating;
 - Groundwater Monitoring and Management Plan (GWMMP);
 - Surface Water Monitoring and Management Plan (SWMMP);
 - Air Quality/Dust Control Plan (AQMP); and
- Rehabilitation and Vegetation Management Plan (R&VMP)

The plans were endorsed by Horsham Rural City Council on 17th July 2017

A review of the EMP (Rev 4) and IWMP (Rev 4) was undertaken in 2020 with the revised plans (Rev 5.1 and 5 respectively) submitted to HRCC for review and approval on the 16th of December 2020. HRCC provided formal endorsement of the plans on the 29th September 2021. A summary of amendments to the EMP and IWMP is provided in **Appendix A**.

2.4 Performance reporting

Section 12.1 of the endorsed EMP (Rev 5.1, September 2021) outlines the routine reporting requirements for the mineral sands by-product disposal operations which are:

A review of performance will be completed and an EMP and Rehabilitation Performance Report prepared annually on a calendar year basis, or as otherwise agreed with the Responsible Authority.

The structure and content of each report will follow that given in Table 49. Where no activities applied in the reporting period for a certain aspect or activity this will be referenced as “Not Applicable” in the report with a brief supporting explanation provided.

Table 49: Structure of EMP and Rehabilitation Performance Reports

Item	Information to be provided
General	
<i>Applicable Reporting Period</i>	<i>Time period covered by report</i>
<i>Executive Summary</i>	<i>Summary of compliance to environmental objectives Summary of rehabilitation activities and performance</i>
Waste Disposal Summary	
<i>Waste Disposed</i>	<i>Summary of waste volumes disposed in the reporting period</i>
<i>Pit Backfill Status</i>	<i>The maximum elevation of the upper surface of materials disposed of at the end of the reporting period.</i>
Environmental Performance	
<i>Groundwater</i>	<i>Reporting as detailed in GWMMP (Table 19)</i>
<i>Surface Water</i>	<i>Reporting as detailed in SWMMP (Table 28)</i>
<i>Air Quality</i>	<i>Reporting as detailed in AQMP (Table 35)</i>
<i>Noise</i>	<i>Reporting as detailed in Table 39</i>
<i>Weeds</i>	<i>Reporting as detailed in Table 42</i>
<i>Vehicle Hygiene</i>	<i>Reporting as detailed in Table 45</i>
<i>Public Safety</i>	<i>Reporting as detailed in Table 48</i>
Rehabilitation Performance	
<i>Rehabilitation Summary</i>	<i>Detailed summary of rehabilitation activities undertaken in the reporting period (e.g. decommissioning, overburden return, revegetation activities).</i>
Other	
<i>Comments / Complaints</i>	<i>Summary of comments / complaints received and resulting actions</i>
<i>Outlook</i>	<i>Plans for the next reporting period</i>
<i>Other Matters</i>	<i>Discussion on other matters considered relevant by the Responsible Authority or Iluka.</i>
<i>Plan Amendment(s)</i>	<i>Summary of any amendments/updates to the EMP, IWMP or R&VWMP in the reporting period (if applicable)</i>

Per Section 13.1.2 of the EMP, the EMP and Rehabilitation Performance Reports will be subject to review by an independent auditor prior to submission to the Responsible Authority.

2.5 Rehabilitation and Vegetation Management Plan

Due to continued operations within Pit 23 no actions relevant to rehabilitation and vegetation management were undertaken in the H1 2021 reporting period.

3 Delivery and Disposal of Materials into Pit 23

During the H1 2021 reporting period 760.4 tonnes of wastes were disposed into Pit 23 in accordance with permit requirements.

4 Monitoring Results

4.1 Groundwater

4.1.1 Bore network status

The Pit 23 bore network includes additional monitoring bores installed in 2018 per the recommendations in the independent desktop review of proposed by-product disposal (EES, 2016). Since the installation of these bores, the augmented bore network satisfies Condition 28(c) of the Permit.

In accordance with Section 7.5.1 of the current endorsed EMP (Rev 5.1, September 2021) groundwater monitoring bores are designated as compliance, impact or background as defined in Table 1.

Table 1: Pit 23 groundwater monitoring bores categories

Category	Description
Impact Bores	Bores immediately adjacent the Pit 23 crest and expected to be influenced by historical mine/tailings disposal, as based on groundwater arrival time predictions (EMM, 2019) and Pit 23 solute transport modelling (per Jacobs, 2016). Not subject to exceedance reporting.
Compliance / Indicator Bores	Bores not impacted by mining or Pit 23 by-product disposal activities and sited down-gradient of Pit 23 and directly on the path of groundwater flow. These bores are used to indicate the occurrence (or otherwise) of potentially-contaminated groundwater flows from Pit 23 and adverse impacts on stock water beneficial use. Subject to exceedance reporting.
Background Bores	Bores sited up-gradient, cross-gradient and far down-gradient of Pit 23 and representative of local or broader background groundwater condition not associated with Pit 23. Monitoring of these bores allows comparison of groundwater trends or observations in nominated compliance bores. Not subject to exceedance reporting.

The category and status of the Pit 23 monitoring bore network is given in Table 2.

Monitoring bore locations are provided in Figure 3.

Table 2: Pit 23 bore status (as at 30/06/2021)

Well ID	Comment	Status / Condition
IMPACT BORES		
WRK300	Adjacent Pit 23 pit crest (NE corner)	OK
BW36A	Adjacent Pit 23 pit crest (NW corner)	OK
COMPLIANCE / INDICATOR BORES		
GW01	Down-gradient / on flow path	OK
GW02	Down-gradient / on flow path	OK
GW03	Down-gradient / on flow path	OK
GW04A	Down-gradient / on flow path	OK
BACKGROUND BORES		
WRK301	Up-gradient of Pit 23	OK
GW04	Cross-gradient of flow path	OK
GW05	Cross-gradient of flow path	OK
WRK302	Up-gradient of Pit 23	OK

Well ID	Comment	Status / Condition
GW06	Up-gradient of Pit 23	OK
GW08	Up-gradient of Pit 23	OK
GW07	Up-gradient of flow path	OK
BW45B	Cross-gradient of flow path	OK
BW28A	Cross-gradient of flow path	OK
BW05	Far down-gradient	OK
IWB2	Background - other	OK
IWB6	Background - other	OK

4.1.2 Bore monitoring schedule

As per Section 7.5 of the EMP bi-annual sampling and analysis will continue for all bores listed in Table 2 above.

Compliance bores (GW01, GW02, GW03 and GW04A) will in addition be sampled in all remaining months outside of bi-annual sampling with a reduced suite of analytes to align with the site specific water quality objectives that have been set for analytes (pH – lower criterion, Se and U₂₃₈ along with ionic ratio's Na:Ca and Cl:SO₄) whose natural background values exceed the groundwater objectives, thereby, the background values become the groundwater objectives.



Site photo: 5 Oct. 2018

DOUGLAS MINE PIT 23 MONITORING BORE NETWORK



4.1.3 Standing water levels

In accordance with Section 7.5 of the current endorsed EMP (Rev 5.1, September 2021) groundwater level monitoring will be undertaken in the course of groundwater quality sampling.

Groundwater level hydrographs for these bores (expressed in groundwater elevation (metres above Australian Height Datum, mAHD)) are provided in Table 3 and Figure 4 – **Error! Reference source not found.** Data includes that obtained during scheduled events and ad-hoc measurements.

All bores along the predicted flow path (Figure 4) have exhibited stable standing water levels in the preceding 24-month period and in comparison to long-term trends; background bores and bores up and cross-gradient of Pit 23 (**Error! Reference source not found.** and **Error! Reference source not found.**) have exhibited relatively stable water levels with minor fluctuation.

Table 3: Monitoring bores - standing water levels (mAHD)

Bore ID	Jan-21	Feb-21	Mar-21	Apr-21	May-21	Jun-21
IMPACT BORES						
WRK300	175.2	*	*	*	*	*
BW36A	174.4	174.5	*	*	174.5	*
INDICATOR / COMPLIANCE BORE:						
GW01	173.5	173.5	173.5	173.5	173.5	173.5
GW02	170.8	170.8	170.8	170.9	170.8	170.8
GW03	162.0	162.0	161.9	162.0	162.0	162.0
GW04A	177.0	177.0	177.1	177.1	177.2	177.2
BORES REPRESENTATIVE OF BACKGROUND						
WRK301	178.2	*	*	*	*	*
GW04	178.3	*	*	*	178.3	*
GW05	178.9	*	*	*	179.0	*
WRK302	176.7	*	*	*	176.8	*
GW06	176.2	*	176.2	*	176.2	*
GW08	177.6	*	177.6	*	177.5	*
GW07	172.5	*	*	*	172.6	*
BW45B	177.4	177.5	*	*	177.4	*
BW28A	152.6	152.5	*	*	152.5	*
BW05	147.5	*	*	*	147.5	*
IWB2	179.7	*	*	*	179.7	*
IWB6	176.6	*	*	*	176.9	*
Notes						
<ul style="list-style-type: none"> dates marked with an asterisk (*) indicates no scheduled sampling required 						

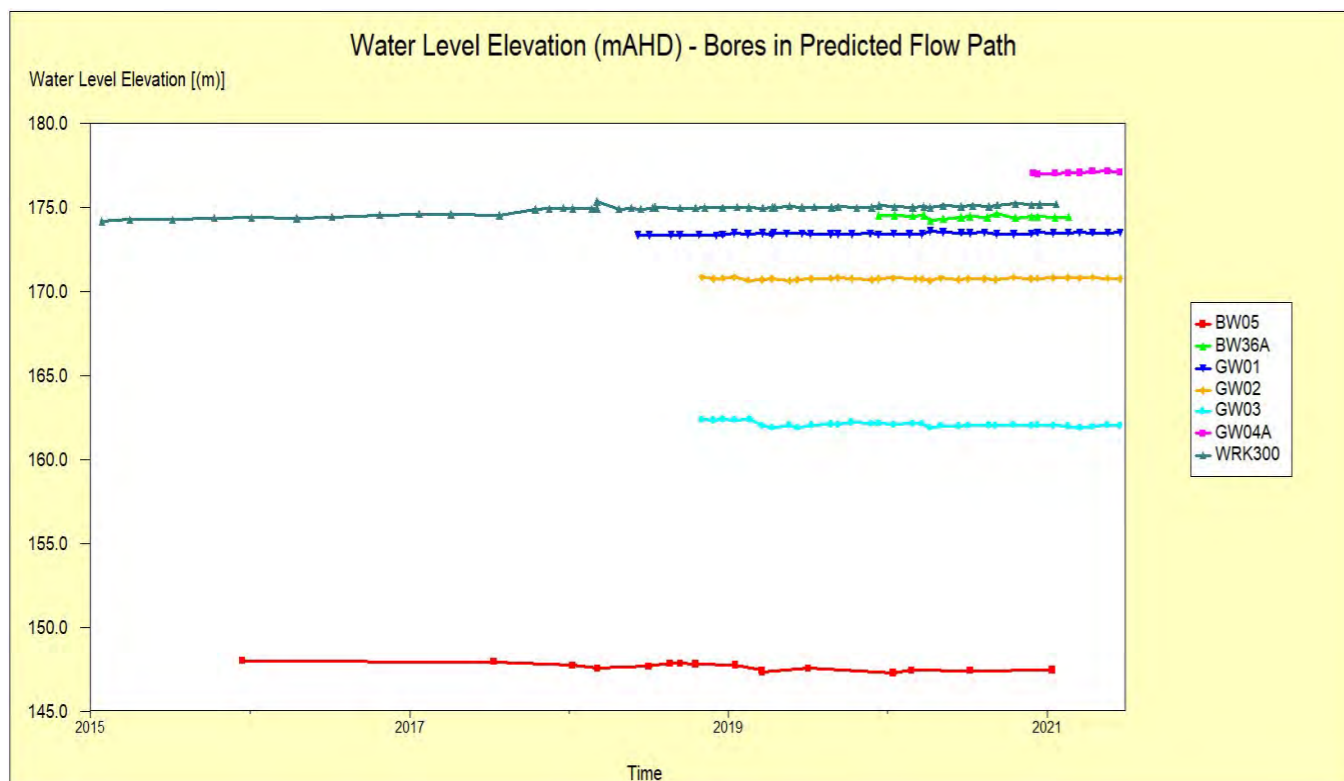


Figure 4: Groundwater elevation (mAHd) – bores in predicted flow path

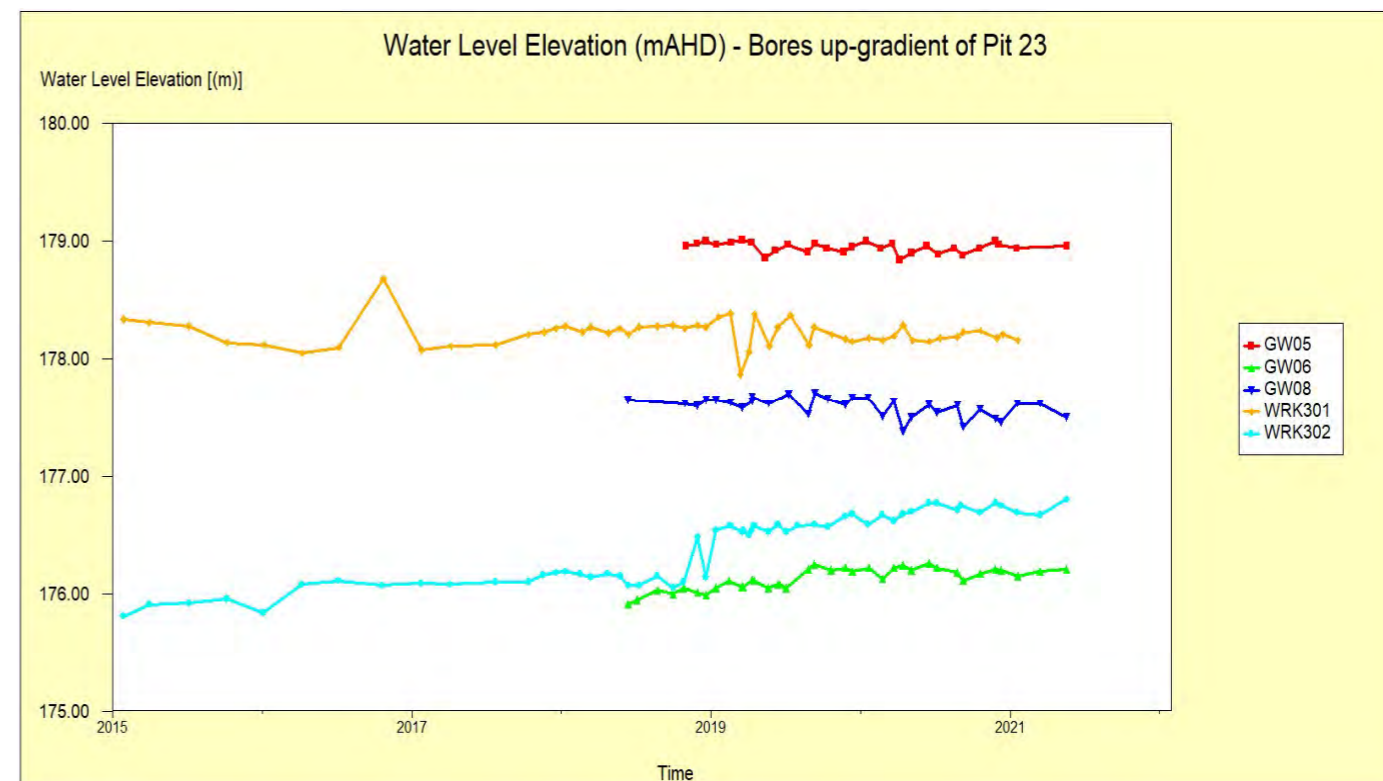


Figure 5: Groundwater elevation (mAHd) – up-gradient bores

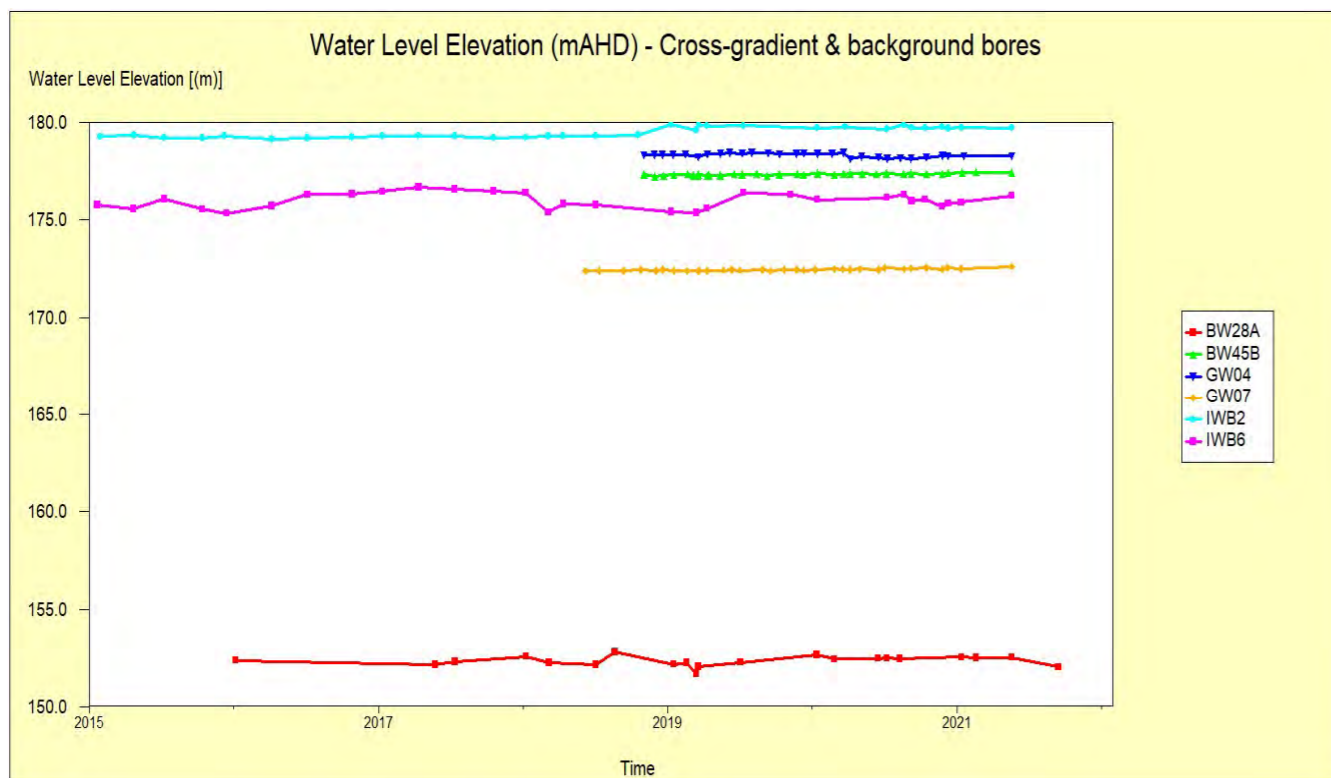


Figure 6: Groundwater elevation (mAHd) – up-gradient bores

4.1.4 Groundwater quality

As per Section 7.3.2 of the EMP groundwater is dominated by the Na-Cl ion pair whereas the results of laboratory leach tests on MSP by-products show that leachate is dominated by the Ca-SO₄ ion pair. Thus, leachate migration would be indicated by a decline in the Cl:SO₄ and Na:Ca ratios as the concentrations of sulfate or calcium increases relative to the concentrations of chloride or sodium, respectively.

Groundwater water quality objectives (GWQOs) are used to evaluate changes in groundwater chemistry that may be associated with seepage from Pit 23, however, objectives for these ionic ratios are not prescribed in the SEPP (Waters) and the GWQOs for these ratios do not apply as standalone limits to be maintained and are only taken into consideration where they correspond to a simultaneous trend of concern in one or more other analytes. I.e. they are used to confirm the likelihood of a Pit 23 related influence on groundwater quality and expression into surface waters where trends of concern are first observed for other analytes.

Per Section 7.6 of the EMP in the event that an exceedance of one or more GWQOs occurs the following will occur:

- Follow up confirmation sampling and analysis
- Referring to the predicted groundwater particle arrival times from the updated hydrogeological model (per EMM, 2019), confirmation of the arrival of seepage from Pit 23 in a bore will be assumed if all the below apply:
 - the results of the follow-up sampling and analysis confirms a continued adverse trend/exceedance;
 - the exceedance(s) correspond with a simultaneous trend of concern/exceedance in Cl:SO₄ and/or Na:Ca ratios;
 - the results are not consistent with the natural background chemistry in that bore or bores; and
 - the timing of the above adverse trends/exceedances is less than 90% of that predicted in the hydrogeological model (i.e. seepage from Pit 23 may have arrived at the bore(s) sooner than expected).

Calculated Cl:SO₄ and Na:Ca ratios and Radionuclide results for the reporting period are given in Table 4. As above, this includes ratios as determined from the results of scheduled and follow-up sampling. During the reporting period there was one elevated result of Selenium received from groundwater bore GW01 in January 2021, however, follow up sampling taken in February show the results for Selenium returned to below the GWQO of 0.06mg/L.

Groundwater sampling and analysis QA/QC assessment and validation provided by external laboratories did not report any non-conformances.

Analysis of Uranium²³⁸ was excluded from the analysis suite in February and March for each of the compliance bores (GW01, GW02, GW03 and GW04A) due to an administrative error. It is believed that the recent changes to the groundwater monitoring program, with the implementation of the Pit 23 EMP (Rev 5.1) groundwater monitoring commitments, may have resulted in the contractor, who undertakes groundwater monitoring on behalf of Iluka, failing to identify the need to analyse for this parameter at the above mentioned monitoring bores.

Results for U₂₃₈ at the compliance bores GW01, GW02, GW03 and GW04A have historically been at below detection levels and ionic ratio levels for February and March are within long term averages. Given that follow up scheduled monitoring (as per Table 4) showed results in line with historical values i.e. below detection level, it is considered unlikely that elevated U₂₃₈ concentrations at these bores during February and March would have been detected.

A notification of the excluded analysis from scheduled monitoring was submitted to HRCC on the 4th of May 2021

The laboratory notified a non result for U₂₃₈ analysis at bore GW03 during the April sampling event due to a blocked matrix. Similar to the discussion above regarding the missed analysis of U₂₃₈, it is considered unlikely that an elevated U₂₃₈ concentration at this bore during April would have been detected given that analysis in following months show values in line with historical range i.e. below detection level.

Analyte concentrations above GWQO's, radionuclide concentrations and ionic balance ratio's are presented in Table 4 and Figure 7 - Figure 10.

All groundwater quality monitoring data (laboratory and field data) for the reporting period for all parameters monitored is provided in **Appendix B** and **Appendix C** of this report, respectively.

Table 4: Compliance monitoring bores – groundwater quality results

Bore ID	Date	U-238	Ra226	Ra228	Cl:SO4	Na:Ca	Se	Groundwater Travel Time (Years) *
		(Bq/L)	(Bq/L)	(Bq/L)	Ratio	Ratio	(mg/L)	
GWQO's		0.2	5	2	<3.8	<6.4	0.06	
COMPLIANCE / INDICATOR BORES								
GW01	7/06/2018	<0.025	<0.05	<0.08	8.4	6	0.002	88 years
	15/01/2019	<0.025	0.48	1.36	8.5	27.7	0.052	
	20/03/2019	<0.025	0.48	0.72	8.3	29.4	0.054	
	15/04/2019	<0.025	0.4	1.2	10	25.3	0.048	
	14/05/2019	<0.025	0.47	1.36	9.4	32.8	0.05	
	18/06/2019	<0.025	0.46	1.29	8	32.1	0.07	
	8/07/2019	<0.025	0.28	0.77	8.5	32.7	0.039	
	15/01/2020	<0.025	0.32	0.81	7.4	20.7	0.063	
	20/02/2020	<0.025	0.32	0.9	7.6	26.0	0.018	
	7/07/2020	<0.025	0.24	0.72	6.6	24.4	0.025	
	10/08/2020	<0.025	0.13	0.42	7.7	23.1	0.024	
	14/01/2021	<0.025	0.48	1.06	7.1	28.8	0.062	
	17/02/2021	DNS	NR	NR	6.3	28.8	0.031	
	15/03/2021	DNS	NR	NR	6.9	24.7	0.026	
	13/04/2021	<0.025	NR	NR	7.4	24.7	0.025	
	19/05/2021	<0.025	NR	NR	8.3	25.0	0.019	
16/06/2021	<0.025	NR	NR	7.2	22.1	0.057		
GW02	28/11/2018	<0.025	0.05	0.11	5.1	34.2	0.003	144 years
	15/01/2019	<0.025	0.05	0.15	6	46.1	0.002	
	10/07/2019	0.296	0.1	0.32	7	61.9	0.002	
	14/01/2020	<0.025	0.05	0.14	6.2	63.2	0.003	
	3/03/2020	<0.025	0.08	0.27	6.9	70.6	0.002	
	2/07/2020	<0.025	0.1	0.33	5.0	57.1	0.003	
	10/08/2020	<0.025	0.09	0.31	5.7	63.2	0.004	
	14/01/2021	<0.025	0.11	0.34	6.3	70.0	0.003	
	17/02/2021	DNS	NR	NR	6.1	68.4	0.004	
	15/03/2021	DNS	NR	NR	5.6	65.0	0.002	
	8/04/2021	<0.025	NR	NR	5.7	66.7	0.002	

Bore ID	Date	U-238	Ra226	Ra228	Cl:SO4	Na:Ca	Se	Groundwater Travel Time (Years) *
		(Bq/L)	(Bq/L)	(Bq/L)	Ratio	Ratio	(mg/L)	
GWQO's		0.2	5	2	<3.8	<6.4	0.06	
	19/05/2021	<0.025	NR	NR	5.0	59.1	0.002	
	16/06/2021	<0.025	NR	NR	5.1	65.0	0.003	
GW03	28/11/2018	0.025	0.07	0.16	5.7	9.5	0.002	176 years
	15/01/2019	<0.025	<0.05	<0.08	5.3	7	0.001	
	19/02/2019	<0.025	<0.05	<0.08	5.6	10	0.001	
	10/07/2019	<0.025	0.01	<0.08	6.3	11.2	<0.001	
	14/01/2020	<0.025	0.01	<0.08	6	11.3	<0.001	
	2/07/2020	0.864	0.01	<0.08	5.8	11.2	<0.001	
	14/01/2021	<0.025			5.24	11.1	0.001	
	17/02/2021	DNS	NR	NR	5.69	11.2	0.002	
	15/03/2021	DNS	NR	NR	6.88	12.0	0.002	
	8/04/2021	NR	NR	NR	6	10.0	0.001	
	19/05/2021	<0.025	NR	NR	5.89	10.0	0.001	
	16/06/2021	<0.025	NR	NR	6.1	10.6	0.001	
GW04A	30/11/2020	<0.025	0.04	0.2	6.4	10.8	0.011	
	18/01/2021	<0.025	0.16	0.38	6.1	12.5	0.028	
	17/02/2021	DNS	NR	NR	6.6	10.8	0.012	
	15/03/2021	DNS	NR	NR	6.6	10.8	0.013	
	13/04/2021	<0.025	NR	NR	6.3	10.8	0.012	
	19/05/2021	<0.025	NR	NR	6.6	10.8	0.012	
	16/06/2021	<0.025	NR	NR	6.6	11.7	0.013	

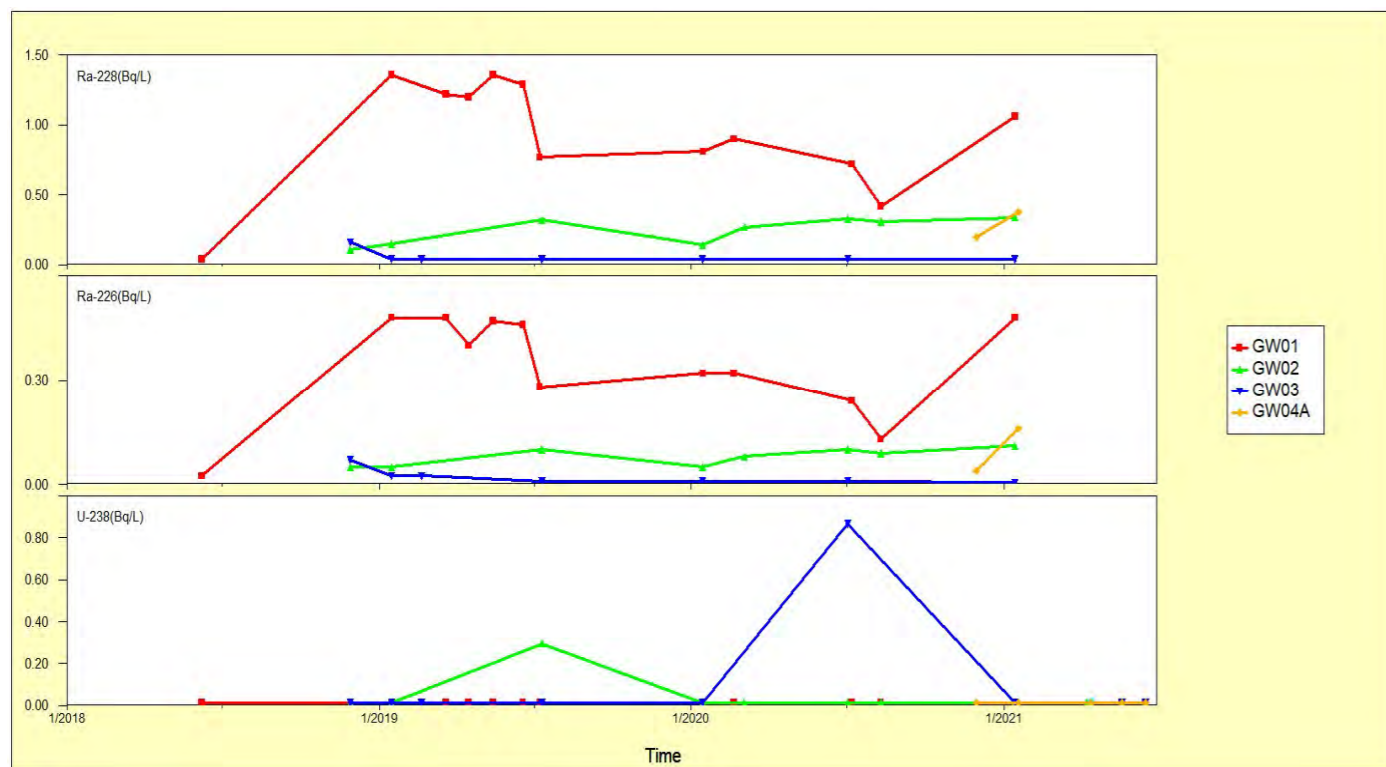


Figure 7: U-238, Radium 226 & Radium 228 trends – compliance bores (1 of 2)

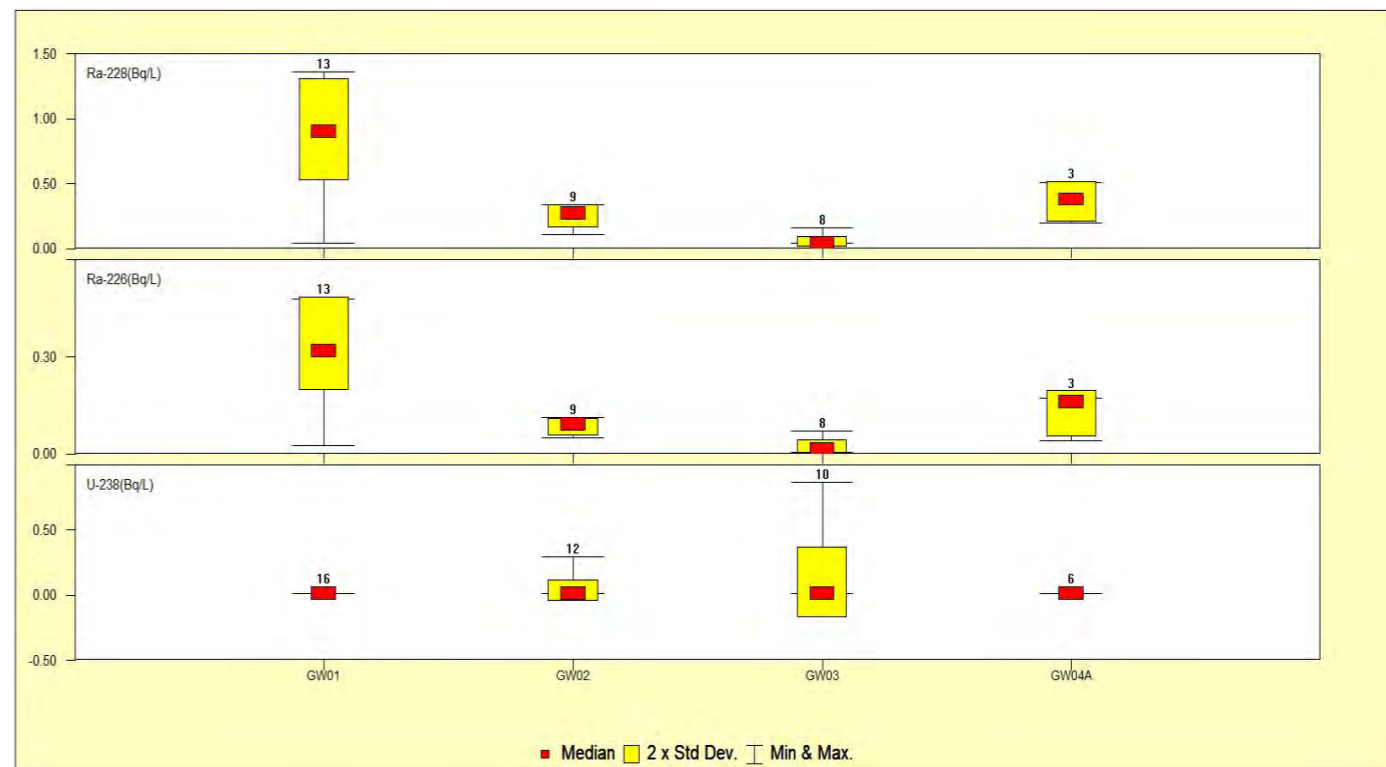


Figure 8: U-238, Radium 226 & Radium 228 trends – compliance bores (2 of 2)

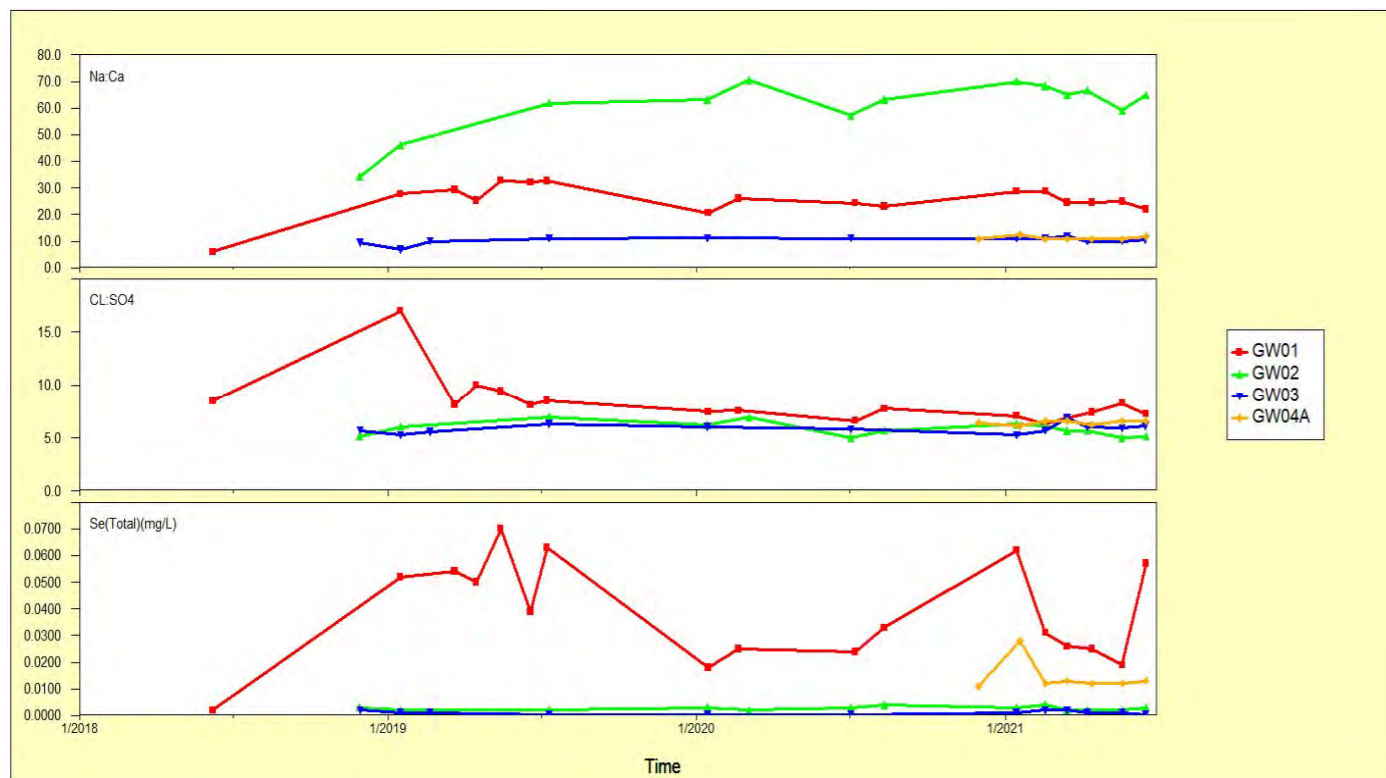


Figure 9: Selenium and ionic balance trends – compliance bores (1 of 2)

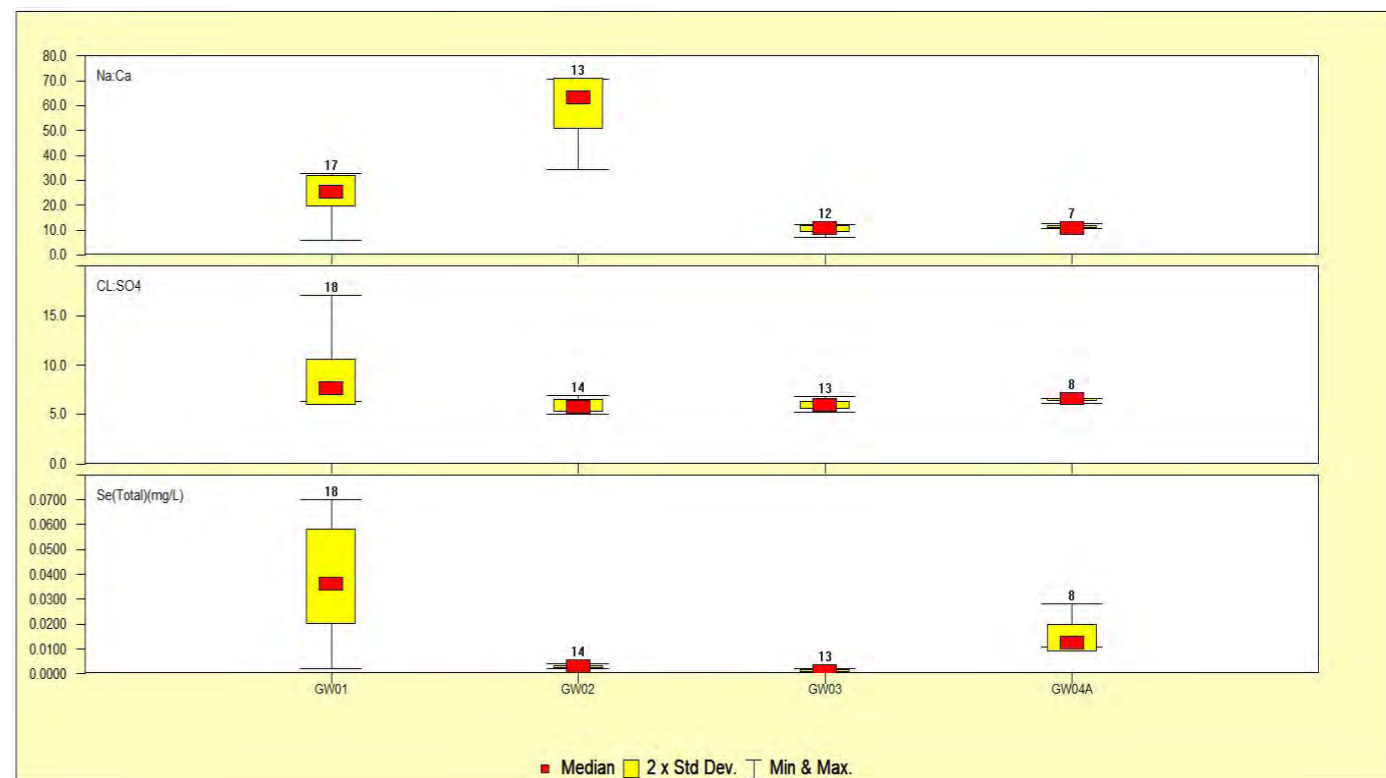


Figure 10: Selenium and ionic balance trends – compliance bores (2 of 2)

4.2 Surface water quality

4.2.1 Run-off fed surface water sites

In accordance with Section 8.4.3.2 of the EMP, surface water samples must be obtained from nominated run-off fed surface water monitoring points if a discharge of run-off from the disturbed area of Pit 23 and surrounds occurs.

No discharges occurred during the reporting period and subsequently no follow-up monitoring was required.

4.2.2 Groundwater-fed surface water sites

In accordance with Section 8.4.3.1 of the EMP, monthly surface water samples (when available) obtained from the nominated groundwater-fed surface water monitoring points down-gradient of Pit 23 (i.e. surface water features receiving groundwater base-flow) are analysed for a suite of target parameters to identify the potential expression of Pit 23 groundwater seepage.

No samples were able to be taken during the reporting period due to dry conditions, monitoring will continue in H2 2021.

Table 9 listed below lists surface water locations and sampling frequency.

Table 5: Surface water monitoring program

Receptor Sites	Frequency
Receptors: Groundwater-fed	
DUSW20 – North-west drainage line DUSW5B – White Lake DUSW24 – McGlashin Swamp	<ul style="list-style-type: none"> • Monthly; or • During or following an off-site discharge event (creek and drainage lines only)
Receptors: Runoff-fed	
DUSW11 – Chadwicks Wetland DUSW25 – Red Hill drainage line	<ul style="list-style-type: none"> • Monthly; or • During or following an off-site discharge event (creek and drainage lines only)

4.3 Noise

In accordance with Section 10.1.4 of the endorsed EMP, noise level measurements will be undertaken in the unlikely event that noise complaints are received.

No noise related complaints were received during the reporting period, and hence no noise levels measurements were undertaken.

4.4 Weeds

No Weeds of National Significance were identified during the reporting period.

4.5 Vehicle Hygiene

No incidents were identified during the reporting period.

4.6 Public Safety

No breaches of the security perimeter occurred during the reporting period.

4.7 PM₁₀ concentrations in air

In accordance with Sections 9.6 and 10.1.4 of the endorsed EMP, the concentration of PM₁₀ dust in air at the Lyon's and Chadwick's residences is measured using high volume ('hi-vol') air samplers on a one-in-six day monitoring cycle. The location of these hi-vol air samplers relative to Pit 23 are shown in Figure 12.

12-month rolling results for PM₁₀ compared to daily rainfall are shown in Figure 11. Results adhere to the expected year-on-year pattern of lower airborne PM₁₀ concentrations in winter months.

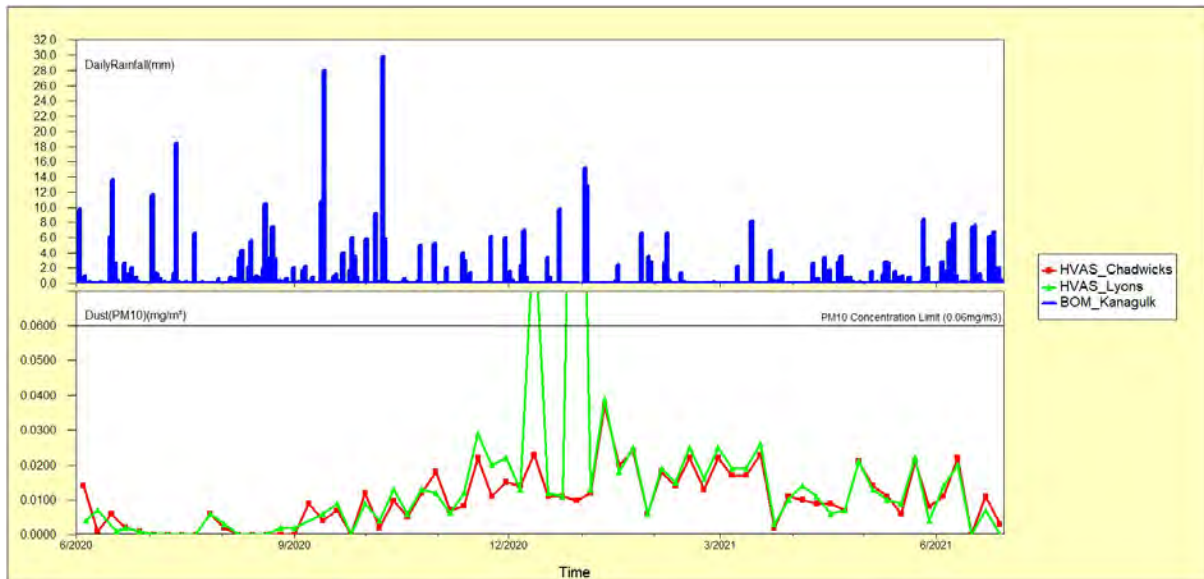


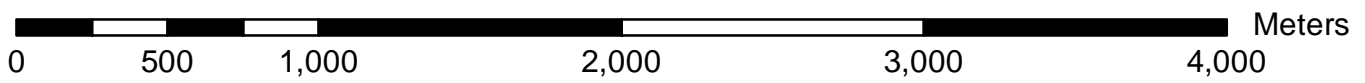
Figure 11: PM₁₀ dust concentrations at neighbouring residences vs. daily rainfall

No results above the PM₁₀ concentration limit (0.06 mg/m³) were recorded during the H1 2021.



Legend

- PM10 monitoring
- Pit 23 crest
- Pit Crests



AIR QUALITY MONITORING LOCATIONS (PM10 - Hi Vols)



4.8 Radiation monitoring – other

It is a requirement of the Iluka Radiation Management Licence 300042022 that works relating to the minerals sands by-product disposal into Pit 23 are conducted in accordance with a Radiation Management Plan (RMP) and a Radioactive Waste Management Plan (RWMP), including the monitoring programs under those plans, to ensure that radiation doses are below the prescribed limit.

Radiation monitoring relevant to this performance report includes:

- Radon concentrations in air;
- Gross alpha activity concentration of airborne dust; and
- Radionuclide concentrations in groundwater and surface water.

Results for radon concentrations in air and gross alpha activity concentration of airborne dust are detailed below. Results for radionuclides in groundwater and surface water are detailed in Sections **Error! Reference source not found.** and **Error! Reference source not found.**, respectively.

4.8.1 Radon concentrations in air

Monitoring of radon concentrations in air is undertaken at four locations within Pit 23 and at two residences east of Pit 23 (Chadwick's) and south of Pit 23 (Rises). Radon monitoring is undertaken using RapiDOS High Sensitivity ("RapiDOS HS") radon detectors and thoron monitoring is undertaken using Landauer thoron progeny detectors (Figure 13).

New high-sensitivity thoron detectors from Landauer and were implemented at the start of the monitoring period. The new thoron progeny meters have a lower detectable limit of ~ 0.5 Bq/m³ compared with the previous Radtrak2 detectors that had a higher detection limit of 30 Bq/m³.

Radon and Thoron monitoring results for the reporting period are presented in Table 6 and Table 7, and also in Figure 14 and Figure 15.

All measured radon and thoron levels in the H1 2021 reporting period were well below the reportable levels.



Figure 13: Thoron and Radon detectors

Table 6: Radon concentrations within Pit 23 for H1 2021

Location	Radon concentration in air (Bq/m ³)				
	Reportable level	Jul20 To Sep20	Oct20 To Dec20	Jan21 To Mar21	Apr21 To Jun21
Pit 23 East	100	<15	23 ± 16	<4	7 ± 6
Pit 23 North	100	<15	15 ± 16	<4	<7
Pit 23 West	100	31 ± 14	31 ± 16	<4	<7
Pit 23 South	100	34 ± 16	<15	<4	8 ± 6
Chadwick's	100	29 ± 12	<15	<4	8 ± 6
Rises	100	<15	<15	<4	9 ± 6

Table 7: Thoron concentrations within Pit 23 for H1 2021

Location	Thoron concentration in air (Bq/m ³)				
	Reportable level	Jul20 To Sep20	Oct20 To Dec20	Jan21 To Mar21	Apr21 To Jun21
Pit 23 East	1000	<30	<40	4.17 ± 0.38	139 ± 2.9
Pit 23 North	1000	<30	<40	4.63 ± 0.39	2.1 ± 0.5
Pit 23 West	1000	<30	87 ± 36	5.03 ± 0.4	2.1 ± 0.5
Pit 23 South	1000	<30	101 ± 36	6.25 ± 0.42	4.0 ± 0.6
Chadwick's	1000	<30	<40	5.12 ± 0.4	1.6 ± 0.47
Rises	1000	<30	<40	1.55 ± 0.32	1.9 ± 0.49

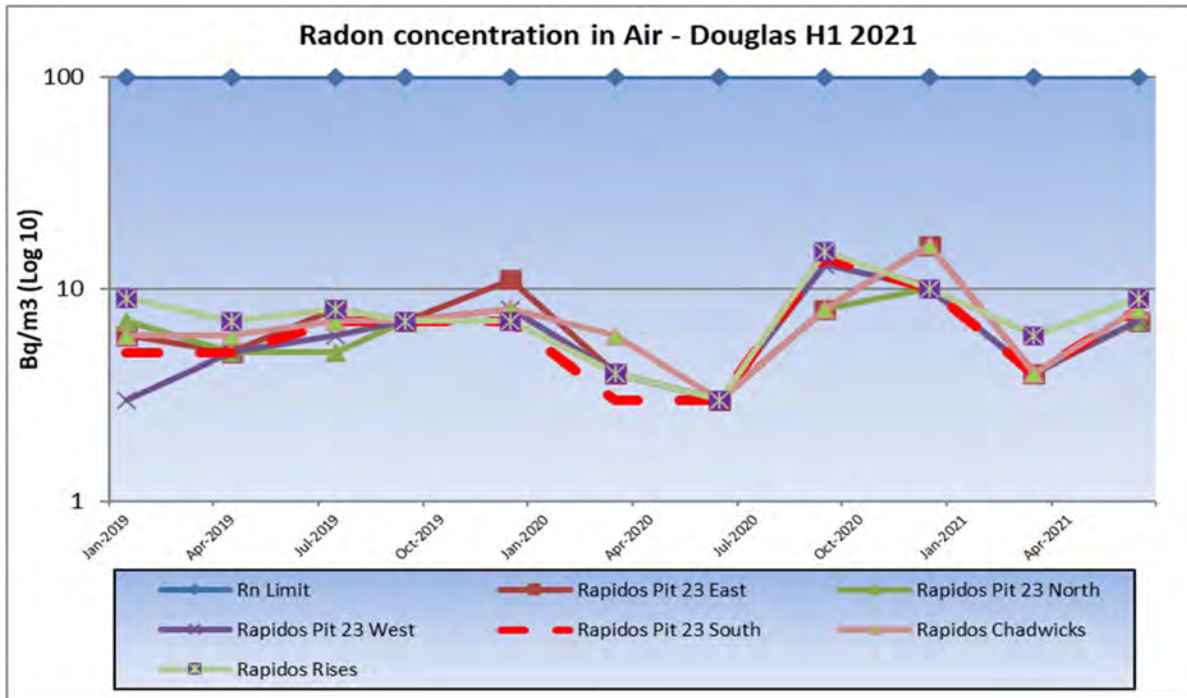


Figure 14: Radon concentration in air, H1 2021

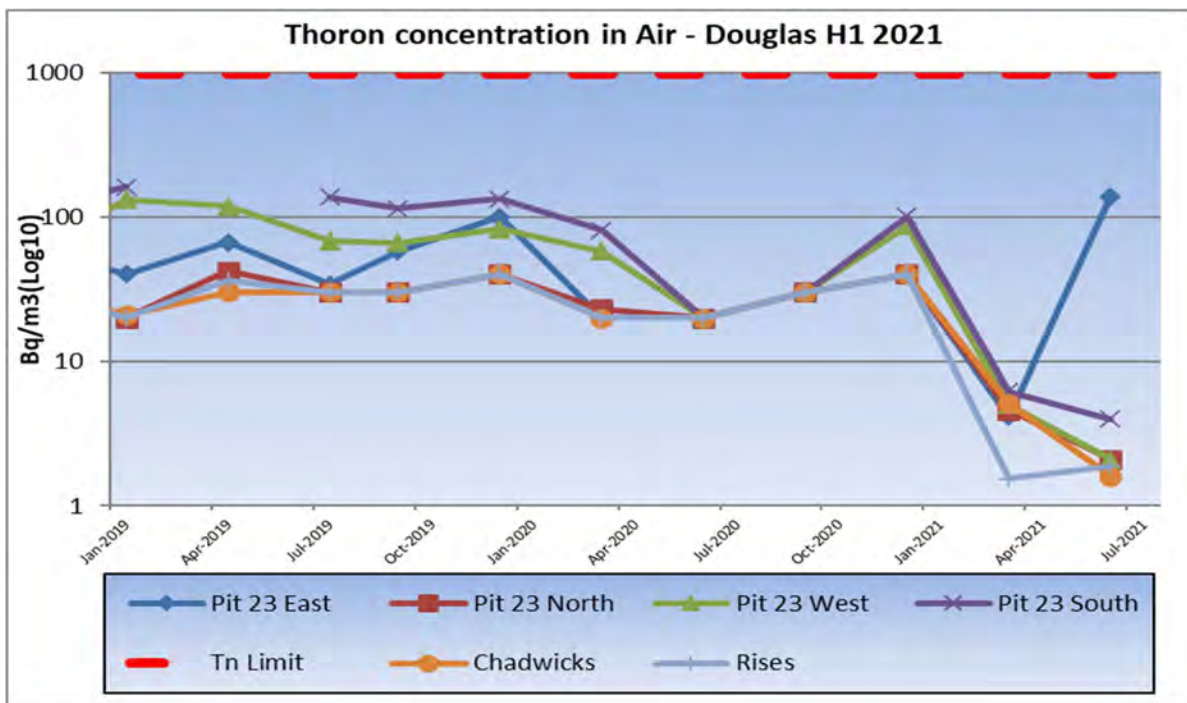


Figure 15: Thoron concentration in air, H1 2021

4.8.2 Gross alpha concentrations in airborne dust

As noted in Section 4.7, sampling for airborne particulates in PM₁₀ dust is conducted using high volume (hi-vol) air samplers located at the Chadwick’s and Lyons residences (see Figure 12).

On a quarterly basis hi-vol units are run at the Lyons and Rises residences for a continuous 96 hour period for purposes of monitoring gross alpha concentration in air, which represents a total air sample volume of approximately 6,000 m³. The filters are weighed to determine the total dust loading in mg/m³ and then analysed for gross alpha activity expressed as millibecquerels/m³ (mBq/m³).

The results for the monitoring period are in line with historical values and are shown in Table 8 and Figure 16.

Table 8: Gross Alpha radiation in PM₁₀ dust

Location	Run Date	Sample / Filter No.	Air Volume (m ³)	Activity Conc (mBq/m ³)
Chadwick's	10/02/2021	160420GF12	5817	0.23
Lyons	10/02/2021	160420GF11	5818	0.24
Rises	10/02/2021	160420GF23	5985	0.13
Chadwick's	5/05/2021	150121GF6	6075	0.32
Lyons	5/05/2021	150121GF5	6148	0.35
Rises	5/05/2021	150121GF4	6141	0.38

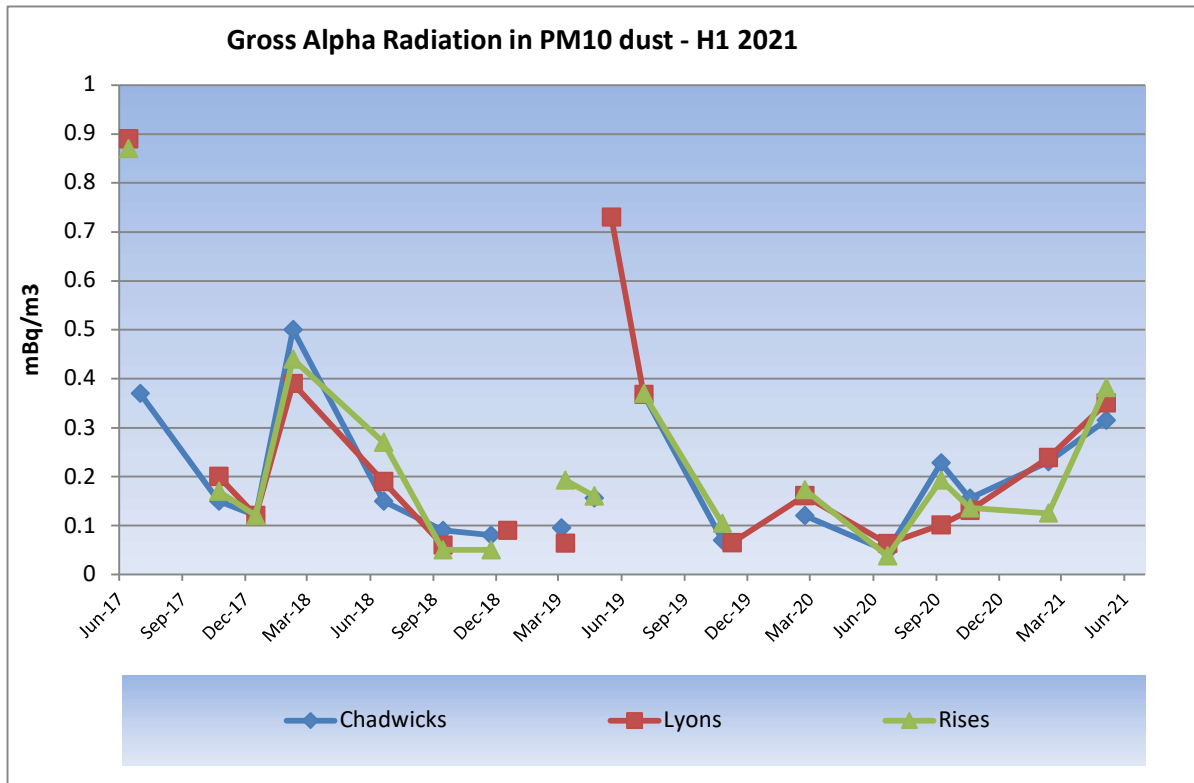


Figure 16: Gross Alpha Radiation in PM10 Dust – H1 2021

5 Management Actions

5.1 Groundwater flow paths from Pit 23

Groundwater levels measured are used to construct groundwater contours in the area of Pit 23 and surrounds and infer groundwater flow paths from Pit 23, with these levels and flow paths compared with the groundwater levels and flow paths predicted by the hydrogeological model.

Groundwater level contours are provided in Figure 17 (EMM 2019; EMM 2021). This compares the 2019 modelled contours per EMM (2019), and interpreted groundwater contours as at June 2021 including standing water level data for new monitoring bores installed in 2018, 2019 and 2020. From these June 2021 contours it is confirmed that groundwater contours and flow-paths are consistent with the 2019 modelled contours and prior year contours.

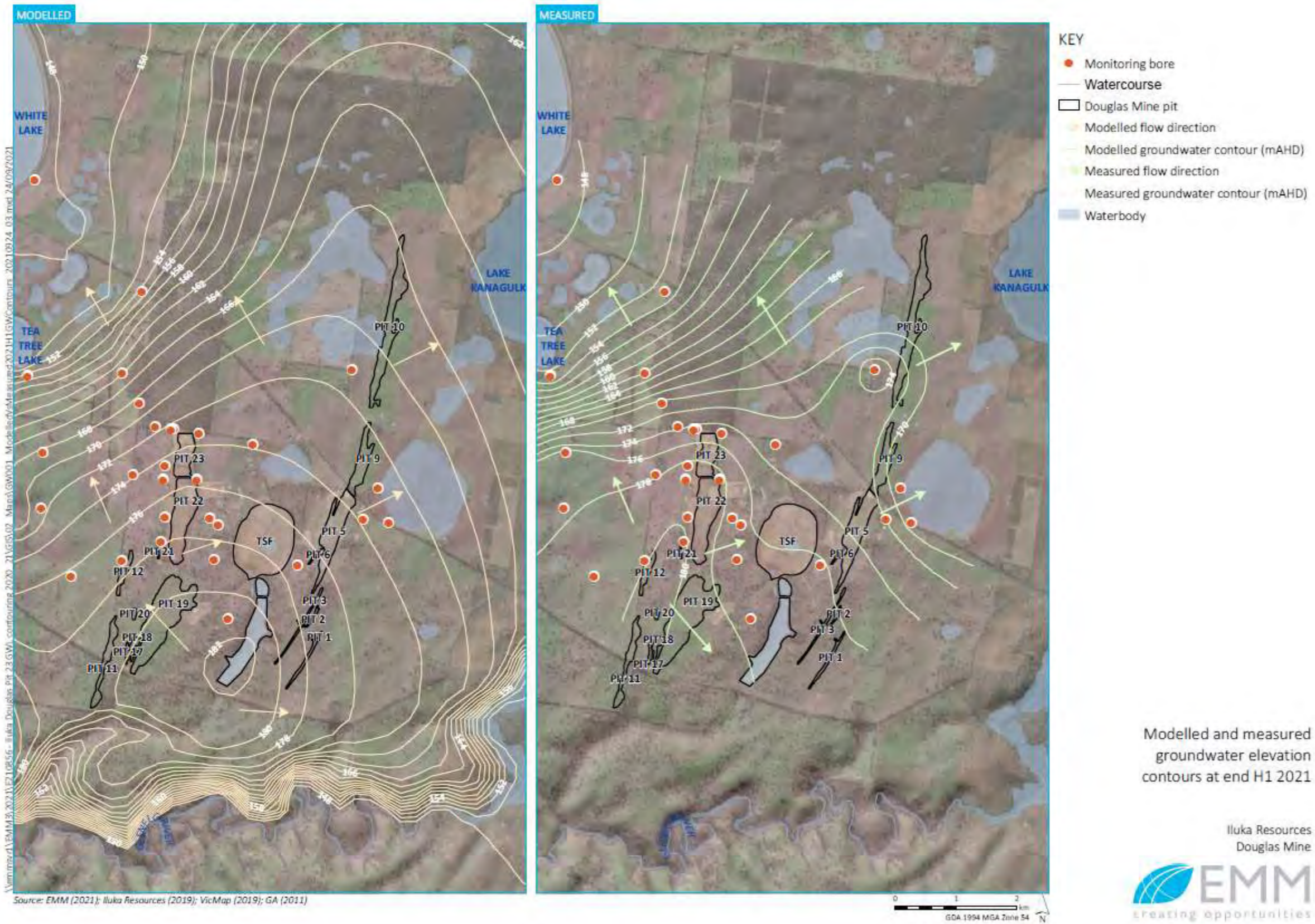


Figure 17: 2019 modelled vs 2021 interpreted groundwater contours (EMM 2019; EMM 2021)

5.2 Groundwater model review and recalibration

Preliminary findings of the 2019 groundwater model update were presented to the Responsible Authority and Pit 23 Technical Reference Group (TRG) by Iluka and EMM Consulting personnel at a meeting held at the HRCC Council Chambers on 23rd May 2019. The final modelling report was completed and provided to the Responsible Authority in Q3 2019.

This modelling was used to validate existing model predictions on the groundwater flow path and groundwater flow rates from the Pit 23 facility, and to inform updates to groundwater-related content of the Pit 23 Environmental Management Plan (EMP, Rev 5.1).

Section 7.5.8 of the endorsed EMP outlines the drivers that will trigger a review and recalibration of the hydrogeological model.

5.3 Maximum surface level of disposed materials in Pit 23

In accordance with Section 7.9.1 of the EMP, the maximum elevation of the upper surface of materials disposed of at the end of the reporting period must be reported.

The Pit 23 void consists of an upper and lower disposal area; 760.4 tonnes of MSP wastes were disposed into the lower disposal area of Pit 23 during the H1 2021 reporting period.

Accordingly, the survey undertaken on the 8th of December 2017 confirming the upper surface of materials deposited in Pit 23 (i.e. the elevation of capped material in the upper disposal area) remains unchanged at 193 mAHD.

5.4 Non-compliances

As discussed in Section 4.1.4 an administrative non-compliance was reported to HRCC on the 4th of May 2021 when Uranium²³⁸ was excluded from the groundwater analysis suite during scheduled sampling in February and March for bores GW01, GW02, GW03 and GW04A.

5.5 Comments and complaints received

No complaints or comments were received during the H1 2021 reporting period.

5.6 H1 2021 Completed Actions

The following actions were completed during H1 2021:

- Implementation of the ongoing monitoring requirements as per the EMP (Revision 5.1).

5.7 H2 2021 Proposed Actions

The following actions are planned for H2 2021:

- Review of the Pit 23 Risk Register; and
- Completion of the geotechnical audit of Pit 23.

5.8 Other matters

5.8.1 Geotechnical audit

In accordance with Section 10.4.4.5 of the EMP, geotechnical audits are completed on a biennial basis with the last audit completed in December 2020 (AMC Consultants, 2020).

An audit has been scheduled to be completed by AMC Consultants in November 2021.

5.8.2 Pit 23 Risk Register annual review

Per Section 6 of the EMP, the Pit 23 Risk Analysis and Response Plan (RARP) was developed by AECOM Australia Pty Ltd who recommended that the Pit 23 Risk Register (contained as Appendix A of the RARP) be reviewed annually at the time when EMP and Rehabilitation Performance Reports are developed.

Reviews of the Pit 23 RARP risk register were conducted in December 2018 and presented in the prior 2018 EMP and Rehabilitation Performance Report submitted to the Responsible Authority on 3rd June 2019.

A review of the Pit 23 RARP risk register was undertaken in November 2020 with the register's next review scheduled to be completed in H2 2021.

6 References

ANZECC/ARMCANZ (2000) *National Water Quality Management Strategy: Australian and New Zealand Guidelines for Fresh and Marine Water Quality*. Australian and New Zealand Environment and Conservation Council and Agricultural and Resource Management Council of Australia and New Zealand, Canberra, Australian Capital Territory, October 2000.

CDM Smith (2014) Douglas Mine Site Hydrogeological Modelling. Completed on behalf of Iluka Resources, November 2014

CDM Smith (2015) Douglas Mine – Particle Tracking of Seepage Water. Completed on behalf of Iluka Resources, February 2015

EMM (2018) Pit 23 Groundwater – Assessment of Seepage Indicator Exceedances, November 2018 (Report S180265, Rev 2 Final), issued for Iluka Resources Ltd

EMM (2019) *Groundwater Model Update and Predictive Scenario Modelling – Douglas Mine*. Prepared by EMM Consulting for Iluka Resources Ltd, September 2019.

EES (2016) *Independent Desktop Review For The Continuation Of Mineral By-Products Disposal Into Pit 23 At Iluka's Douglas Mine Site, Northwest Victoria No. 215071v2 dated April 2016*. Prepared by Environmental Earth Sciences, Melbourne, Victoria. (TRIM T18729).

AMC Consultants (2021) Douglas Mine Pit 23 Geotechnical Audit & Risk Assessment, 3rd December 2020.

7 Appendices

Appendix A: Amendments to EMP and IWMP

Iluka Resources Ltd – Pit 23 Facility (HRCC Planning Permit 15-105) List of Amendments to Pit 23 Environmental Management Plan (EMP)

Plan Name	Environmental Management Plan (EMP)
Previous Endorsed Revision	Rev 4 (5 th April 2017)
Current Endorsed Revision	Rev 5.1 (23 rd September 2021)

Section (Page)	Amendment	Reason for Amendment	Change in Risk Profile
Maps	All maps updated. Regional and site location maps standardised across all three management plans.	General update only	N/A
1.3.1 (11)	Added section to clearly specify matters outside the scope of the EMP: <ul style="list-style-type: none"> - all compliance matters associated with the adjacent Douglas mine; - matters of radiation protection 	To remove ambiguity as to application of the EMP (to radiation protection and management in particular).	No – Iluka's compliance obligations for radiological monitoring of groundwaters (as required by Condition 24(b)(ii) of the Permit) is still satisfied through other regulatory mechanisms (i.e. the Iluka Murray Basin Radiation Management Plan and Radiation Management Licence)
3.5 (20)	Re-structured this section to include sub-sections for hydrogeology (Section 3.5.1) and hydrochemistry (Section 3.5.2).	Contextual info on hydrogeology and hydrochemistry previously included in the risk assessment section of the GWMMP in the prior iteration of	N/A

Plan Name	Environmental Management Plan (EMP)
Previous Endorsed Revision	Rev 4 (5 th April 2017)
Current Endorsed Revision	Rev 5.1 (23 rd September 2021)

Section (Page)	Amendment	Reason for Amendment	Change in Risk Profile
		the EMP (Rev 4, July 2017). More appropriate to include this information in the environmental context section of plan.	
3.6 (24)	Expanded to incorporate contextual text taken from the SWMMP.	Some contextual info on Pit 23 hydrology previously included in the risk assessment section of the SWMMP in the prior iteration of the EMP (Rev 4, July 2017).	N/A
4 (27) Table 2	Updated objective descriptions and added links to relevant sections of plan. Added objective IDs which are cross-referenced in monitoring program, trigger and contingency sections within the plan.	Clearer structure in document and alignment of objectives to risks (per the RARP) and associated monitoring, trigger and contingency sections later in document.	No
5 (28) Table 3	Amendment Table 3 to indicate that roles associated with the Hamilton MSP are contingent on the operating status of the MSP facility.	To reflect current idle setting of the MSP, effective as of October 2017	No

Plan Name	Environmental Management Plan (EMP)
Previous Endorsed Revision	Rev 4 (5 th April 2017)
Current Endorsed Revision	Rev 5.1 (23 rd September 2021)

Section (Page)	Amendment	Reason for Amendment	Change in Risk Profile
6 (29) RARP	Major update and re-structure. Updated RARP (presented as Appendix) updated by internal Iluka personnel and aligned to the risk assessment framework of the Victorian Department of Jobs, Precincts and Regions (DJPR, 2019).	The Permit requires the RARP to be developed by suitably qualified persons. This does not imply external (non-Iluka) persons only. Adoption of the DJPR risk framework is appropriate to the Pit 23 site/facility and has been applied in assessing risks for the adjacent Douglas Mine. Considered logical and sensible to have a consistent risk framework across the two operations given their shared history, site location and overlap in risks and receptors.	No – No material change in risk rankings of environmental aspects considered in the EMP when comparing the prior RARP (from EMP Revision 4, 2017) to the updated RARP presented in EMP (Revision 5, October 2019).
7 (39) GWMMP	Major update and re-structure. Updated references SEPP (Waters) and applicable groundwater segments. Completed comprehensive review of groundwater chemistry including derivation of updated trigger levels which apply trend-based assessment and reporting (per the ANZECC guidelines, 'control charting'). This includes derivation of updated groundwater quality objectives (GWQOs – Table 11) better representative of background conditions. Updated the risk analysis section to incorporate results of updated groundwater modelling (EMM, 2019). Added latest maps of groundwater contours and particle tracks (flow paths), and groundwater travel times.	Prior iteration of the EMP (Rev 4) required updated groundwater modelling within 2 years of endorsement of that plan. Modelling was commissioned through EMM Consulting in December 2018 and finalized in September 2019. This modelling also considered results of false seepage	No – The assessment of risk to groundwater in the GWMMP is more robust taking into account updated modelling by EMM (2019). Updated trigger levels (GWQOs) better account for the natural

Plan Name	Environmental Management Plan (EMP)
Previous Endorsed Revision	Rev 4 (5 th April 2017)
Current Endorsed Revision	Rev 5.1 (23 rd September 2021)

Section (Page)	Amendment	Reason for Amendment	Change in Risk Profile
	<p>Updated bore network list (Table 16) to reflect current status of bores, including new and replacement bores.</p> <p>Added a new section “<i>Objectives, monitoring program, triggers and contingency</i>” (formerly captured as Appendix B in Revision 4 of the EMP) aligned to the management objectives in Section 4 and the new trend-based GWQOs/trigger levels.</p>	<p>exceedances in McGlashin Swamp as reported to HRCC in 2018.</p> <p>Groundwater quality trigger levels in the prior iteration of the EMP were based on limited available bore data and did not adequately account for natural background variation.</p> <p>Updated trigger levels are based on the grouping of chemistry data from a wider network of Douglas site bores to derive trigger levels which better account for this natural variability. The updated GWQOs are also based on trends (rather than single ‘exceedances’) and are therefore less sensitive to point-in-time fluctuations in bore chemistry, potential data/measurement errors and seasonality.</p>	<p>variability in groundwater chemistry and are now trend-based. i.e. less sensitive to point-in-time fluctuations in groundwater quality.</p> <p>This reduces the likelihood that ‘false flag’ exceedances are reported, and provides for better early warning of adverse trends in groundwater chemistry down-gradient of Pit 23.</p>
8 (72) SWMMP	<p>Major update and re-structure.</p> <p>SWMMP now considers the difference in surface water risk in the operations vs. rehab phase.</p> <p>Updated reference to SEPP (Waters) and classed receptors into feature type for purposes of identifying the correct default SEPP objectives applicable in each case.</p>	<p>Surface water quality trigger levels in the prior iteration of the EMP were based on limited available data for sites of interest</p>	<p>No – Updated trigger levels (GWQOs) better account for the natural variability in</p>

Plan Name	Environmental Management Plan (EMP)
Previous Endorsed Revision	Rev 4 (5 th April 2017)
Current Endorsed Revision	Rev 5.1 (23 rd September 2021)

Section (Page)	Amendment	Reason for Amendment	Change in Risk Profile
	<p>Defined 'battery limits' relevant to the management of runoff (i.e. the point of transfer and liability for runoff transferred from Pit 23 to the Douglas Mine).</p> <p>Developed site-specific surface water quality objectives (SWQOs) to be applied to each receptor, developed using reference site data (per the methodologies outlined in the SEPP and ANZECC guidelines). As with groundwater, these are trend-based.</p> <p>Updated the surface water monitoring program inc. new map of monitoring locations (receptor monitoring points and reference site monitoring points).</p> <p>Delineated sampling suite based on the receptor type (GW-fed vs. SW-fed). The groundwater-fed analytical suite aligns to the groundwater monitoring suite.</p> <p>Added a new section "<i>Objectives, monitoring program, triggers and contingency</i>" (formerly captured as Appendix B in Revision 4 of the EMP) aligned to the management objectives in Section 4 and new trend-based SWQOs.</p>	<p>and were therefore overly sensitive to wide fluctuations in natural background water quality. This was a critical flaw identified by EMM (2018) in their investigation into reported surface water quality exceedances for McGlashin Swamp.</p> <p>The updated SWQOs group data from appropriate reference sites as per the methodology in the ANZECC guidelines. As with the groundwater GWQOs, the SWQOs are also trend-based to better account for natural variability in background water quality, which is inherent in surface waters and particularly those which are ephemeral as applies to the Pit 23/Douglas catchments.</p> <p>The designation of battery limits is important – this provides for a clear transfer of compliance ownership of managed runoff between Pit 23</p>	<p>surface water and are now trend-based. i.e. less sensitive to point-in-time fluctuations and seasonality in surface water quality.</p> <p>This reduces the likelihood that false (non-valid) exceedances are reported, and provides for better early warning of adverse trends in the water quality at receptor sites down-gradient / downstream of Pit 23.</p>

Plan Name	Environmental Management Plan (EMP)
Previous Endorsed Revision	Rev 4 (5 th April 2017)
Current Endorsed Revision	Rev 5.1 (23 rd September 2021)

Section (Page)	Amendment	Reason for Amendment	Change in Risk Profile
		and the Douglas Mine. This was not clear in the prior iteration of the EMP (Rev 4, July 2017).	
9 (100) AQMP	<p>Major update and re-structure.</p> <p>AQMP now considers the difference in dust and air-quality risk and based on a detailed assessment of life-of-mine air quality data proposes that PM10 monitoring is only warranted in the rehabilitation phase (when earthmoving operations are in effect) and in summer months when weather conditions are potentially conducive to impacts on sensitive receptors.</p> <p>Added a new section “<i>Objectives, monitoring program, triggers and contingency</i>” (formerly captured as Appendix B in Revision 4 of the EMP) aligned to the management objectives in Section 4 and proposed timing of air quality (PM10) monitoring.</p>	<p>Life-of-mine PM10 data for the Douglas Mine indicates an extremely low risk of adverse air quality impacts to sensitive receptors (occupied private residences within a 5km radius of Pit 23).</p> <p>The implementation of PM10 monitoring only in the Pit 23 rehabilitation phase is justified based on the extensive monitoring history for the Douglas site and represents a legitimate risk-based approach whilst still satisfying Condition 33(b) of the Permit.</p> <p>(i.e. there is no dust/PM10 impact pathway during the Pit 23 operations phase).</p>	No

Plan Name	Environmental Management Plan (EMP)
Previous Endorsed Revision	Rev 4 (5 th April 2017)
Current Endorsed Revision	Rev 5.1 (23 rd September 2021)

Section (Page)	Amendment	Reason for Amendment	Change in Risk Profile
10.1 (111) Noise	Minor restructure consistent with other risk management sections of the EMP (e.g. GWMMMP, SWMMMP). Added a new section “ <i>Objectives, monitoring program, triggers and contingency</i> ” (formerly captured as Appendix B in Revision 4 of the EMP) aligned to the management objectives in Section 4.	---	No
10.2 (115) Weeds	Minor restructure consistent with other risk management sections of the EMP (e.g. GWMMMP, SWMMMP). Weeds section of EMP now differentiates between the risks posed by weeds between the operations and rehabilitation phases, and only proposes monitoring and management in the latter phase. Added a new section “ <i>Objectives, monitoring program, triggers and contingency</i> ” (formerly captured as Appendix B in Revision 4 of the EMP) aligned to the management objectives in Section 4.	Weed monitoring and management not justified in the operations phase on basis of risk.	No
10.3 (119) Vehicle Hygiene	Restructure consistent with other risk management sections. No material amendments from prior EMP (Rev 4)	N/A	N/A
10.4 (123) Public Safety	Restructure consistent with other risk management sections. Updated risk assessment commentary to reflect learnings from geotechnical audits undertaken post-issue of the Planning Permit. No material amendments from prior EMP (Rev 4)	N/A – minor edits only to reflect prior audit outcomes	No
12.1 (128) Routine Reporting	Updated proposed structure of EMP and Rehabilitation Performance Reports	The updated structure for reports reflects feedback received from EPA Accredited Auditors on previous performance reports.	N/A

Plan Name	Environmental Management Plan (EMP)
Previous Endorsed Revision	Rev 4 (5 th April 2017)
Current Endorsed Revision	Rev 5.1 (23 rd September 2021)

Section (Page)	Amendment	Reason for Amendment	Change in Risk Profile
12.2 (128) Exception Reporting	This section revised to refer back to other sections of the plan where trigger responses, contingency actions and exception reporting requirements are specified.	This is an improvement aimed to minimize duplication and avoid misunderstanding as to when exception reports are required. Duplication of content regarding trigger responses, contingency measures and exception reporting was identified in the prior iteration of the EMP (Rev 4).	N/A
13 (130)	Minor restructure only to improve clarity	N/A	N/A
14 (132)	Changed plan review and amendment frequency from two (2) to three (3) years	Considered that this revision of the EMP (Rev 5.1) represents a major update and incorporates updated understanding of the environmental setting and risk (notably for groundwater and surface water). Likewise the document now aligns to updated legislation and SEPP policies which are unlikely to change in the foreseeable future, On this basis a 3-year default review cycle is appropriate.	N/A

Plan Name	Environmental Management Plan (EMP)
Previous Endorsed Revision	Rev 4 (5 th April 2017)
Current Endorsed Revision	Rev 5.1 (23 rd September 2021)

Section (Page)	Amendment	Reason for Amendment	Change in Risk Profile
APPENDIX A (138) RARP Risk Register	Major update – refer commentary herein regarding revised approach to the RARP and the risk framework applied.	---	---

Iluka Resources Ltd – Pit 23 Facility (HRCC Planning Permit 15-105) List of Amendments to Incoming Waste Monitoring Plan (IWMP)

Plan Name	Incoming Waste Monitoring Plan (IWMP)
Previous Endorsed Revision	Rev 4 (5 th April 2017)
Current Endorsed Revision	Rev 5 (29 th October 2019)

Section (Page)	Amendment	Reason for Amendment	Change in Risk Profile
Maps	All maps updated to show latest aerial imagery. Regional and site location maps standardised across all three management plans.	General update only	N/A
1.4 (7)	Added text summarising approved waste streams and source sites as per Condition 6 of the Permit. Revised text regarding constraints on disposal of material – re-worded to ' <i>minimum cap depth of 5m</i> ' to align with wording of the R&VMP, and wording of Condition 36(e) in the Planning Permit.	Alignment of wording in the Planning Permit and the R&VMP.	N/A
1.4.1 (7)	Added section to clearly specify: <ul style="list-style-type: none"> - wastes not approved for disposal to Pit 23; - wastes and other materials approved for disposal to, or used for Pit 23 disposal and rehabilitation, but outside the scope of the IWMP 	To remove ambiguity as to application of the IWMP to miscellaneous waste streams, interim cover / capping material and rehabilitation resources.	N/A

Plan Name	Incoming Waste Monitoring Plan (IWMP)
Previous Endorsed Revision	Rev 4 (5 th April 2017)
Current Endorsed Revision	Rev 5 (29 th October 2019)

Section (Page)	Amendment	Reason for Amendment	Change in Risk Profile
2.2.1 (11)	Added point that MSP by-products also includes any combination of wet circuit, dry circuit and gypsum waste streams	Blending of waste streams may be required to improve material handling and to satisfy 'spadeability' requirements for disposal to Pit 23	N/A
2.2.3 (12)	Added text noting that NORM-contaminated concrete and steel typically presents as fixed surface-contamination within paints, coatings and scale.	Followings learnings from demolition of the Iluka WRP and Douglas Mine mineral concentrating plants completed in 2019, including results of sampling and analysis of surface coatings.	N/A – Contextual information only
3.1.1 (12)	Added paragraph outlining alternative sampling procedures that will apply to MSP by-products under non-routine operations (e.g. maintenance shutdown and plant idle periods). Specific reference added to representative sampling as the method to apply for sampling of MSP by-products under non-routine operations based on the EPA IWRG Publication 702 as best practice guideline on number of samples required relative to the volume of material sampled.	Under normal MSP operations most sampling and measurement systems relevant to by-products are automated – these systems are not available in shutdown or idle periods (non-routine operations). The shutdown or idle of the MSP does not preclude the consignment of by-products to Pit 23 (e.g. remaining stockpiled material, material generated through maintenance activities). Alternative means of sampling by-products and demonstrating compliance with the IWMP and Pit 23 acceptance criteria therefore required.	No – Alternative sampling procedures generate equivalent analytical data required to satisfy the IWMP and incoming waste acceptance criteria. Representative sampling is standard practice and will follow EPA guidelines.
3.1.2 (13)	Revised to reference that internal Iluka laboratories or external NATA-accredited laboratories may be used for analysis of MSP by-products.	Previous iteration of IWMP noted only the Hamilton MSP as the laboratory to be used for such analysis, however the MSP laboratory ceased on idling of the Hamilton MSP in October 2017. The use of external laboratories is therefore required where internal laboratories are not available.	No – The analytical method used for by-product analysis is the same irrespective of the laboratory used.

Plan Name	Incoming Waste Monitoring Plan (IWMP)
Previous Endorsed Revision	Rev 4 (5 th April 2017)
Current Endorsed Revision	Rev 5 (29 th October 2019)

Section (Page)	Amendment	Reason for Amendment	Change in Risk Profile
3.3 (14)	Included key notation that the classification of contaminated objects as radioactive per the <i>Radiation Regulations 2017</i> is based on the overall mass of the material.	The classification of surface-contaminated objects as radioactive considering the overall mass of the object is supported by DHHS. This approach is in accord with the Regulations and optimizes the recovery of scrap material in the recycling stream and avoids unnecessary disposal to Pit 23.	No – Improves recovery of waste steel and concrete for re-use or recycling
3.2.1 (13)	Added reference to sampling every dust filter bag where the number of filter bags numbers five (5) or less	Limited quantities of used filter bags may be generated – i.e. during plant idle periods. The existing reference to sampling from “ <i>at least five filter bags per consignment</i> ” assumes that all consignments of used filter bags will be large with >5 samples referring to an appropriate representative sample size to account for statistical variation in analytical results. Representative sampling only applies to large volume or quantity of material.	No – Sampling of every filter bag (when applicable) is appropriate for smaller consignments.
3.3.2 (14)	Expanded on the basis for disposal of NORM-contaminated concrete and steel into Pit 23, including further detail on methodologies that may be used to analyse and characterise the radiological contamination and radionuclides comprising such contamination.	Adopts learnings from demolition of the Iluka WRP and Douglas Mine concentrating plants in 2019. Also adopts guidance from DHHS on the process for material classification and basis for material disposal to Pit 23.	No – Process to classify material for disposal to Pit 23 aligns to the Permit and Radiation Regulations
6 (18)	Changed plan review and amendment frequency from two (2) to three (3) years	Considered that the plan is now robust having applied key learnings from the idling of the Hamilton MSP (as it relates to alternative processes for by-product sampling and analysis) and demolition projects (as it relates to NORM-contaminated steel and concrete analysis and classification for disposal).	N/A

Plan Name	Incoming Waste Monitoring Plan (IWMP)
Previous Endorsed Revision	Rev 4 (5 th April 2017)
Current Endorsed Revision	Rev 5 (29 th October 2019)

Section (Page)	Amendment	Reason for Amendment	Change in Risk Profile
		On this basis a 3-year default review cycle is appropriate.	
4.4 (12 – 14) Table 3	Updated table to more closely align with text descriptions in main body of plan.	Formatting only	N/A

Appendix B: Monitoring Data (Lab) – Groundwater

Variable	Unit	Sample Point	Date	Result
Alkalinity (Bicarbonate) as CaCO3	mg/L	DG_A_I_PZ_BW05	12/01/2021	460
Alkalinity (Bicarbonate) as CaCO3	mg/L	DG_A_I_PZ_IWB2	12/01/2021	31
Alkalinity (Bicarbonate) as CaCO3	mg/L	DG_A_I_PZ_IWB6	12/01/2021	14
Alkalinity (Bicarbonate) as CaCO3	mg/L	DG_A_I_PZ_WRK300	21/01/2021	160
Alkalinity (Bicarbonate) as CaCO3	mg/L	DG_A_I_PZ_WRK301	20/01/2021	360
Alkalinity (Bicarbonate) as CaCO3	mg/L	DG_A_I_PZ_WRK302	19/01/2021	90
Alkalinity (Bicarbonate) as CaCO3	mg/L	DG_A_I_PZ_WRK302	16/03/2021	81
Alkalinity (Bicarbonate) as CaCO3	mg/L	DG_A_I_PZ_GW01	14/01/2021	16
Alkalinity (Bicarbonate) as CaCO3	mg/L	DG_A_I_PZ_GW01	17/02/2021	16
Alkalinity (Bicarbonate) as CaCO3	mg/L	DG_A_I_PZ_GW01	15/03/2021	15
Alkalinity (Bicarbonate) as CaCO3	mg/L	DG_A_I_PZ_GW01	13/04/2021	14
Alkalinity (Bicarbonate) as CaCO3	mg/L	DG_A_I_PZ_GW01	19/05/2021	14
Alkalinity (Bicarbonate) as CaCO3	mg/L	DG_A_I_PZ_GW01	16/06/2021	15
Alkalinity (Bicarbonate) as CaCO3	mg/L	DG_A_I_PZ_GW06	20/01/2021	200
Alkalinity (Bicarbonate) as CaCO3	mg/L	DG_A_I_PZ_GW06	16/03/2021	200
Alkalinity (Bicarbonate) as CaCO3	mg/L	DG_A_I_PZ_GW07	11/01/2021	83
Alkalinity (Bicarbonate) as CaCO3	mg/L	DG_A_I_PZ_BW45B	14/01/2021	1
Alkalinity (Bicarbonate) as CaCO3	mg/L	DG_A_I_PZ_BW45B	18/02/2021	1
Alkalinity (Bicarbonate) as CaCO3	mg/L	DG_A_I_PZ_GW02	14/01/2021	34
Alkalinity (Bicarbonate) as CaCO3	mg/L	DG_A_I_PZ_GW02	17/02/2021	33
Alkalinity (Bicarbonate) as CaCO3	mg/L	DG_A_I_PZ_GW02	15/03/2021	33
Alkalinity (Bicarbonate) as CaCO3	mg/L	DG_A_I_PZ_GW02	8/04/2021	31
Alkalinity (Bicarbonate) as CaCO3	mg/L	DG_A_I_PZ_GW02	19/05/2021	30
Alkalinity (Bicarbonate) as CaCO3	mg/L	DG_A_I_PZ_GW02	16/06/2021	32
Alkalinity (Bicarbonate) as CaCO3	mg/L	DG_A_I_PZ_GW03	14/01/2021	130
Alkalinity (Bicarbonate) as CaCO3	mg/L	DG_A_I_PZ_GW03	17/02/2021	120
Alkalinity (Bicarbonate) as CaCO3	mg/L	DG_A_I_PZ_GW03	15/03/2021	130
Alkalinity (Bicarbonate) as CaCO3	mg/L	DG_A_I_PZ_GW03	8/04/2021	130
Alkalinity (Bicarbonate) as CaCO3	mg/L	DG_A_I_PZ_GW03	19/05/2021	130
Alkalinity (Bicarbonate) as CaCO3	mg/L	DG_A_I_PZ_GW03	16/06/2021	130
Alkalinity (Bicarbonate) as CaCO3	mg/L	DG_A_I_PZ_GW04	18/01/2021	27
Alkalinity (Bicarbonate) as CaCO3	mg/L	DG_A_I_PZ_GW05	18/01/2021	44
Alkalinity (Bicarbonate) as CaCO3	mg/L	DG_A_I_PZ_GW08	19/01/2021	170
Alkalinity (Bicarbonate) as CaCO3	mg/L	DG_A_I_PZ_GW08	16/03/2021	160
Alkalinity (Bicarbonate) as CaCO3	mg/L	DG_A_I_PZ_BW50	13/01/2021	310
Alkalinity (Bicarbonate) as CaCO3	mg/L	DG_A_I_PZ_BW36A	18/01/2021	260
Alkalinity (Bicarbonate) as CaCO3	mg/L	DG_A_I_PZ_BW36A	18/02/2021	240
Alkalinity (Bicarbonate) as CaCO3	mg/L	DG_A_I_PZ_GW04A	18/01/2021	56
Alkalinity (Bicarbonate) as CaCO3	mg/L	DG_A_I_PZ_GW04A	17/02/2021	70
Alkalinity (Bicarbonate) as CaCO3	mg/L	DG_A_I_PZ_GW04A	15/03/2021	58
Alkalinity (Bicarbonate) as CaCO3	mg/L	DG_A_I_PZ_GW04A	13/04/2021	46
Alkalinity (Bicarbonate) as CaCO3	mg/L	DG_A_I_PZ_GW04A	19/05/2021	59

Variable	Unit	Sample Point	Date	Result
Alkalinity (Bicarbonate) as CaCO3	mg/L	DG_A PZ_GW04A	16/06/2021	51
Alkalinity (Carbonate) as CaCO3	mg/L	DG_A PZ_BW05	12/01/2021	0
Alkalinity (Carbonate) as CaCO3	mg/L	DG_A PZ_IWB2	12/01/2021	0
Alkalinity (Carbonate) as CaCO3	mg/L	DG_A PZ_IWB6	12/01/2021	0
Alkalinity (Carbonate) as CaCO3	mg/L	DG_A PZ_WRK300	21/01/2021	0
Alkalinity (Carbonate) as CaCO3	mg/L	DG_A PZ_WRK301	20/01/2021	0
Alkalinity (Carbonate) as CaCO3	mg/L	DG_A PZ_WRK302	19/01/2021	0
Alkalinity (Carbonate) as CaCO3	mg/L	DG_A PZ_WRK302	16/03/2021	0
Alkalinity (Carbonate) as CaCO3	mg/L	DG_A PZ_GW01	14/01/2021	0
Alkalinity (Carbonate) as CaCO3	mg/L	DG_A PZ_GW01	17/02/2021	0
Alkalinity (Carbonate) as CaCO3	mg/L	DG_A PZ_GW01	15/03/2021	0
Alkalinity (Carbonate) as CaCO3	mg/L	DG_A PZ_GW01	13/04/2021	0
Alkalinity (Carbonate) as CaCO3	mg/L	DG_A PZ_GW01	19/05/2021	0
Alkalinity (Carbonate) as CaCO3	mg/L	DG_A PZ_GW01	16/06/2021	0
Alkalinity (Carbonate) as CaCO3	mg/L	DG_A PZ_GW06	20/01/2021	0
Alkalinity (Carbonate) as CaCO3	mg/L	DG_A PZ_GW06	16/03/2021	0
Alkalinity (Carbonate) as CaCO3	mg/L	DG_A PZ_GW07	11/01/2021	0
Alkalinity (Carbonate) as CaCO3	mg/L	DG_A PZ_BW45B	14/01/2021	0
Alkalinity (Carbonate) as CaCO3	mg/L	DG_A PZ_BW45B	18/02/2021	0
Alkalinity (Carbonate) as CaCO3	mg/L	DG_A PZ_GW02	14/01/2021	0
Alkalinity (Carbonate) as CaCO3	mg/L	DG_A PZ_GW02	17/02/2021	0
Alkalinity (Carbonate) as CaCO3	mg/L	DG_A PZ_GW02	15/03/2021	0
Alkalinity (Carbonate) as CaCO3	mg/L	DG_A PZ_GW02	8/04/2021	0
Alkalinity (Carbonate) as CaCO3	mg/L	DG_A PZ_GW02	19/05/2021	0
Alkalinity (Carbonate) as CaCO3	mg/L	DG_A PZ_GW02	16/06/2021	0
Alkalinity (Carbonate) as CaCO3	mg/L	DG_A PZ_GW03	14/01/2021	0
Alkalinity (Carbonate) as CaCO3	mg/L	DG_A PZ_GW03	17/02/2021	0
Alkalinity (Carbonate) as CaCO3	mg/L	DG_A PZ_GW03	15/03/2021	0
Alkalinity (Carbonate) as CaCO3	mg/L	DG_A PZ_GW03	8/04/2021	0
Alkalinity (Carbonate) as CaCO3	mg/L	DG_A PZ_GW03	19/05/2021	0
Alkalinity (Carbonate) as CaCO3	mg/L	DG_A PZ_GW03	16/06/2021	0
Alkalinity (Carbonate) as CaCO3	mg/L	DG_A PZ_GW04	18/01/2021	0
Alkalinity (Carbonate) as CaCO3	mg/L	DG_A PZ_GW05	18/01/2021	0
Alkalinity (Carbonate) as CaCO3	mg/L	DG_A PZ_GW08	19/01/2021	0
Alkalinity (Carbonate) as CaCO3	mg/L	DG_A PZ_GW08	16/03/2021	0
Alkalinity (Carbonate) as CaCO3	mg/L	DG_A PZ_BW50	13/01/2021	0
Alkalinity (Carbonate) as CaCO3	mg/L	DG_A PZ_BW36A	18/01/2021	0
Alkalinity (Carbonate) as CaCO3	mg/L	DG_A PZ_BW36A	18/02/2021	0
Alkalinity (Carbonate) as CaCO3	mg/L	DG_A PZ_GW04A	18/01/2021	0
Alkalinity (Carbonate) as CaCO3	mg/L	DG_A PZ_GW04A	17/02/2021	0
Alkalinity (Carbonate) as CaCO3	mg/L	DG_A PZ_GW04A	15/03/2021	0
Alkalinity (Carbonate) as CaCO3	mg/L	DG_A PZ_GW04A	13/04/2021	0
Alkalinity (Carbonate) as CaCO3	mg/L	DG_A PZ_GW04A	19/05/2021	0
Alkalinity (Carbonate) as CaCO3	mg/L	DG_A PZ_GW04A	16/06/2021	0

Variable	Unit	Sample Point	Date	Result
Alkalinity (Hydroxide) as CaCO3	mg/L	DG_A PZ_BW05	12/01/2021	0
Alkalinity (Hydroxide) as CaCO3	mg/L	DG_A PZ_IWB2	12/01/2021	0
Alkalinity (Hydroxide) as CaCO3	mg/L	DG_A PZ_IWB6	12/01/2021	0
Alkalinity (Hydroxide) as CaCO3	mg/L	DG_A PZ_WRK300	21/01/2021	0
Alkalinity (Hydroxide) as CaCO3	mg/L	DG_A PZ_WRK301	20/01/2021	0
Alkalinity (Hydroxide) as CaCO3	mg/L	DG_A PZ_WRK302	19/01/2021	0
Alkalinity (Hydroxide) as CaCO3	mg/L	DG_A PZ_WRK302	16/03/2021	0
Alkalinity (Hydroxide) as CaCO3	mg/L	DG_A PZ_GW01	14/01/2021	0
Alkalinity (Hydroxide) as CaCO3	mg/L	DG_A PZ_GW01	17/02/2021	0
Alkalinity (Hydroxide) as CaCO3	mg/L	DG_A PZ_GW01	15/03/2021	0
Alkalinity (Hydroxide) as CaCO3	mg/L	DG_A PZ_GW01	13/04/2021	0
Alkalinity (Hydroxide) as CaCO3	mg/L	DG_A PZ_GW01	19/05/2021	0
Alkalinity (Hydroxide) as CaCO3	mg/L	DG_A PZ_GW01	16/06/2021	0
Alkalinity (Hydroxide) as CaCO3	mg/L	DG_A PZ_GW06	20/01/2021	0
Alkalinity (Hydroxide) as CaCO3	mg/L	DG_A PZ_GW06	16/03/2021	0
Alkalinity (Hydroxide) as CaCO3	mg/L	DG_A PZ_GW07	11/01/2021	0
Alkalinity (Hydroxide) as CaCO3	mg/L	DG_A PZ_BW45B	14/01/2021	0
Alkalinity (Hydroxide) as CaCO3	mg/L	DG_A PZ_BW45B	18/02/2021	0
Alkalinity (Hydroxide) as CaCO3	mg/L	DG_A PZ_GW02	14/01/2021	0
Alkalinity (Hydroxide) as CaCO3	mg/L	DG_A PZ_GW02	17/02/2021	0
Alkalinity (Hydroxide) as CaCO3	mg/L	DG_A PZ_GW02	15/03/2021	0
Alkalinity (Hydroxide) as CaCO3	mg/L	DG_A PZ_GW02	8/04/2021	0
Alkalinity (Hydroxide) as CaCO3	mg/L	DG_A PZ_GW02	19/05/2021	0
Alkalinity (Hydroxide) as CaCO3	mg/L	DG_A PZ_GW02	16/06/2021	0
Alkalinity (Hydroxide) as CaCO3	mg/L	DG_A PZ_GW03	14/01/2021	0
Alkalinity (Hydroxide) as CaCO3	mg/L	DG_A PZ_GW03	17/02/2021	0
Alkalinity (Hydroxide) as CaCO3	mg/L	DG_A PZ_GW03	15/03/2021	0
Alkalinity (Hydroxide) as CaCO3	mg/L	DG_A PZ_GW03	8/04/2021	0
Alkalinity (Hydroxide) as CaCO3	mg/L	DG_A PZ_GW03	19/05/2021	0
Alkalinity (Hydroxide) as CaCO3	mg/L	DG_A PZ_GW03	16/06/2021	0
Alkalinity (Hydroxide) as CaCO3	mg/L	DG_A PZ_GW04	18/01/2021	0
Alkalinity (Hydroxide) as CaCO3	mg/L	DG_A PZ_GW05	18/01/2021	0
Alkalinity (Hydroxide) as CaCO3	mg/L	DG_A PZ_GW08	19/01/2021	0
Alkalinity (Hydroxide) as CaCO3	mg/L	DG_A PZ_GW08	16/03/2021	0
Alkalinity (Hydroxide) as CaCO3	mg/L	DG_A PZ_BW50	13/01/2021	0
Alkalinity (Hydroxide) as CaCO3	mg/L	DG_A PZ_BW36A	18/01/2021	0
Alkalinity (Hydroxide) as CaCO3	mg/L	DG_A PZ_BW36A	18/02/2021	0
Alkalinity (Hydroxide) as CaCO3	mg/L	DG_A PZ_GW04A	18/01/2021	0
Alkalinity (Hydroxide) as CaCO3	mg/L	DG_A PZ_GW04A	17/02/2021	0
Alkalinity (Hydroxide) as CaCO3	mg/L	DG_A PZ_GW04A	15/03/2021	0
Alkalinity (Hydroxide) as CaCO3	mg/L	DG_A PZ_GW04A	13/04/2021	0
Alkalinity (Hydroxide) as CaCO3	mg/L	DG_A PZ_GW04A	19/05/2021	0
Alkalinity (Hydroxide) as CaCO3	mg/L	DG_A PZ_GW04A	16/06/2021	0
Alkalinity (Total) as CaCO3	mg/L	DG_A PZ_BW05	12/01/2021	460

Variable	Unit	Sample Point	Date	Result
Alkalinity (Total) as CaCO3	mg/L	DG_A_I_PZ_IWB2	12/01/2021	31
Alkalinity (Total) as CaCO3	mg/L	DG_A_I_PZ_IWB6	12/01/2021	14
Alkalinity (Total) as CaCO3	mg/L	DG_A_I_PZ_WRK300	21/01/2021	160
Alkalinity (Total) as CaCO3	mg/L	DG_A_I_PZ_WRK301	20/01/2021	360
Alkalinity (Total) as CaCO3	mg/L	DG_A_I_PZ_WRK302	19/01/2021	90
Alkalinity (Total) as CaCO3	mg/L	DG_A_I_PZ_WRK302	16/03/2021	81
Alkalinity (Total) as CaCO3	mg/L	DG_A_I_PZ_GW01	14/01/2021	16
Alkalinity (Total) as CaCO3	mg/L	DG_A_I_PZ_GW01	17/02/2021	16
Alkalinity (Total) as CaCO3	mg/L	DG_A_I_PZ_GW01	15/03/2021	15
Alkalinity (Total) as CaCO3	mg/L	DG_A_I_PZ_GW01	13/04/2021	14
Alkalinity (Total) as CaCO3	mg/L	DG_A_I_PZ_GW01	19/05/2021	14
Alkalinity (Total) as CaCO3	mg/L	DG_A_I_PZ_GW01	16/06/2021	15
Alkalinity (Total) as CaCO3	mg/L	DG_A_I_PZ_GW06	20/01/2021	200
Alkalinity (Total) as CaCO3	mg/L	DG_A_I_PZ_GW06	16/03/2021	200
Alkalinity (Total) as CaCO3	mg/L	DG_A_I_PZ_GW07	11/01/2021	83
Alkalinity (Total) as CaCO3	mg/L	DG_A_I_PZ_BW45B	14/01/2021	1
Alkalinity (Total) as CaCO3	mg/L	DG_A_I_PZ_BW45B	18/02/2021	1
Alkalinity (Total) as CaCO3	mg/L	DG_A_I_PZ_GW02	14/01/2021	34
Alkalinity (Total) as CaCO3	mg/L	DG_A_I_PZ_GW02	17/02/2021	33
Alkalinity (Total) as CaCO3	mg/L	DG_A_I_PZ_GW02	15/03/2021	33
Alkalinity (Total) as CaCO3	mg/L	DG_A_I_PZ_GW02	8/04/2021	31
Alkalinity (Total) as CaCO3	mg/L	DG_A_I_PZ_GW02	19/05/2021	30
Alkalinity (Total) as CaCO3	mg/L	DG_A_I_PZ_GW02	16/06/2021	32
Alkalinity (Total) as CaCO3	mg/L	DG_A_I_PZ_GW03	14/01/2021	130
Alkalinity (Total) as CaCO3	mg/L	DG_A_I_PZ_GW03	17/02/2021	120
Alkalinity (Total) as CaCO3	mg/L	DG_A_I_PZ_GW03	15/03/2021	130
Alkalinity (Total) as CaCO3	mg/L	DG_A_I_PZ_GW03	8/04/2021	130
Alkalinity (Total) as CaCO3	mg/L	DG_A_I_PZ_GW03	19/05/2021	130
Alkalinity (Total) as CaCO3	mg/L	DG_A_I_PZ_GW03	16/06/2021	130
Alkalinity (Total) as CaCO3	mg/L	DG_A_I_PZ_GW04	18/01/2021	27
Alkalinity (Total) as CaCO3	mg/L	DG_A_I_PZ_GW05	18/01/2021	44
Alkalinity (Total) as CaCO3	mg/L	DG_A_I_PZ_GW08	19/01/2021	170
Alkalinity (Total) as CaCO3	mg/L	DG_A_I_PZ_GW08	16/03/2021	160
Alkalinity (Total) as CaCO3	mg/L	DG_A_I_PZ_BW50	13/01/2021	310
Alkalinity (Total) as CaCO3	mg/L	DG_A_I_PZ_BW36A	18/01/2021	260
Alkalinity (Total) as CaCO3	mg/L	DG_A_I_PZ_BW36A	18/02/2021	240
Alkalinity (Total) as CaCO3	mg/L	DG_A_I_PZ_GW04A	18/01/2021	56
Alkalinity (Total) as CaCO3	mg/L	DG_A_I_PZ_GW04A	17/02/2021	70
Alkalinity (Total) as CaCO3	mg/L	DG_A_I_PZ_GW04A	15/03/2021	58
Alkalinity (Total) as CaCO3	mg/L	DG_A_I_PZ_GW04A	13/04/2021	46
Alkalinity (Total) as CaCO3	mg/L	DG_A_I_PZ_GW04A	19/05/2021	59
Alkalinity (Total) as CaCO3	mg/L	DG_A_I_PZ_GW04A	16/06/2021	51
Aluminium (Total)	mg/L	DG_A_I_PZ_BW05	12/01/2021	0.4
Aluminium (Total)	mg/L	DG_A_I_PZ_IWB2	12/01/2021	0.09

Variable	Unit	Sample Point	Date	Result
Aluminium (Total)	mg/L	DG_A PZ_IWB6	12/01/2021	1.6
Aluminium (Total)	mg/L	DG_A PZ_WRK300	21/01/2021	0.01
Aluminium (Total)	mg/L	DG_A PZ_WRK301	20/01/2021	0.02
Aluminium (Total)	mg/L	DG_A PZ_WRK302	19/01/2021	0.27
Aluminium (Total)	mg/L	DG_A PZ_WRK302	16/03/2021	0.03
Aluminium (Total)	mg/L	DG_A PZ_GW01	14/01/2021	1.4
Aluminium (Total)	mg/L	DG_A PZ_GW01	17/02/2021	1.3
Aluminium (Total)	mg/L	DG_A PZ_GW01	15/03/2021	1.6
Aluminium (Total)	mg/L	DG_A PZ_GW01	13/04/2021	1.7
Aluminium (Total)	mg/L	DG_A PZ_GW01	19/05/2021	1.7
Aluminium (Total)	mg/L	DG_A PZ_GW01	16/06/2021	1.5
Aluminium (Total)	mg/L	DG_A PZ_GW06	20/01/2021	0.04
Aluminium (Total)	mg/L	DG_A PZ_GW06	16/03/2021	0.01
Aluminium (Total)	mg/L	DG_A PZ_GW07	11/01/2021	0.02
Aluminium (Total)	mg/L	DG_A PZ_BW45B	14/01/2021	8.7
Aluminium (Total)	mg/L	DG_A PZ_BW45B	18/02/2021	8.5
Aluminium (Total)	mg/L	DG_A PZ_GW02	14/01/2021	0.01
Aluminium (Total)	mg/L	DG_A PZ_GW02	17/02/2021	0.02
Aluminium (Total)	mg/L	DG_A PZ_GW02	15/03/2021	0.01
Aluminium (Total)	mg/L	DG_A PZ_GW02	8/04/2021	0.01
Aluminium (Total)	mg/L	DG_A PZ_GW02	19/05/2021	0.01
Aluminium (Total)	mg/L	DG_A PZ_GW02	16/06/2021	0.02
Aluminium (Total)	mg/L	DG_A PZ_GW03	14/01/2021	0.01
Aluminium (Total)	mg/L	DG_A PZ_GW03	17/02/2021	0.02
Aluminium (Total)	mg/L	DG_A PZ_GW03	15/03/2021	0.01
Aluminium (Total)	mg/L	DG_A PZ_GW03	8/04/2021	0.01
Aluminium (Total)	mg/L	DG_A PZ_GW03	19/05/2021	0.19
Aluminium (Total)	mg/L	DG_A PZ_GW03	16/06/2021	0.01
Aluminium (Total)	mg/L	DG_A PZ_GW04	18/01/2021	0.01
Aluminium (Total)	mg/L	DG_A PZ_GW05	18/01/2021	0.01
Aluminium (Total)	mg/L	DG_A PZ_GW08	19/01/2021	0.01
Aluminium (Total)	mg/L	DG_A PZ_GW08	16/03/2021	0.01
Aluminium (Total)	mg/L	DG_A PZ_BW50	13/01/2021	0.15
Aluminium (Total)	mg/L	DG_A PZ_BW36A	18/01/2021	0.01
Aluminium (Total)	mg/L	DG_A PZ_BW36A	18/02/2021	0.01
Aluminium (Total)	mg/L	DG_A PZ_GW04A	18/01/2021	0.03
Aluminium (Total)	mg/L	DG_A PZ_GW04A	17/02/2021	0.02
Aluminium (Total)	mg/L	DG_A PZ_GW04A	15/03/2021	0.01
Aluminium (Total)	mg/L	DG_A PZ_GW04A	13/04/2021	0.01
Aluminium (Total)	mg/L	DG_A PZ_GW04A	19/05/2021	0.01
Aluminium (Total)	mg/L	DG_A PZ_GW04A	16/06/2021	0.01
Ammonia Nitrogen	mg/L	DG_A PZ_BW05	12/01/2021	0.02
Ammonia Nitrogen	mg/L	DG_A PZ_IWB2	12/01/2021	0.004
Ammonia Nitrogen	mg/L	DG_A PZ_IWB6	12/01/2021	0.004

Variable	Unit	Sample Point	Date	Result
Ammonia Nitrogen	mg/L	DG_A PZ_WRK300	21/01/2021	0.004
Ammonia Nitrogen	mg/L	DG_A PZ_WRK301	20/01/2021	0.02
Ammonia Nitrogen	mg/L	DG_A PZ_WRK302	19/01/2021	0.02
Ammonia Nitrogen	mg/L	DG_A PZ_WRK302	16/03/2021	0.02
Ammonia Nitrogen	mg/L	DG_A PZ_GW01	14/01/2021	0.02
Ammonia Nitrogen	mg/L	DG_A PZ_GW01	17/02/2021	0.01
Ammonia Nitrogen	mg/L	DG_A PZ_GW01	15/03/2021	0.02
Ammonia Nitrogen	mg/L	DG_A PZ_GW01	13/04/2021	0.02
Ammonia Nitrogen	mg/L	DG_A PZ_GW01	19/05/2021	0.5
Ammonia Nitrogen	mg/L	DG_A PZ_GW01	16/06/2021	0.028
Ammonia Nitrogen	mg/L	DG_A PZ_GW06	20/01/2021	0.02
Ammonia Nitrogen	mg/L	DG_A PZ_GW06	16/03/2021	0.02
Ammonia Nitrogen	mg/L	DG_A PZ_GW07	11/01/2021	0.02
Ammonia Nitrogen	mg/L	DG_A PZ_BW45B	14/01/2021	0.02
Ammonia Nitrogen	mg/L	DG_A PZ_BW45B	18/02/2021	0.01
Ammonia Nitrogen	mg/L	DG_A PZ_GW02	14/01/2021	0.057
Ammonia Nitrogen	mg/L	DG_A PZ_GW02	17/02/2021	0.053
Ammonia Nitrogen	mg/L	DG_A PZ_GW02	15/03/2021	0.064
Ammonia Nitrogen	mg/L	DG_A PZ_GW02	8/04/2021	0.052
Ammonia Nitrogen	mg/L	DG_A PZ_GW02	19/05/2021	0.045
Ammonia Nitrogen	mg/L	DG_A PZ_GW02	16/06/2021	0.061
Ammonia Nitrogen	mg/L	DG_A PZ_GW03	14/01/2021	0.02
Ammonia Nitrogen	mg/L	DG_A PZ_GW03	17/02/2021	0.01
Ammonia Nitrogen	mg/L	DG_A PZ_GW03	15/03/2021	0.02
Ammonia Nitrogen	mg/L	DG_A PZ_GW03	8/04/2021	0.02
Ammonia Nitrogen	mg/L	DG_A PZ_GW03	19/05/2021	0.045
Ammonia Nitrogen	mg/L	DG_A PZ_GW03	16/06/2021	0.016
Ammonia Nitrogen	mg/L	DG_A PZ_GW04	18/01/2021	0.005
Ammonia Nitrogen	mg/L	DG_A PZ_GW05	18/01/2021	0.029
Ammonia Nitrogen	mg/L	DG_A PZ_GW08	19/01/2021	0.02
Ammonia Nitrogen	mg/L	DG_A PZ_GW08	16/03/2021	0.02
Ammonia Nitrogen	mg/L	DG_A PZ_BW50	13/01/2021	0.023
Ammonia Nitrogen	mg/L	DG_A PZ_BW36A	18/01/2021	0.05
Ammonia Nitrogen	mg/L	DG_A PZ_BW36A	18/02/2021	0.055
Ammonia Nitrogen	mg/L	DG_A PZ_GW04A	18/01/2021	0.041
Ammonia Nitrogen	mg/L	DG_A PZ_GW04A	17/02/2021	0.053
Ammonia Nitrogen	mg/L	DG_A PZ_GW04A	15/03/2021	0.037
Ammonia Nitrogen	mg/L	DG_A PZ_GW04A	13/04/2021	0.024
Ammonia Nitrogen	mg/L	DG_A PZ_GW04A	19/05/2021	0.073
Ammonia Nitrogen	mg/L	DG_A PZ_GW04A	16/06/2021	0.036
Anions (Total)	meq/L	DG_A PZ_BW05	12/01/2021	250
Anions (Total)	meq/L	DG_A PZ_IWB2	12/01/2021	35
Anions (Total)	meq/L	DG_A PZ_IWB6	12/01/2021	15
Anions (Total)	meq/L	DG_A PZ_WRK300	21/01/2021	58

Variable	Unit	Sample Point	Date	Result
Anions (Total)	meq/L	DG_A PZ_WRK301	20/01/2021	110
Anions (Total)	meq/L	DG_A PZ_WRK302	19/01/2021	210
Anions (Total)	meq/L	DG_A PZ_WRK302	16/03/2021	200
Anions (Total)	meq/L	DG_A PZ_GW01	14/01/2021	110
Anions (Total)	meq/L	DG_A PZ_GW01	17/02/2021	110
Anions (Total)	meq/L	DG_A PZ_GW01	15/03/2021	100
Anions (Total)	meq/L	DG_A PZ_GW01	13/04/2021	110
Anions (Total)	meq/L	DG_A PZ_GW01	19/05/2021	100
Anions (Total)	meq/L	DG_A PZ_GW01	16/06/2021	110
Anions (Total)	meq/L	DG_A PZ_GW06	20/01/2021	220
Anions (Total)	meq/L	DG_A PZ_GW06	16/03/2021	220
Anions (Total)	meq/L	DG_A PZ_GW07	11/01/2021	180
Anions (Total)	meq/L	DG_A PZ_BW45B	14/01/2021	180
Anions (Total)	meq/L	DG_A PZ_BW45B	18/02/2021	170
Anions (Total)	meq/L	DG_A PZ_GW02	14/01/2021	72
Anions (Total)	meq/L	DG_A PZ_GW02	17/02/2021	71
Anions (Total)	meq/L	DG_A PZ_GW02	15/03/2021	71
Anions (Total)	meq/L	DG_A PZ_GW02	8/04/2021	68
Anions (Total)	meq/L	DG_A PZ_GW02	19/05/2021	70
Anions (Total)	meq/L	DG_A PZ_GW02	16/06/2021	70
Anions (Total)	meq/L	DG_A PZ_GW03	14/01/2021	110
Anions (Total)	meq/L	DG_A PZ_GW03	17/02/2021	110
Anions (Total)	meq/L	DG_A PZ_GW03	15/03/2021	110
Anions (Total)	meq/L	DG_A PZ_GW03	8/04/2021	110
Anions (Total)	meq/L	DG_A PZ_GW03	19/05/2021	110
Anions (Total)	meq/L	DG_A PZ_GW03	16/06/2021	110
Anions (Total)	meq/L	DG_A PZ_GW04	18/01/2021	94
Anions (Total)	meq/L	DG_A PZ_GW05	18/01/2021	90
Anions (Total)	meq/L	DG_A PZ_GW08	19/01/2021	220
Anions (Total)	meq/L	DG_A PZ_GW08	16/03/2021	220
Anions (Total)	meq/L	DG_A PZ_BW50	13/01/2021	83
Anions (Total)	meq/L	DG_A PZ_BW36A	18/01/2021	80
Anions (Total)	meq/L	DG_A PZ_BW36A	18/02/2021	81
Anions (Total)	meq/L	DG_A PZ_GW04A	18/01/2021	81
Anions (Total)	meq/L	DG_A PZ_GW04A	17/02/2021	80
Anions (Total)	meq/L	DG_A PZ_GW04A	15/03/2021	81
Anions (Total)	meq/L	DG_A PZ_GW04A	13/04/2021	80
Anions (Total)	meq/L	DG_A PZ_GW04A	19/05/2021	79
Anions (Total)	meq/L	DG_A PZ_GW04A	16/06/2021	79
Antimony (Total)	mg/L	DG_A PZ_BW05	12/01/2021	0.001
Antimony (Total)	mg/L	DG_A PZ_IWB2	12/01/2021	0.001
Antimony (Total)	mg/L	DG_A PZ_IWB6	12/01/2021	0.001
Antimony (Total)	mg/L	DG_A PZ_WRK300	21/01/2021	0.001
Antimony (Total)	mg/L	DG_A PZ_WRK301	20/01/2021	0.001

Variable	Unit	Sample Point	Date	Result
Antimony (Total)	mg/L	DG_A PZ_WRK302	19/01/2021	0.001
Antimony (Total)	mg/L	DG_A PZ_WRK302	16/03/2021	0.001
Antimony (Total)	mg/L	DG_A PZ_GW01	14/01/2021	0.001
Antimony (Total)	mg/L	DG_A PZ_GW01	17/02/2021	0.001
Antimony (Total)	mg/L	DG_A PZ_GW01	15/03/2021	0.001
Antimony (Total)	mg/L	DG_A PZ_GW01	13/04/2021	0.001
Antimony (Total)	mg/L	DG_A PZ_GW01	19/05/2021	0.001
Antimony (Total)	mg/L	DG_A PZ_GW01	16/06/2021	0.001
Antimony (Total)	mg/L	DG_A PZ_GW06	20/01/2021	0.001
Antimony (Total)	mg/L	DG_A PZ_GW06	16/03/2021	0.001
Antimony (Total)	mg/L	DG_A PZ_GW07	11/01/2021	0.001
Antimony (Total)	mg/L	DG_A PZ_BW45B	14/01/2021	0.001
Antimony (Total)	mg/L	DG_A PZ_BW45B	18/02/2021	0.001
Antimony (Total)	mg/L	DG_A PZ_GW02	14/01/2021	0.001
Antimony (Total)	mg/L	DG_A PZ_GW02	17/02/2021	0.001
Antimony (Total)	mg/L	DG_A PZ_GW02	15/03/2021	0.001
Antimony (Total)	mg/L	DG_A PZ_GW02	8/04/2021	0.001
Antimony (Total)	mg/L	DG_A PZ_GW02	19/05/2021	0.001
Antimony (Total)	mg/L	DG_A PZ_GW02	16/06/2021	0.001
Antimony (Total)	mg/L	DG_A PZ_GW03	14/01/2021	0.001
Antimony (Total)	mg/L	DG_A PZ_GW03	17/02/2021	0.001
Antimony (Total)	mg/L	DG_A PZ_GW03	15/03/2021	0.001
Antimony (Total)	mg/L	DG_A PZ_GW03	8/04/2021	0.001
Antimony (Total)	mg/L	DG_A PZ_GW03	19/05/2021	0.001
Antimony (Total)	mg/L	DG_A PZ_GW03	16/06/2021	0.001
Antimony (Total)	mg/L	DG_A PZ_GW04	18/01/2021	0.001
Antimony (Total)	mg/L	DG_A PZ_GW05	18/01/2021	0.001
Antimony (Total)	mg/L	DG_A PZ_GW08	19/01/2021	0.001
Antimony (Total)	mg/L	DG_A PZ_GW08	16/03/2021	0.001
Antimony (Total)	mg/L	DG_A PZ_BW50	13/01/2021	0.001
Antimony (Total)	mg/L	DG_A PZ_BW36A	18/01/2021	0.001
Antimony (Total)	mg/L	DG_A PZ_BW36A	18/02/2021	0.001
Antimony (Total)	mg/L	DG_A PZ_GW04A	18/01/2021	0.001
Antimony (Total)	mg/L	DG_A PZ_GW04A	17/02/2021	0.001
Antimony (Total)	mg/L	DG_A PZ_GW04A	15/03/2021	0.001
Antimony (Total)	mg/L	DG_A PZ_GW04A	13/04/2021	0.001
Antimony (Total)	mg/L	DG_A PZ_GW04A	19/05/2021	0.001
Antimony (Total)	mg/L	DG_A PZ_GW04A	16/06/2021	0.001
Arsenic (Total)	mg/L	DG_A PZ_BW05	12/01/2021	0.011
Arsenic (Total)	mg/L	DG_A PZ_IWB2	12/01/2021	0.002
Arsenic (Total)	mg/L	DG_A PZ_IWB6	12/01/2021	0.029
Arsenic (Total)	mg/L	DG_A PZ_WRK300	21/01/2021	0.003
Arsenic (Total)	mg/L	DG_A PZ_WRK301	20/01/2021	0.005
Arsenic (Total)	mg/L	DG_A PZ_WRK302	19/01/2021	0.004

Variable	Unit	Sample Point	Date	Result
Arsenic (Total)	mg/L	DG_A PZ_WRK302	16/03/2021	0.001
Arsenic (Total)	mg/L	DG_A PZ_GW01	14/01/2021	0.013
Arsenic (Total)	mg/L	DG_A PZ_GW01	17/02/2021	0.013
Arsenic (Total)	mg/L	DG_A PZ_GW01	15/03/2021	0.009
Arsenic (Total)	mg/L	DG_A PZ_GW01	13/04/2021	0.008
Arsenic (Total)	mg/L	DG_A PZ_GW01	19/05/2021	0.006
Arsenic (Total)	mg/L	DG_A PZ_GW01	16/06/2021	0.013
Arsenic (Total)	mg/L	DG_A PZ_GW06	20/01/2021	0.006
Arsenic (Total)	mg/L	DG_A PZ_GW06	16/03/2021	0.001
Arsenic (Total)	mg/L	DG_A PZ_GW07	11/01/2021	0.002
Arsenic (Total)	mg/L	DG_A PZ_BW45B	14/01/2021	0.01
Arsenic (Total)	mg/L	DG_A PZ_BW45B	18/02/2021	0.006
Arsenic (Total)	mg/L	DG_A PZ_GW02	14/01/2021	0.001
Arsenic (Total)	mg/L	DG_A PZ_GW02	17/02/2021	0.001
Arsenic (Total)	mg/L	DG_A PZ_GW02	15/03/2021	0.001
Arsenic (Total)	mg/L	DG_A PZ_GW02	8/04/2021	0.001
Arsenic (Total)	mg/L	DG_A PZ_GW02	19/05/2021	0.001
Arsenic (Total)	mg/L	DG_A PZ_GW02	16/06/2021	0.001
Arsenic (Total)	mg/L	DG_A PZ_GW03	14/01/2021	0.008
Arsenic (Total)	mg/L	DG_A PZ_GW03	17/02/2021	0.006
Arsenic (Total)	mg/L	DG_A PZ_GW03	15/03/2021	0.007
Arsenic (Total)	mg/L	DG_A PZ_GW03	8/04/2021	0.008
Arsenic (Total)	mg/L	DG_A PZ_GW03	19/05/2021	0.006
Arsenic (Total)	mg/L	DG_A PZ_GW03	16/06/2021	0.005
Arsenic (Total)	mg/L	DG_A PZ_GW04	18/01/2021	0.003
Arsenic (Total)	mg/L	DG_A PZ_GW05	18/01/2021	0.18
Arsenic (Total)	mg/L	DG_A PZ_GW08	19/01/2021	0.002
Arsenic (Total)	mg/L	DG_A PZ_GW08	16/03/2021	0.001
Arsenic (Total)	mg/L	DG_A PZ_BW50	13/01/2021	0.01
Arsenic (Total)	mg/L	DG_A PZ_BW36A	18/01/2021	0.003
Arsenic (Total)	mg/L	DG_A PZ_BW36A	18/02/2021	0.17
Arsenic (Total)	mg/L	DG_A PZ_GW04A	18/01/2021	0.006
Arsenic (Total)	mg/L	DG_A PZ_GW04A	17/02/2021	0.002
Arsenic (Total)	mg/L	DG_A PZ_GW04A	15/03/2021	0.002
Arsenic (Total)	mg/L	DG_A PZ_GW04A	13/04/2021	0.002
Arsenic (Total)	mg/L	DG_A PZ_GW04A	19/05/2021	0.002
Arsenic (Total)	mg/L	DG_A PZ_GW04A	16/06/2021	0.002
Barium (Total)	mg/L	DG_A PZ_BW05	12/01/2021	0.033
Barium (Total)	mg/L	DG_A PZ_IWB2	12/01/2021	0.003
Barium (Total)	mg/L	DG_A PZ_IWB6	12/01/2021	0.028
Barium (Total)	mg/L	DG_A PZ_WRK300	21/01/2021	0.026
Barium (Total)	mg/L	DG_A PZ_WRK301	20/01/2021	0.015
Barium (Total)	mg/L	DG_A PZ_WRK302	19/01/2021	0.022
Barium (Total)	mg/L	DG_A PZ_WRK302	16/03/2021	0.002

Variable	Unit	Sample Point	Date	Result
Barium (Total)	mg/L	DG_A PZ_GW01	14/01/2021	0.044
Barium (Total)	mg/L	DG_A PZ_GW01	17/02/2021	0.044
Barium (Total)	mg/L	DG_A PZ_GW01	15/03/2021	0.047
Barium (Total)	mg/L	DG_A PZ_GW01	13/04/2021	0.045
Barium (Total)	mg/L	DG_A PZ_GW01	19/05/2021	0.044
Barium (Total)	mg/L	DG_A PZ_GW01	16/06/2021	0.046
Barium (Total)	mg/L	DG_A PZ_GW06	20/01/2021	0.021
Barium (Total)	mg/L	DG_A PZ_GW06	16/03/2021	0.002
Barium (Total)	mg/L	DG_A PZ_GW07	11/01/2021	0.027
Barium (Total)	mg/L	DG_A PZ_BW45B	14/01/2021	0.022
Barium (Total)	mg/L	DG_A PZ_BW45B	18/02/2021	0.022
Barium (Total)	mg/L	DG_A PZ_GW02	14/01/2021	0.033
Barium (Total)	mg/L	DG_A PZ_GW02	17/02/2021	0.033
Barium (Total)	mg/L	DG_A PZ_GW02	15/03/2021	0.034
Barium (Total)	mg/L	DG_A PZ_GW02	8/04/2021	0.031
Barium (Total)	mg/L	DG_A PZ_GW02	19/05/2021	0.032
Barium (Total)	mg/L	DG_A PZ_GW02	16/06/2021	0.032
Barium (Total)	mg/L	DG_A PZ_GW03	14/01/2021	0.013
Barium (Total)	mg/L	DG_A PZ_GW03	17/02/2021	0.008
Barium (Total)	mg/L	DG_A PZ_GW03	15/03/2021	0.009
Barium (Total)	mg/L	DG_A PZ_GW03	8/04/2021	0.009
Barium (Total)	mg/L	DG_A PZ_GW03	19/05/2021	0.008
Barium (Total)	mg/L	DG_A PZ_GW03	16/06/2021	0.014
Barium (Total)	mg/L	DG_A PZ_GW04	18/01/2021	0.053
Barium (Total)	mg/L	DG_A PZ_GW05	18/01/2021	0.35
Barium (Total)	mg/L	DG_A PZ_GW08	19/01/2021	0.006
Barium (Total)	mg/L	DG_A PZ_GW08	16/03/2021	0.001
Barium (Total)	mg/L	DG_A PZ_BW50	13/01/2021	0.061
Barium (Total)	mg/L	DG_A PZ_BW36A	18/01/2021	0.014
Barium (Total)	mg/L	DG_A PZ_BW36A	18/02/2021	0.33
Barium (Total)	mg/L	DG_A PZ_GW04A	18/01/2021	0.021
Barium (Total)	mg/L	DG_A PZ_GW04A	17/02/2021	0.051
Barium (Total)	mg/L	DG_A PZ_GW04A	15/03/2021	0.05
Barium (Total)	mg/L	DG_A PZ_GW04A	13/04/2021	0.042
Barium (Total)	mg/L	DG_A PZ_GW04A	19/05/2021	0.044
Barium (Total)	mg/L	DG_A PZ_GW04A	16/06/2021	0.048
Beryllium (Total)	mg/L	DG_A PZ_BW05	12/01/2021	0.001
Beryllium (Total)	mg/L	DG_A PZ_IWB2	12/01/2021	0.001
Beryllium (Total)	mg/L	DG_A PZ_IWB6	12/01/2021	0.001
Beryllium (Total)	mg/L	DG_A PZ_WRK300	21/01/2021	0.001
Beryllium (Total)	mg/L	DG_A PZ_WRK301	20/01/2021	0.001
Beryllium (Total)	mg/L	DG_A PZ_WRK302	19/01/2021	0.001
Beryllium (Total)	mg/L	DG_A PZ_WRK302	16/03/2021	0.001
Beryllium (Total)	mg/L	DG_A PZ_GW01	14/01/2021	0.013

Variable	Unit	Sample Point	Date	Result
Beryllium (Total)	mg/L	DG_A PZ_GW01	17/02/2021	0.013
Beryllium (Total)	mg/L	DG_A PZ_GW01	15/03/2021	0.014
Beryllium (Total)	mg/L	DG_A PZ_GW01	13/04/2021	0.014
Beryllium (Total)	mg/L	DG_A PZ_GW01	19/05/2021	0.014
Beryllium (Total)	mg/L	DG_A PZ_GW01	16/06/2021	0.014
Beryllium (Total)	mg/L	DG_A PZ_GW06	20/01/2021	0.001
Beryllium (Total)	mg/L	DG_A PZ_GW06	16/03/2021	0.001
Beryllium (Total)	mg/L	DG_A PZ_GW07	11/01/2021	0.002
Beryllium (Total)	mg/L	DG_A PZ_BW45B	14/01/2021	0.008
Beryllium (Total)	mg/L	DG_A PZ_BW45B	18/02/2021	0.008
Beryllium (Total)	mg/L	DG_A PZ_GW02	14/01/2021	0.001
Beryllium (Total)	mg/L	DG_A PZ_GW02	17/02/2021	0.001
Beryllium (Total)	mg/L	DG_A PZ_GW02	15/03/2021	0.001
Beryllium (Total)	mg/L	DG_A PZ_GW02	8/04/2021	0.001
Beryllium (Total)	mg/L	DG_A PZ_GW02	19/05/2021	0.001
Beryllium (Total)	mg/L	DG_A PZ_GW02	16/06/2021	0.001
Beryllium (Total)	mg/L	DG_A PZ_GW03	14/01/2021	0.001
Beryllium (Total)	mg/L	DG_A PZ_GW03	17/02/2021	0.001
Beryllium (Total)	mg/L	DG_A PZ_GW03	15/03/2021	0.001
Beryllium (Total)	mg/L	DG_A PZ_GW03	8/04/2021	0.001
Beryllium (Total)	mg/L	DG_A PZ_GW03	19/05/2021	0.001
Beryllium (Total)	mg/L	DG_A PZ_GW03	16/06/2021	0.001
Beryllium (Total)	mg/L	DG_A PZ_GW04	18/01/2021	0.001
Beryllium (Total)	mg/L	DG_A PZ_GW05	18/01/2021	0.001
Beryllium (Total)	mg/L	DG_A PZ_GW08	19/01/2021	0.001
Beryllium (Total)	mg/L	DG_A PZ_GW08	16/03/2021	0.001
Beryllium (Total)	mg/L	DG_A PZ_BW50	13/01/2021	0.001
Beryllium (Total)	mg/L	DG_A PZ_BW36A	18/01/2021	0.001
Beryllium (Total)	mg/L	DG_A PZ_BW36A	18/02/2021	0.001
Beryllium (Total)	mg/L	DG_A PZ_GW04A	18/01/2021	0.001
Beryllium (Total)	mg/L	DG_A PZ_GW04A	17/02/2021	0.001
Beryllium (Total)	mg/L	DG_A PZ_GW04A	15/03/2021	0.001
Beryllium (Total)	mg/L	DG_A PZ_GW04A	13/04/2021	0.001
Beryllium (Total)	mg/L	DG_A PZ_GW04A	19/05/2021	0.001
Beryllium (Total)	mg/L	DG_A PZ_GW04A	16/06/2021	0.001
Boron (Total)	mg/L	DG_A PZ_BW05	12/01/2021	1.6
Boron (Total)	mg/L	DG_A PZ_IWB2	12/01/2021	0.37
Boron (Total)	mg/L	DG_A PZ_IWB6	12/01/2021	0.33
Boron (Total)	mg/L	DG_A PZ_WRK300	21/01/2021	0.17
Boron (Total)	mg/L	DG_A PZ_WRK301	20/01/2021	0.61
Boron (Total)	mg/L	DG_A PZ_WRK302	19/01/2021	1.8
Boron (Total)	mg/L	DG_A PZ_WRK302	16/03/2021	0.16
Boron (Total)	mg/L	DG_A PZ_GW01	14/01/2021	0.34
Boron (Total)	mg/L	DG_A PZ_GW01	17/02/2021	0.1

Variable	Unit	Sample Point	Date	Result
Boron (Total)	mg/L	DG_A PZ_GW01	15/03/2021	0.1
Boron (Total)	mg/L	DG_A PZ_GW01	13/04/2021	0.1
Boron (Total)	mg/L	DG_A PZ_GW01	19/05/2021	0.07
Boron (Total)	mg/L	DG_A PZ_GW01	16/06/2021	0.09
Boron (Total)	mg/L	DG_A PZ_GW06	20/01/2021	1.7
Boron (Total)	mg/L	DG_A PZ_GW06	16/03/2021	0.15
Boron (Total)	mg/L	DG_A PZ_GW07	11/01/2021	2.1
Boron (Total)	mg/L	DG_A PZ_BW45B	14/01/2021	1.2
Boron (Total)	mg/L	DG_A PZ_BW45B	18/02/2021	0.96
Boron (Total)	mg/L	DG_A PZ_GW02	14/01/2021	0.35
Boron (Total)	mg/L	DG_A PZ_GW02	17/02/2021	0.13
Boron (Total)	mg/L	DG_A PZ_GW02	15/03/2021	0.13
Boron (Total)	mg/L	DG_A PZ_GW02	8/04/2021	0.13
Boron (Total)	mg/L	DG_A PZ_GW02	19/05/2021	0.09
Boron (Total)	mg/L	DG_A PZ_GW02	16/06/2021	0.11
Boron (Total)	mg/L	DG_A PZ_GW03	14/01/2021	0.52
Boron (Total)	mg/L	DG_A PZ_GW03	17/02/2021	0.28
Boron (Total)	mg/L	DG_A PZ_GW03	15/03/2021	0.31
Boron (Total)	mg/L	DG_A PZ_GW03	8/04/2021	0.31
Boron (Total)	mg/L	DG_A PZ_GW03	19/05/2021	0.25
Boron (Total)	mg/L	DG_A PZ_GW03	16/06/2021	0.3
Boron (Total)	mg/L	DG_A PZ_GW04	18/01/2021	0.61
Boron (Total)	mg/L	DG_A PZ_GW05	18/01/2021	0.29
Boron (Total)	mg/L	DG_A PZ_GW08	19/01/2021	1.5
Boron (Total)	mg/L	DG_A PZ_GW08	16/03/2021	0.13
Boron (Total)	mg/L	DG_A PZ_BW50	13/01/2021	0.77
Boron (Total)	mg/L	DG_A PZ_BW36A	18/01/2021	1.1
Boron (Total)	mg/L	DG_A PZ_BW36A	18/02/2021	0.08
Boron (Total)	mg/L	DG_A PZ_GW04A	18/01/2021	0.79
Boron (Total)	mg/L	DG_A PZ_GW04A	17/02/2021	0.4
Boron (Total)	mg/L	DG_A PZ_GW04A	15/03/2021	0.43
Boron (Total)	mg/L	DG_A PZ_GW04A	13/04/2021	0.43
Boron (Total)	mg/L	DG_A PZ_GW04A	19/05/2021	0.34
Boron (Total)	mg/L	DG_A PZ_GW04A	16/06/2021	0.39
Cadmium (Total)	mg/L	DG_A PZ_BW05	12/01/2021	0.0002
Cadmium (Total)	mg/L	DG_A PZ_IWB2	12/01/2021	0.0002
Cadmium (Total)	mg/L	DG_A PZ_IWB6	12/01/2021	0.0002
Cadmium (Total)	mg/L	DG_A PZ_WRK300	21/01/2021	0.0002
Cadmium (Total)	mg/L	DG_A PZ_WRK301	20/01/2021	0.0002
Cadmium (Total)	mg/L	DG_A PZ_WRK302	19/01/2021	0.0002
Cadmium (Total)	mg/L	DG_A PZ_WRK302	16/03/2021	0.0002
Cadmium (Total)	mg/L	DG_A PZ_GW01	14/01/2021	0.0002
Cadmium (Total)	mg/L	DG_A PZ_GW01	17/02/2021	0.0002
Cadmium (Total)	mg/L	DG_A PZ_GW01	15/03/2021	0.0002

Variable	Unit	Sample Point	Date	Result
Cadmium (Total)	mg/L	DG_A PZ_GW01	13/04/2021	0.0002
Cadmium (Total)	mg/L	DG_A PZ_GW01	19/05/2021	0.0002
Cadmium (Total)	mg/L	DG_A PZ_GW01	16/06/2021	0.0002
Cadmium (Total)	mg/L	DG_A PZ_GW06	20/01/2021	0.0002
Cadmium (Total)	mg/L	DG_A PZ_GW06	16/03/2021	0.0002
Cadmium (Total)	mg/L	DG_A PZ_GW07	11/01/2021	0.0002
Cadmium (Total)	mg/L	DG_A PZ_BW45B	14/01/2021	0.0002
Cadmium (Total)	mg/L	DG_A PZ_BW45B	18/02/2021	0.0002
Cadmium (Total)	mg/L	DG_A PZ_GW02	14/01/2021	0.0002
Cadmium (Total)	mg/L	DG_A PZ_GW02	17/02/2021	0.0002
Cadmium (Total)	mg/L	DG_A PZ_GW02	15/03/2021	0.0002
Cadmium (Total)	mg/L	DG_A PZ_GW02	8/04/2021	0.0002
Cadmium (Total)	mg/L	DG_A PZ_GW02	19/05/2021	0.0002
Cadmium (Total)	mg/L	DG_A PZ_GW02	16/06/2021	0.0002
Cadmium (Total)	mg/L	DG_A PZ_GW03	14/01/2021	0.0002
Cadmium (Total)	mg/L	DG_A PZ_GW03	17/02/2021	0.0002
Cadmium (Total)	mg/L	DG_A PZ_GW03	15/03/2021	0.0002
Cadmium (Total)	mg/L	DG_A PZ_GW03	8/04/2021	0.0002
Cadmium (Total)	mg/L	DG_A PZ_GW03	19/05/2021	0.0002
Cadmium (Total)	mg/L	DG_A PZ_GW03	16/06/2021	0.0002
Cadmium (Total)	mg/L	DG_A PZ_GW04	18/01/2021	0.0002
Cadmium (Total)	mg/L	DG_A PZ_GW05	18/01/2021	0.0002
Cadmium (Total)	mg/L	DG_A PZ_GW08	19/01/2021	0.0002
Cadmium (Total)	mg/L	DG_A PZ_GW08	16/03/2021	0.0002
Cadmium (Total)	mg/L	DG_A PZ_BW50	13/01/2021	0.0002
Cadmium (Total)	mg/L	DG_A PZ_BW36A	18/01/2021	0.0002
Cadmium (Total)	mg/L	DG_A PZ_BW36A	18/02/2021	0.0002
Cadmium (Total)	mg/L	DG_A PZ_GW04A	18/01/2021	0.0002
Cadmium (Total)	mg/L	DG_A PZ_GW04A	17/02/2021	0.0002
Cadmium (Total)	mg/L	DG_A PZ_GW04A	15/03/2021	0.0002
Cadmium (Total)	mg/L	DG_A PZ_GW04A	13/04/2021	0.0002
Cadmium (Total)	mg/L	DG_A PZ_GW04A	19/05/2021	0.0002
Cadmium (Total)	mg/L	DG_A PZ_GW04A	16/06/2021	0.0002
Calcium	mg/L	DG_A PZ_BW05	12/01/2021	270
Calcium	mg/L	DG_A PZ_IWB2	12/01/2021	10
Calcium	mg/L	DG_A PZ_IWB6	12/01/2021	6.7
Calcium	mg/L	DG_A PZ_WRK300	21/01/2021	140
Calcium	mg/L	DG_A PZ_WRK301	20/01/2021	260
Calcium	mg/L	DG_A PZ_WRK302	19/01/2021	430
Calcium	mg/L	DG_A PZ_WRK302	16/03/2021	460
Calcium	mg/L	DG_A PZ_GW01	14/01/2021	66
Calcium	mg/L	DG_A PZ_GW01	17/02/2021	66
Calcium	mg/L	DG_A PZ_GW01	15/03/2021	73
Calcium	mg/L	DG_A PZ_GW01	13/04/2021	77

Variable	Unit	Sample Point	Date	Result
Calcium	mg/L	DG_A PZ_GW01	19/05/2021	76
Calcium	mg/L	DG_A PZ_GW01	16/06/2021	86
Calcium	mg/L	DG_A PZ_GW06	20/01/2021	600
Calcium	mg/L	DG_A PZ_GW06	16/03/2021	520
Calcium	mg/L	DG_A PZ_GW07	11/01/2021	420
Calcium	mg/L	DG_A PZ_BW45B	14/01/2021	320
Calcium	mg/L	DG_A PZ_BW45B	18/02/2021	340
Calcium	mg/L	DG_A PZ_GW02	14/01/2021	20
Calcium	mg/L	DG_A PZ_GW02	17/02/2021	19
Calcium	mg/L	DG_A PZ_GW02	15/03/2021	20
Calcium	mg/L	DG_A PZ_GW02	8/04/2021	18
Calcium	mg/L	DG_A PZ_GW02	19/05/2021	22
Calcium	mg/L	DG_A PZ_GW02	16/06/2021	20
Calcium	mg/L	DG_A PZ_GW03	14/01/2021	180
Calcium	mg/L	DG_A PZ_GW03	17/02/2021	170
Calcium	mg/L	DG_A PZ_GW03	15/03/2021	150
Calcium	mg/L	DG_A PZ_GW03	8/04/2021	180
Calcium	mg/L	DG_A PZ_GW03	19/05/2021	200
Calcium	mg/L	DG_A PZ_GW03	16/06/2021	180
Calcium	mg/L	DG_A PZ_GW04	18/01/2021	110
Calcium	mg/L	DG_A PZ_GW05	18/01/2021	82
Calcium	mg/L	DG_A PZ_GW08	19/01/2021	530
Calcium	mg/L	DG_A PZ_GW08	16/03/2021	550
Calcium	mg/L	DG_A PZ_BW50	13/01/2021	260
Calcium	mg/L	DG_A PZ_BW36A	18/01/2021	130
Calcium	mg/L	DG_A PZ_BW36A	18/02/2021	140
Calcium	mg/L	DG_A PZ_GW04A	18/01/2021	120
Calcium	mg/L	DG_A PZ_GW04A	17/02/2021	130
Calcium	mg/L	DG_A PZ_GW04A	15/03/2021	130
Calcium	mg/L	DG_A PZ_GW04A	13/04/2021	120
Calcium	mg/L	DG_A PZ_GW04A	19/05/2021	130
Calcium	mg/L	DG_A PZ_GW04A	16/06/2021	120
Cations (Total)	meq/L	DG_A PZ_BW05	12/01/2021	260
Cations (Total)	meq/L	DG_A PZ_IWB2	12/01/2021	37
Cations (Total)	meq/L	DG_A PZ_IWB6	12/01/2021	16
Cations (Total)	meq/L	DG_A PZ_WRK300	21/01/2021	60
Cations (Total)	meq/L	DG_A PZ_WRK301	20/01/2021	110
Cations (Total)	meq/L	DG_A PZ_WRK302	19/01/2021	210
Cations (Total)	meq/L	DG_A PZ_WRK302	16/03/2021	210
Cations (Total)	meq/L	DG_A PZ_GW01	14/01/2021	110
Cations (Total)	meq/L	DG_A PZ_GW01	17/02/2021	110
Cations (Total)	meq/L	DG_A PZ_GW01	15/03/2021	100
Cations (Total)	meq/L	DG_A PZ_GW01	13/04/2021	110
Cations (Total)	meq/L	DG_A PZ_GW01	19/05/2021	110

Variable	Unit	Sample Point	Date	Result
Cations (Total)	meq/L	DG_A PZ_GW01	16/06/2021	110
Cations (Total)	meq/L	DG_A PZ_GW06	20/01/2021	230
Cations (Total)	meq/L	DG_A PZ_GW06	16/03/2021	240
Cations (Total)	meq/L	DG_A PZ_GW07	11/01/2021	190
Cations (Total)	meq/L	DG_A PZ_BW45B	14/01/2021	180
Cations (Total)	meq/L	DG_A PZ_BW45B	18/02/2021	170
Cations (Total)	meq/L	DG_A PZ_GW02	14/01/2021	73
Cations (Total)	meq/L	DG_A PZ_GW02	17/02/2021	70
Cations (Total)	meq/L	DG_A PZ_GW02	15/03/2021	72
Cations (Total)	meq/L	DG_A PZ_GW02	8/04/2021	66
Cations (Total)	meq/L	DG_A PZ_GW02	19/05/2021	71
Cations (Total)	meq/L	DG_A PZ_GW02	16/06/2021	69
Cations (Total)	meq/L	DG_A PZ_GW03	14/01/2021	110
Cations (Total)	meq/L	DG_A PZ_GW03	17/02/2021	110
Cations (Total)	meq/L	DG_A PZ_GW03	15/03/2021	100
Cations (Total)	meq/L	DG_A PZ_GW03	8/04/2021	110
Cations (Total)	meq/L	DG_A PZ_GW03	19/05/2021	110
Cations (Total)	meq/L	DG_A PZ_GW03	16/06/2021	110
Cations (Total)	meq/L	DG_A PZ_GW04	18/01/2021	99
Cations (Total)	meq/L	DG_A PZ_GW05	18/01/2021	94
Cations (Total)	meq/L	DG_A PZ_GW08	19/01/2021	230
Cations (Total)	meq/L	DG_A PZ_GW08	16/03/2021	220
Cations (Total)	meq/L	DG_A PZ_BW50	13/01/2021	85
Cations (Total)	meq/L	DG_A PZ_BW36A	18/01/2021	78
Cations (Total)	meq/L	DG_A PZ_BW36A	18/02/2021	78
Cations (Total)	meq/L	DG_A PZ_GW04A	18/01/2021	86
Cations (Total)	meq/L	DG_A PZ_GW04A	17/02/2021	79
Cations (Total)	meq/L	DG_A PZ_GW04A	15/03/2021	81
Cations (Total)	meq/L	DG_A PZ_GW04A	13/04/2021	76
Cations (Total)	meq/L	DG_A PZ_GW04A	19/05/2021	78
Cations (Total)	meq/L	DG_A PZ_GW04A	16/06/2021	78
Chloride	mg/L	DG_A PZ_BW05	12/01/2021	7900
Chloride	mg/L	DG_A PZ_IWB2	12/01/2021	1100
Chloride	mg/L	DG_A PZ_IWB6	12/01/2021	360
Chloride	mg/L	DG_A PZ_WRK300	21/01/2021	1700
Chloride	mg/L	DG_A PZ_WRK301	20/01/2021	3200
Chloride	mg/L	DG_A PZ_WRK302	19/01/2021	6200
Chloride	mg/L	DG_A PZ_WRK302	16/03/2021	6200
Chloride	mg/L	DG_A PZ_GW01	14/01/2021	3400
Chloride	mg/L	DG_A PZ_GW01	17/02/2021	3400
Chloride	mg/L	DG_A PZ_GW01	15/03/2021	3300
Chloride	mg/L	DG_A PZ_GW01	13/04/2021	3400
Chloride	mg/L	DG_A PZ_GW01	19/05/2021	3300
Chloride	mg/L	DG_A PZ_GW01	16/06/2021	3400

Variable	Unit	Sample Point	Date	Result
Chloride	mg/L	DG_A PZ_GW06	20/01/2021	6600
Chloride	mg/L	DG_A PZ_GW06	16/03/2021	6600
Chloride	mg/L	DG_A PZ_GW07	11/01/2021	5700
Chloride	mg/L	DG_A PZ_BW45B	14/01/2021	5500
Chloride	mg/L	DG_A PZ_BW45B	18/02/2021	5300
Chloride	mg/L	DG_A PZ_GW02	14/01/2021	2200
Chloride	mg/L	DG_A PZ_GW02	17/02/2021	2200
Chloride	mg/L	DG_A PZ_GW02	15/03/2021	2200
Chloride	mg/L	DG_A PZ_GW02	8/04/2021	2100
Chloride	mg/L	DG_A PZ_GW02	19/05/2021	2100
Chloride	mg/L	DG_A PZ_GW02	16/06/2021	2100
Chloride	mg/L	DG_A PZ_GW03	14/01/2021	3300
Chloride	mg/L	DG_A PZ_GW03	17/02/2021	3300
Chloride	mg/L	DG_A PZ_GW03	15/03/2021	3300
Chloride	mg/L	DG_A PZ_GW03	8/04/2021	3300
Chloride	mg/L	DG_A PZ_GW03	19/05/2021	3300
Chloride	mg/L	DG_A PZ_GW03	16/06/2021	3300
Chloride	mg/L	DG_A PZ_GW04	18/01/2021	2800
Chloride	mg/L	DG_A PZ_GW05	18/01/2021	2600
Chloride	mg/L	DG_A PZ_GW08	19/01/2021	6700
Chloride	mg/L	DG_A PZ_GW08	16/03/2021	6700
Chloride	mg/L	DG_A PZ_BW50	13/01/2021	2500
Chloride	mg/L	DG_A PZ_BW36A	18/01/2021	2400
Chloride	mg/L	DG_A PZ_BW36A	18/02/2021	2500
Chloride	mg/L	DG_A PZ_GW04A	18/01/2021	2500
Chloride	mg/L	DG_A PZ_GW04A	17/02/2021	2500
Chloride	mg/L	DG_A PZ_GW04A	15/03/2021	2500
Chloride	mg/L	DG_A PZ_GW04A	13/04/2021	2500
Chloride	mg/L	DG_A PZ_GW04A	19/05/2021	2500
Chloride	mg/L	DG_A PZ_GW04A	16/06/2021	2500
Chloride:Sulfate Ratio		DG_A PZ_BW05	12/01/2021	9.19
Chloride:Sulfate Ratio		DG_A PZ_IWB2	12/01/2021	7.33
Chloride:Sulfate Ratio		DG_A PZ_IWB6	12/01/2021	1.8
Chloride:Sulfate Ratio		DG_A PZ_WRK300	21/01/2021	5.15
Chloride:Sulfate Ratio		DG_A PZ_WRK301	20/01/2021	4.71
Chloride:Sulfate Ratio		DG_A PZ_WRK302	19/01/2021	4.43
Chloride:Sulfate Ratio		DG_A PZ_WRK302	16/03/2021	4.77
Chloride:Sulfate Ratio		DG_A PZ_GW01	14/01/2021	7.08
Chloride:Sulfate Ratio		DG_A PZ_GW01	17/02/2021	6.3
Chloride:Sulfate Ratio		DG_A PZ_GW01	15/03/2021	6.88
Chloride:Sulfate Ratio		DG_A PZ_GW01	13/04/2021	7.39
Chloride:Sulfate Ratio		DG_A PZ_GW01	19/05/2021	8.25
Chloride:Sulfate Ratio		DG_A PZ_GW01	16/06/2021	7.23
Chloride:Sulfate Ratio		DG_A PZ_GW06	20/01/2021	4.13

Variable	Unit	Sample Point	Date	Result
Chloride:Sulfate Ratio		DG_A PZ_GW06	16/03/2021	4.4
Chloride:Sulfate Ratio		DG_A PZ_GW07	11/01/2021	5.94
Chloride:Sulfate Ratio		DG_A PZ_BW45B	14/01/2021	5.5
Chloride:Sulfate Ratio		DG_A PZ_BW45B	18/02/2021	5.52
Chloride:Sulfate Ratio		DG_A PZ_GW02	14/01/2021	6.29
Chloride:Sulfate Ratio		DG_A PZ_GW02	17/02/2021	6.11
Chloride:Sulfate Ratio		DG_A PZ_GW02	15/03/2021	5.64
Chloride:Sulfate Ratio		DG_A PZ_GW02	8/04/2021	5.68
Chloride:Sulfate Ratio		DG_A PZ_GW02	19/05/2021	5
Chloride:Sulfate Ratio		DG_A PZ_GW02	16/06/2021	5.12
Chloride:Sulfate Ratio		DG_A PZ_GW03	14/01/2021	5.24
Chloride:Sulfate Ratio		DG_A PZ_GW03	17/02/2021	5.69
Chloride:Sulfate Ratio		DG_A PZ_GW03	15/03/2021	6.88
Chloride:Sulfate Ratio		DG_A PZ_GW03	8/04/2021	6
Chloride:Sulfate Ratio		DG_A PZ_GW03	19/05/2021	5.89
Chloride:Sulfate Ratio		DG_A PZ_GW03	16/06/2021	6.11
Chloride:Sulfate Ratio		DG_A PZ_GW04	18/01/2021	4.24
Chloride:Sulfate Ratio		DG_A PZ_GW05	18/01/2021	3.56
Chloride:Sulfate Ratio		DG_A PZ_GW08	19/01/2021	4.79
Chloride:Sulfate Ratio		DG_A PZ_GW08	16/03/2021	5.15
Chloride:Sulfate Ratio		DG_A PZ_BW50	13/01/2021	7.35
Chromium (Total)	mg/L	DG_A PZ_BW05	12/01/2021	0.001
Chromium (Total)	mg/L	DG_A PZ_IWB2	12/01/2021	0.001
Chromium (Total)	mg/L	DG_A PZ_IWB6	12/01/2021	0.002
Chromium (Total)	mg/L	DG_A PZ_WRK300	21/01/2021	0.001
Chromium (Total)	mg/L	DG_A PZ_WRK301	20/01/2021	0.001
Chromium (Total)	mg/L	DG_A PZ_WRK302	19/01/2021	0.001
Chromium (Total)	mg/L	DG_A PZ_WRK302	16/03/2021	0.001
Chromium (Total)	mg/L	DG_A PZ_GW01	14/01/2021	0.001
Chromium (Total)	mg/L	DG_A PZ_GW01	17/02/2021	0.006
Chromium (Total)	mg/L	DG_A PZ_GW01	15/03/2021	0.004
Chromium (Total)	mg/L	DG_A PZ_GW01	13/04/2021	0.005
Chromium (Total)	mg/L	DG_A PZ_GW01	19/05/2021	0.001
Chromium (Total)	mg/L	DG_A PZ_GW01	16/06/2021	0.006
Chromium (Total)	mg/L	DG_A PZ_GW06	20/01/2021	0.001
Chromium (Total)	mg/L	DG_A PZ_GW06	16/03/2021	0.001
Chromium (Total)	mg/L	DG_A PZ_GW07	11/01/2021	0.003
Chromium (Total)	mg/L	DG_A PZ_BW45B	14/01/2021	0.001
Chromium (Total)	mg/L	DG_A PZ_BW45B	18/02/2021	0.003
Chromium (Total)	mg/L	DG_A PZ_GW02	14/01/2021	0.001
Chromium (Total)	mg/L	DG_A PZ_GW02	17/02/2021	0.002
Chromium (Total)	mg/L	DG_A PZ_GW02	15/03/2021	0.001
Chromium (Total)	mg/L	DG_A PZ_GW02	8/04/2021	0.001
Chromium (Total)	mg/L	DG_A PZ_GW02	19/05/2021	0.001

Variable	Unit	Sample Point	Date	Result
Chromium (Total)	mg/L	DG_A PZ_GW02	16/06/2021	0.002
Chromium (Total)	mg/L	DG_A PZ_GW03	14/01/2021	0.001
Chromium (Total)	mg/L	DG_A PZ_GW03	17/02/2021	0.002
Chromium (Total)	mg/L	DG_A PZ_GW03	15/03/2021	0.001
Chromium (Total)	mg/L	DG_A PZ_GW03	8/04/2021	0.001
Chromium (Total)	mg/L	DG_A PZ_GW03	19/05/2021	0.001
Chromium (Total)	mg/L	DG_A PZ_GW03	16/06/2021	0.002
Chromium (Total)	mg/L	DG_A PZ_GW04	18/01/2021	0.001
Chromium (Total)	mg/L	DG_A PZ_GW05	18/01/2021	0.001
Chromium (Total)	mg/L	DG_A PZ_GW08	19/01/2021	0.001
Chromium (Total)	mg/L	DG_A PZ_GW08	16/03/2021	0.001
Chromium (Total)	mg/L	DG_A PZ_BW50	13/01/2021	0.001
Chromium (Total)	mg/L	DG_A PZ_BW36A	18/01/2021	0.001
Chromium (Total)	mg/L	DG_A PZ_BW36A	18/02/2021	0.002
Chromium (Total)	mg/L	DG_A PZ_GW04A	18/01/2021	0.001
Chromium (Total)	mg/L	DG_A PZ_GW04A	17/02/2021	0.002
Chromium (Total)	mg/L	DG_A PZ_GW04A	15/03/2021	0.001
Chromium (Total)	mg/L	DG_A PZ_GW04A	13/04/2021	0.001
Chromium (Total)	mg/L	DG_A PZ_GW04A	19/05/2021	0.001
Chromium (Total)	mg/L	DG_A PZ_GW04A	16/06/2021	0.002
Cobalt (Total)	mg/L	DG_A PZ_BW05	12/01/2021	0.001
Cobalt (Total)	mg/L	DG_A PZ_IWB2	12/01/2021	0.002
Cobalt (Total)	mg/L	DG_A PZ_IWB6	12/01/2021	0.002
Cobalt (Total)	mg/L	DG_A PZ_WRK300	21/01/2021	0.001
Cobalt (Total)	mg/L	DG_A PZ_WRK301	20/01/2021	0.001
Cobalt (Total)	mg/L	DG_A PZ_WRK302	19/01/2021	0.028
Cobalt (Total)	mg/L	DG_A PZ_WRK302	16/03/2021	0.003
Cobalt (Total)	mg/L	DG_A PZ_GW01	14/01/2021	0.064
Cobalt (Total)	mg/L	DG_A PZ_GW01	17/02/2021	0.071
Cobalt (Total)	mg/L	DG_A PZ_GW01	15/03/2021	0.071
Cobalt (Total)	mg/L	DG_A PZ_GW01	13/04/2021	0.069
Cobalt (Total)	mg/L	DG_A PZ_GW01	19/05/2021	0.067
Cobalt (Total)	mg/L	DG_A PZ_GW01	16/06/2021	0.069
Cobalt (Total)	mg/L	DG_A PZ_GW06	20/01/2021	0.002
Cobalt (Total)	mg/L	DG_A PZ_GW06	16/03/2021	0.001
Cobalt (Total)	mg/L	DG_A PZ_GW07	11/01/2021	0.028
Cobalt (Total)	mg/L	DG_A PZ_BW45B	14/01/2021	0.031
Cobalt (Total)	mg/L	DG_A PZ_BW45B	18/02/2021	0.033
Cobalt (Total)	mg/L	DG_A PZ_GW02	14/01/2021	0.017
Cobalt (Total)	mg/L	DG_A PZ_GW02	17/02/2021	0.018
Cobalt (Total)	mg/L	DG_A PZ_GW02	15/03/2021	0.018
Cobalt (Total)	mg/L	DG_A PZ_GW02	8/04/2021	0.017
Cobalt (Total)	mg/L	DG_A PZ_GW02	19/05/2021	0.018
Cobalt (Total)	mg/L	DG_A PZ_GW02	16/06/2021	0.017

Variable	Unit	Sample Point	Date	Result
Cobalt (Total)	mg/L	DG_A PZ_GW03	14/01/2021	0.005
Cobalt (Total)	mg/L	DG_A PZ_GW03	17/02/2021	0.003
Cobalt (Total)	mg/L	DG_A PZ_GW03	15/03/2021	0.003
Cobalt (Total)	mg/L	DG_A PZ_GW03	8/04/2021	0.003
Cobalt (Total)	mg/L	DG_A PZ_GW03	19/05/2021	0.003
Cobalt (Total)	mg/L	DG_A PZ_GW03	16/06/2021	0.003
Cobalt (Total)	mg/L	DG_A PZ_GW04	18/01/2021	0.006
Cobalt (Total)	mg/L	DG_A PZ_GW05	18/01/2021	0.006
Cobalt (Total)	mg/L	DG_A PZ_GW08	19/01/2021	0.001
Cobalt (Total)	mg/L	DG_A PZ_GW08	16/03/2021	0.001
Cobalt (Total)	mg/L	DG_A PZ_BW50	13/01/2021	0.002
Cobalt (Total)	mg/L	DG_A PZ_BW36A	18/01/2021	0.003
Cobalt (Total)	mg/L	DG_A PZ_BW36A	18/02/2021	0.006
Cobalt (Total)	mg/L	DG_A PZ_GW04A	18/01/2021	0.012
Cobalt (Total)	mg/L	DG_A PZ_GW04A	17/02/2021	0.006
Cobalt (Total)	mg/L	DG_A PZ_GW04A	15/03/2021	0.006
Cobalt (Total)	mg/L	DG_A PZ_GW04A	13/04/2021	0.006
Cobalt (Total)	mg/L	DG_A PZ_GW04A	19/05/2021	0.006
Cobalt (Total)	mg/L	DG_A PZ_GW04A	16/06/2021	0.005
Copper (Total)	mg/L	DG_A PZ_BW05	12/01/2021	0.001
Copper (Total)	mg/L	DG_A PZ_IWB2	12/01/2021	0.001
Copper (Total)	mg/L	DG_A PZ_IWB6	12/01/2021	0.001
Copper (Total)	mg/L	DG_A PZ_WRK300	21/01/2021	0.002
Copper (Total)	mg/L	DG_A PZ_WRK301	20/01/2021	0.003
Copper (Total)	mg/L	DG_A PZ_WRK302	19/01/2021	0.003
Copper (Total)	mg/L	DG_A PZ_WRK302	16/03/2021	0.001
Copper (Total)	mg/L	DG_A PZ_GW01	14/01/2021	0.002
Copper (Total)	mg/L	DG_A PZ_GW01	17/02/2021	0.005
Copper (Total)	mg/L	DG_A PZ_GW01	15/03/2021	0.002
Copper (Total)	mg/L	DG_A PZ_GW01	13/04/2021	0.001
Copper (Total)	mg/L	DG_A PZ_GW01	19/05/2021	0.015
Copper (Total)	mg/L	DG_A PZ_GW01	16/06/2021	0.003
Copper (Total)	mg/L	DG_A PZ_GW06	20/01/2021	0.002
Copper (Total)	mg/L	DG_A PZ_GW06	16/03/2021	0.001
Copper (Total)	mg/L	DG_A PZ_GW07	11/01/2021	0.001
Copper (Total)	mg/L	DG_A PZ_BW45B	14/01/2021	0.01
Copper (Total)	mg/L	DG_A PZ_BW45B	18/02/2021	0.011
Copper (Total)	mg/L	DG_A PZ_GW02	14/01/2021	0.001
Copper (Total)	mg/L	DG_A PZ_GW02	17/02/2021	0.002
Copper (Total)	mg/L	DG_A PZ_GW02	15/03/2021	0.002
Copper (Total)	mg/L	DG_A PZ_GW02	8/04/2021	0.002
Copper (Total)	mg/L	DG_A PZ_GW02	19/05/2021	0.001
Copper (Total)	mg/L	DG_A PZ_GW02	16/06/2021	0.001
Copper (Total)	mg/L	DG_A PZ_GW03	14/01/2021	0.002

Variable	Unit	Sample Point	Date	Result
Copper (Total)	mg/L	DG_A PZ_GW03	17/02/2021	0.002
Copper (Total)	mg/L	DG_A PZ_GW03	15/03/2021	0.003
Copper (Total)	mg/L	DG_A PZ_GW03	8/04/2021	0.012
Copper (Total)	mg/L	DG_A PZ_GW03	19/05/2021	0.004
Copper (Total)	mg/L	DG_A PZ_GW03	16/06/2021	0.003
Copper (Total)	mg/L	DG_A PZ_GW04	18/01/2021	0.001
Copper (Total)	mg/L	DG_A PZ_GW05	18/01/2021	0.004
Copper (Total)	mg/L	DG_A PZ_GW08	19/01/2021	0.007
Copper (Total)	mg/L	DG_A PZ_GW08	16/03/2021	0.001
Copper (Total)	mg/L	DG_A PZ_BW50	13/01/2021	0.001
Copper (Total)	mg/L	DG_A PZ_BW36A	18/01/2021	0.009
Copper (Total)	mg/L	DG_A PZ_BW36A	18/02/2021	0.006
Copper (Total)	mg/L	DG_A PZ_GW04A	18/01/2021	0.008
Copper (Total)	mg/L	DG_A PZ_GW04A	17/02/2021	0.001
Copper (Total)	mg/L	DG_A PZ_GW04A	15/03/2021	0.001
Copper (Total)	mg/L	DG_A PZ_GW04A	13/04/2021	0.001
Copper (Total)	mg/L	DG_A PZ_GW04A	19/05/2021	0.001
Copper (Total)	mg/L	DG_A PZ_GW04A	16/06/2021	0.001
Electrical Conductivity	µS/cm	DG_A PZ_BW05	12/01/2021	24000
Electrical Conductivity	µS/cm	DG_A PZ_BW05	12/01/2021	24000
Electrical Conductivity	µS/cm	DG_A PZ_IWB2	12/01/2021	3900
Electrical Conductivity	µS/cm	DG_A PZ_IWB2	12/01/2021	3900
Electrical Conductivity	µS/cm	DG_A PZ_IWB6	12/01/2021	1700
Electrical Conductivity	µS/cm	DG_A PZ_IWB6	12/01/2021	1700
Electrical Conductivity	µS/cm	DG_A PZ_WRK300	21/01/2021	6100
Electrical Conductivity	µS/cm	DG_A PZ_WRK301	20/01/2021	11000
Electrical Conductivity	µS/cm	DG_A PZ_WRK301	20/01/2021	11000
Electrical Conductivity	µS/cm	DG_A PZ_WRK302	19/01/2021	19000
Electrical Conductivity	µS/cm	DG_A PZ_WRK302	16/03/2021	20000
Electrical Conductivity	µS/cm	DG_A PZ_WRK302	19/01/2021	19000
Electrical Conductivity	µS/cm	DG_A PZ_GW01	14/01/2021	11000
Electrical Conductivity	µS/cm	DG_A PZ_GW01	17/02/2021	11000
Electrical Conductivity	µS/cm	DG_A PZ_GW01	15/03/2021	11000
Electrical Conductivity	µS/cm	DG_A PZ_GW01	13/04/2021	11000
Electrical Conductivity	µS/cm	DG_A PZ_GW01	19/05/2021	11000
Electrical Conductivity	µS/cm	DG_A PZ_GW01	16/06/2021	11000
Electrical Conductivity	µS/cm	DG_A PZ_GW01	14/01/2021	11000
Electrical Conductivity	µS/cm	DG_A PZ_GW06	20/01/2021	21000
Electrical Conductivity	µS/cm	DG_A PZ_GW06	16/03/2021	21000
Electrical Conductivity	µS/cm	DG_A PZ_GW06	20/01/2021	21000
Electrical Conductivity	µS/cm	DG_A PZ_GW07	11/01/2021	18000
Electrical Conductivity	µS/cm	DG_A PZ_GW07	11/01/2021	18000
Electrical Conductivity	µS/cm	DG_A PZ_BW45B	14/01/2021	17000
Electrical Conductivity	µS/cm	DG_A PZ_BW45B	18/02/2021	17000

Variable	Unit	Sample Point	Date	Result
Electrical Conductivity	µS/cm	DG_A PZ_BW45B	14/01/2021	17000
Electrical Conductivity	µS/cm	DG_A PZ_GW02	14/01/2021	7600
Electrical Conductivity	µS/cm	DG_A PZ_GW02	17/02/2021	7600
Electrical Conductivity	µS/cm	DG_A PZ_GW02	15/03/2021	7600
Electrical Conductivity	µS/cm	DG_A PZ_GW02	8/04/2021	7600
Electrical Conductivity	µS/cm	DG_A PZ_GW02	19/05/2021	7600
Electrical Conductivity	µS/cm	DG_A PZ_GW02	16/06/2021	7500
Electrical Conductivity	µS/cm	DG_A PZ_GW02	14/01/2021	7600
Electrical Conductivity	µS/cm	DG_A PZ_GW03	14/01/2021	11000
Electrical Conductivity	µS/cm	DG_A PZ_GW03	17/02/2021	11000
Electrical Conductivity	µS/cm	DG_A PZ_GW03	15/03/2021	11000
Electrical Conductivity	µS/cm	DG_A PZ_GW03	8/04/2021	11000
Electrical Conductivity	µS/cm	DG_A PZ_GW03	19/05/2021	11000
Electrical Conductivity	µS/cm	DG_A PZ_GW03	16/06/2021	11000
Electrical Conductivity	µS/cm	DG_A PZ_GW03	14/01/2021	11000
Electrical Conductivity	µS/cm	DG_A PZ_GW04	18/01/2021	9700
Electrical Conductivity	µS/cm	DG_A PZ_GW04	18/01/2021	9700
Electrical Conductivity	µS/cm	DG_A PZ_GW05	18/01/2021	9200
Electrical Conductivity	µS/cm	DG_A PZ_GW05	18/01/2021	9200
Electrical Conductivity	µS/cm	DG_A PZ_GW08	19/01/2021	21000
Electrical Conductivity	µS/cm	DG_A PZ_GW08	16/03/2021	21000
Electrical Conductivity	µS/cm	DG_A PZ_BW50	13/01/2021	8400
Electrical Conductivity	µS/cm	DG_A PZ_BW50	13/01/2021	8400
Electrical Conductivity	µS/cm	DG_A PZ_BW36A	18/01/2021	8200
Electrical Conductivity	µS/cm	DG_A PZ_BW36A	18/02/2021	8400
Electrical Conductivity	µS/cm	DG_A PZ_BW36A	18/01/2021	8200
Electrical Conductivity	µS/cm	DG_A PZ_GW04A	18/01/2021	8400
Electrical Conductivity	µS/cm	DG_A PZ_GW04A	17/02/2021	8400
Electrical Conductivity	µS/cm	DG_A PZ_GW04A	15/03/2021	8500
Electrical Conductivity	µS/cm	DG_A PZ_GW04A	13/04/2021	8600
Electrical Conductivity	µS/cm	DG_A PZ_GW04A	19/05/2021	8400
Electrical Conductivity	µS/cm	DG_A PZ_GW04A	16/06/2021	8500
Electrical Conductivity	µS/cm	DG_A PZ_GW04A	18/01/2021	8400
Fluoride	mg/L	DG_A PZ_BW05	12/01/2021	0.34
Fluoride	mg/L	DG_A PZ_IWB2	12/01/2021	0.26
Fluoride	mg/L	DG_A PZ_IWB6	12/01/2021	0.1
Fluoride	mg/L	DG_A PZ_WRK300	21/01/2021	0.31
Fluoride	mg/L	DG_A PZ_WRK301	20/01/2021	0.59
Fluoride	mg/L	DG_A PZ_WRK302	19/01/2021	0.41
Fluoride	mg/L	DG_A PZ_WRK302	16/03/2021	0.32
Fluoride	mg/L	DG_A PZ_GW01	14/01/2021	0.89
Fluoride	mg/L	DG_A PZ_GW01	17/02/2021	0.96
Fluoride	mg/L	DG_A PZ_GW01	15/03/2021	1
Fluoride	mg/L	DG_A PZ_GW01	13/04/2021	1

Variable	Unit	Sample Point	Date	Result
Fluoride	mg/L	DG_A PZ_GW01	19/05/2021	1.1
Fluoride	mg/L	DG_A PZ_GW01	16/06/2021	0.96
Fluoride	mg/L	DG_A PZ_GW06	20/01/2021	0.19
Fluoride	mg/L	DG_A PZ_GW06	16/03/2021	0.14
Fluoride	mg/L	DG_A PZ_GW07	11/01/2021	0.32
Fluoride	mg/L	DG_A PZ_BW45B	14/01/2021	1.2
Fluoride	mg/L	DG_A PZ_BW45B	18/02/2021	2
Fluoride	mg/L	DG_A PZ_GW02	14/01/2021	0.1
Fluoride	mg/L	DG_A PZ_GW02	17/02/2021	0.1
Fluoride	mg/L	DG_A PZ_GW02	15/03/2021	0.1
Fluoride	mg/L	DG_A PZ_GW02	8/04/2021	0.1
Fluoride	mg/L	DG_A PZ_GW02	19/05/2021	0.1
Fluoride	mg/L	DG_A PZ_GW02	16/06/2021	0.1
Fluoride	mg/L	DG_A PZ_GW03	14/01/2021	0.26
Fluoride	mg/L	DG_A PZ_GW03	17/02/2021	0.25
Fluoride	mg/L	DG_A PZ_GW03	15/03/2021	0.24
Fluoride	mg/L	DG_A PZ_GW03	8/04/2021	0.25
Fluoride	mg/L	DG_A PZ_GW03	19/05/2021	0.25
Fluoride	mg/L	DG_A PZ_GW03	16/06/2021	0.2
Fluoride	mg/L	DG_A PZ_GW04	18/01/2021	0.16
Fluoride	mg/L	DG_A PZ_GW05	18/01/2021	0.13
Fluoride	mg/L	DG_A PZ_GW08	19/01/2021	0.22
Fluoride	mg/L	DG_A PZ_GW08	16/03/2021	0.11
Fluoride	mg/L	DG_A PZ_BW50	13/01/2021	0.9
Fluoride	mg/L	DG_A PZ_BW36A	18/01/2021	0.54
Fluoride	mg/L	DG_A PZ_BW36A	18/02/2021	0.58
Fluoride	mg/L	DG_A PZ_GW04A	18/01/2021	0.23
Fluoride	mg/L	DG_A PZ_GW04A	17/02/2021	0.25
Fluoride	mg/L	DG_A PZ_GW04A	15/03/2021	0.22
Fluoride	mg/L	DG_A PZ_GW04A	13/04/2021	0.2
Fluoride	mg/L	DG_A PZ_GW04A	19/05/2021	0.21
Fluoride	mg/L	DG_A PZ_GW04A	16/06/2021	0.21
Iron (Total)	mg/L	DG_A PZ_BW05	12/01/2021	0.82
Iron (Total)	mg/L	DG_A PZ_IWB2	12/01/2021	0.08
Iron (Total)	mg/L	DG_A PZ_IWB6	12/01/2021	3
Iron (Total)	mg/L	DG_A PZ_WRK300	21/01/2021	0.01
Iron (Total)	mg/L	DG_A PZ_WRK301	20/01/2021	0.01
Iron (Total)	mg/L	DG_A PZ_WRK302	19/01/2021	0.01
Iron (Total)	mg/L	DG_A PZ_WRK302	16/03/2021	0.01
Iron (Total)	mg/L	DG_A PZ_GW01	14/01/2021	0.03
Iron (Total)	mg/L	DG_A PZ_GW01	17/02/2021	0.04
Iron (Total)	mg/L	DG_A PZ_GW01	15/03/2021	0.03
Iron (Total)	mg/L	DG_A PZ_GW01	13/04/2021	0.01
Iron (Total)	mg/L	DG_A PZ_GW01	19/05/2021	0.01

Variable	Unit	Sample Point	Date	Result
Iron (Total)	mg/L	DG_A PZ_GW01	16/06/2021	0.02
Iron (Total)	mg/L	DG_A PZ_GW06	20/01/2021	0.02
Iron (Total)	mg/L	DG_A PZ_GW06	16/03/2021	0.03
Iron (Total)	mg/L	DG_A PZ_GW07	11/01/2021	0.01
Iron (Total)	mg/L	DG_A PZ_BW45B	14/01/2021	0.03
Iron (Total)	mg/L	DG_A PZ_BW45B	18/02/2021	0.03
Iron (Total)	mg/L	DG_A PZ_GW02	14/01/2021	0.01
Iron (Total)	mg/L	DG_A PZ_GW02	17/02/2021	0.02
Iron (Total)	mg/L	DG_A PZ_GW02	15/03/2021	0.02
Iron (Total)	mg/L	DG_A PZ_GW02	8/04/2021	0.02
Iron (Total)	mg/L	DG_A PZ_GW02	19/05/2021	0.01
Iron (Total)	mg/L	DG_A PZ_GW02	16/06/2021	0.01
Iron (Total)	mg/L	DG_A PZ_GW03	14/01/2021	1.5
Iron (Total)	mg/L	DG_A PZ_GW03	17/02/2021	1.1
Iron (Total)	mg/L	DG_A PZ_GW03	15/03/2021	1.2
Iron (Total)	mg/L	DG_A PZ_GW03	8/04/2021	1.4
Iron (Total)	mg/L	DG_A PZ_GW03	19/05/2021	1.1
Iron (Total)	mg/L	DG_A PZ_GW03	16/06/2021	1.5
Iron (Total)	mg/L	DG_A PZ_GW04	18/01/2021	0.08
Iron (Total)	mg/L	DG_A PZ_GW05	18/01/2021	8.4
Iron (Total)	mg/L	DG_A PZ_GW08	19/01/2021	0.01
Iron (Total)	mg/L	DG_A PZ_GW08	16/03/2021	0.01
Iron (Total)	mg/L	DG_A PZ_BW50	13/01/2021	0.12
Iron (Total)	mg/L	DG_A PZ_BW36A	18/01/2021	0.01
Iron (Total)	mg/L	DG_A PZ_BW36A	18/02/2021	7.7
Iron (Total)	mg/L	DG_A PZ_GW04A	18/01/2021	0.01
Iron (Total)	mg/L	DG_A PZ_GW04A	17/02/2021	0.04
Iron (Total)	mg/L	DG_A PZ_GW04A	15/03/2021	0.03
Iron (Total)	mg/L	DG_A PZ_GW04A	13/04/2021	0.05
Iron (Total)	mg/L	DG_A PZ_GW04A	19/05/2021	0.01
Iron (Total)	mg/L	DG_A PZ_GW04A	16/06/2021	0.02
Lead (Total)	mg/L	DG_A PZ_BW05	12/01/2021	0.005
Lead (Total)	mg/L	DG_A PZ_IWB2	12/01/2021	0.004
Lead (Total)	mg/L	DG_A PZ_IWB6	12/01/2021	0.006
Lead (Total)	mg/L	DG_A PZ_WRK300	21/01/2021	0.001
Lead (Total)	mg/L	DG_A PZ_WRK301	20/01/2021	0.001
Lead (Total)	mg/L	DG_A PZ_WRK302	19/01/2021	0.006
Lead (Total)	mg/L	DG_A PZ_WRK302	16/03/2021	0.001
Lead (Total)	mg/L	DG_A PZ_GW01	14/01/2021	0.001
Lead (Total)	mg/L	DG_A PZ_GW01	17/02/2021	0.001
Lead (Total)	mg/L	DG_A PZ_GW01	15/03/2021	0.001
Lead (Total)	mg/L	DG_A PZ_GW01	13/04/2021	0.001
Lead (Total)	mg/L	DG_A PZ_GW01	19/05/2021	0.001
Lead (Total)	mg/L	DG_A PZ_GW01	16/06/2021	0.001

Variable	Unit	Sample Point	Date	Result
Lead (Total)	mg/L	DG_A PZ_GW06	20/01/2021	0.001
Lead (Total)	mg/L	DG_A PZ_GW06	16/03/2021	0.001
Lead (Total)	mg/L	DG_A PZ_GW07	11/01/2021	0.004
Lead (Total)	mg/L	DG_A PZ_BW45B	14/01/2021	0.029
Lead (Total)	mg/L	DG_A PZ_BW45B	18/02/2021	0.03
Lead (Total)	mg/L	DG_A PZ_GW02	14/01/2021	0.001
Lead (Total)	mg/L	DG_A PZ_GW02	17/02/2021	0.001
Lead (Total)	mg/L	DG_A PZ_GW02	15/03/2021	0.001
Lead (Total)	mg/L	DG_A PZ_GW02	8/04/2021	0.001
Lead (Total)	mg/L	DG_A PZ_GW02	19/05/2021	0.001
Lead (Total)	mg/L	DG_A PZ_GW02	16/06/2021	0.001
Lead (Total)	mg/L	DG_A PZ_GW03	14/01/2021	0.001
Lead (Total)	mg/L	DG_A PZ_GW03	17/02/2021	0.001
Lead (Total)	mg/L	DG_A PZ_GW03	15/03/2021	0.001
Lead (Total)	mg/L	DG_A PZ_GW03	8/04/2021	0.001
Lead (Total)	mg/L	DG_A PZ_GW03	19/05/2021	0.002
Lead (Total)	mg/L	DG_A PZ_GW03	16/06/2021	0.001
Lead (Total)	mg/L	DG_A PZ_GW04	18/01/2021	0.001
Lead (Total)	mg/L	DG_A PZ_GW05	18/01/2021	0.001
Lead (Total)	mg/L	DG_A PZ_GW08	19/01/2021	0.001
Lead (Total)	mg/L	DG_A PZ_GW08	16/03/2021	0.001
Lead (Total)	mg/L	DG_A PZ_BW50	13/01/2021	0.001
Lead (Total)	mg/L	DG_A PZ_BW36A	18/01/2021	0.001
Lead (Total)	mg/L	DG_A PZ_BW36A	18/02/2021	0.001
Lead (Total)	mg/L	DG_A PZ_GW04A	18/01/2021	0.001
Lead (Total)	mg/L	DG_A PZ_GW04A	17/02/2021	0.001
Lead (Total)	mg/L	DG_A PZ_GW04A	15/03/2021	0.001
Lead (Total)	mg/L	DG_A PZ_GW04A	13/04/2021	0.001
Lead (Total)	mg/L	DG_A PZ_GW04A	19/05/2021	0.001
Lead (Total)	mg/L	DG_A PZ_GW04A	16/06/2021	0.001
Magnesium	mg/L	DG_A PZ_BW05	12/01/2021	450
Magnesium	mg/L	DG_A PZ_IWB2	12/01/2021	84
Magnesium	mg/L	DG_A PZ_IWB6	12/01/2021	20
Magnesium	mg/L	DG_A PZ_WRK300	21/01/2021	130
Magnesium	mg/L	DG_A PZ_WRK301	20/01/2021	260
Magnesium	mg/L	DG_A PZ_WRK302	19/01/2021	410
Magnesium	mg/L	DG_A PZ_WRK302	16/03/2021	410
Magnesium	mg/L	DG_A PZ_GW01	14/01/2021	240
Magnesium	mg/L	DG_A PZ_GW01	17/02/2021	250
Magnesium	mg/L	DG_A PZ_GW01	15/03/2021	240
Magnesium	mg/L	DG_A PZ_GW01	13/04/2021	250
Magnesium	mg/L	DG_A PZ_GW01	19/05/2021	240
Magnesium	mg/L	DG_A PZ_GW01	16/06/2021	270
Magnesium	mg/L	DG_A PZ_GW06	20/01/2021	510

Variable	Unit	Sample Point	Date	Result
Magnesium	mg/L	DG_A PZ_GW06	16/03/2021	400
Magnesium	mg/L	DG_A PZ_GW07	11/01/2021	320
Magnesium	mg/L	DG_A PZ_BW45B	14/01/2021	320
Magnesium	mg/L	DG_A PZ_BW45B	18/02/2021	330
Magnesium	mg/L	DG_A PZ_GW02	14/01/2021	150
Magnesium	mg/L	DG_A PZ_GW02	17/02/2021	150
Magnesium	mg/L	DG_A PZ_GW02	15/03/2021	140
Magnesium	mg/L	DG_A PZ_GW02	8/04/2021	140
Magnesium	mg/L	DG_A PZ_GW02	19/05/2021	140
Magnesium	mg/L	DG_A PZ_GW02	16/06/2021	150
Magnesium	mg/L	DG_A PZ_GW03	14/01/2021	210
Magnesium	mg/L	DG_A PZ_GW03	17/02/2021	200
Magnesium	mg/L	DG_A PZ_GW03	15/03/2021	200
Magnesium	mg/L	DG_A PZ_GW03	8/04/2021	210
Magnesium	mg/L	DG_A PZ_GW03	19/05/2021	210
Magnesium	mg/L	DG_A PZ_GW03	16/06/2021	210
Magnesium	mg/L	DG_A PZ_GW04	18/01/2021	160
Magnesium	mg/L	DG_A PZ_GW05	18/01/2021	100
Magnesium	mg/L	DG_A PZ_GW08	19/01/2021	520
Magnesium	mg/L	DG_A PZ_GW08	16/03/2021	500
Magnesium	mg/L	DG_A PZ_BW50	13/01/2021	150
Magnesium	mg/L	DG_A PZ_BW36A	18/01/2021	130
Magnesium	mg/L	DG_A PZ_BW36A	18/02/2021	130
Magnesium	mg/L	DG_A PZ_GW04A	18/01/2021	150
Magnesium	mg/L	DG_A PZ_GW04A	17/02/2021	150
Magnesium	mg/L	DG_A PZ_GW04A	15/03/2021	150
Magnesium	mg/L	DG_A PZ_GW04A	13/04/2021	150
Magnesium	mg/L	DG_A PZ_GW04A	19/05/2021	150
Magnesium	mg/L	DG_A PZ_GW04A	16/06/2021	150
Manganese (Total)	mg/L	DG_A PZ_BW05	12/01/2021	0.12
Manganese (Total)	mg/L	DG_A PZ_IWB2	12/01/2021	0.008
Manganese (Total)	mg/L	DG_A PZ_IWB6	12/01/2021	0.011
Manganese (Total)	mg/L	DG_A PZ_WRK300	21/01/2021	0.023
Manganese (Total)	mg/L	DG_A PZ_WRK301	20/01/2021	0.034
Manganese (Total)	mg/L	DG_A PZ_WRK302	19/01/2021	0.021
Manganese (Total)	mg/L	DG_A PZ_WRK302	16/03/2021	0.002
Manganese (Total)	mg/L	DG_A PZ_GW01	14/01/2021	0.021
Manganese (Total)	mg/L	DG_A PZ_GW01	17/02/2021	0.027
Manganese (Total)	mg/L	DG_A PZ_GW01	15/03/2021	0.029
Manganese (Total)	mg/L	DG_A PZ_GW01	13/04/2021	0.027
Manganese (Total)	mg/L	DG_A PZ_GW01	19/05/2021	0.027
Manganese (Total)	mg/L	DG_A PZ_GW01	16/06/2021	0.038
Manganese (Total)	mg/L	DG_A PZ_GW06	20/01/2021	0.019
Manganese (Total)	mg/L	DG_A PZ_GW06	16/03/2021	0.002

Variable	Unit	Sample Point	Date	Result
Manganese (Total)	mg/L	DG_A PZ_GW07	11/01/2021	0.009
Manganese (Total)	mg/L	DG_A PZ_BW45B	14/01/2021	0.048
Manganese (Total)	mg/L	DG_A PZ_BW45B	18/02/2021	0.049
Manganese (Total)	mg/L	DG_A PZ_GW02	14/01/2021	0.59
Manganese (Total)	mg/L	DG_A PZ_GW02	17/02/2021	0.48
Manganese (Total)	mg/L	DG_A PZ_GW02	15/03/2021	0.54
Manganese (Total)	mg/L	DG_A PZ_GW02	8/04/2021	0.59
Manganese (Total)	mg/L	DG_A PZ_GW02	19/05/2021	0.42
Manganese (Total)	mg/L	DG_A PZ_GW02	16/06/2021	0.45
Manganese (Total)	mg/L	DG_A PZ_GW03	14/01/2021	0.66
Manganese (Total)	mg/L	DG_A PZ_GW03	17/02/2021	0.49
Manganese (Total)	mg/L	DG_A PZ_GW03	15/03/2021	0.55
Manganese (Total)	mg/L	DG_A PZ_GW03	8/04/2021	0.53
Manganese (Total)	mg/L	DG_A PZ_GW03	19/05/2021	0.46
Manganese (Total)	mg/L	DG_A PZ_GW03	16/06/2021	0.66
Manganese (Total)	mg/L	DG_A PZ_GW04	18/01/2021	0.064
Manganese (Total)	mg/L	DG_A PZ_GW05	18/01/2021	3.6
Manganese (Total)	mg/L	DG_A PZ_GW08	19/01/2021	0.002
Manganese (Total)	mg/L	DG_A PZ_GW08	16/03/2021	0.001
Manganese (Total)	mg/L	DG_A PZ_BW50	13/01/2021	0.096
Manganese (Total)	mg/L	DG_A PZ_BW36A	18/01/2021	0.014
Manganese (Total)	mg/L	DG_A PZ_BW36A	18/02/2021	3.4
Manganese (Total)	mg/L	DG_A PZ_GW04A	18/01/2021	0.033
Manganese (Total)	mg/L	DG_A PZ_GW04A	17/02/2021	0.083
Manganese (Total)	mg/L	DG_A PZ_GW04A	15/03/2021	0.08
Manganese (Total)	mg/L	DG_A PZ_GW04A	13/04/2021	0.051
Manganese (Total)	mg/L	DG_A PZ_GW04A	19/05/2021	0.065
Manganese (Total)	mg/L	DG_A PZ_GW04A	16/06/2021	0.06
Mercury (Total)	mg/L	DG_A PZ_BW05	12/01/2021	0.0001
Mercury (Total)	mg/L	DG_A PZ_IWB2	12/01/2021	0.0001
Mercury (Total)	mg/L	DG_A PZ_IWB6	12/01/2021	0.0001
Mercury (Total)	mg/L	DG_A PZ_WRK300	21/01/2021	0.0001
Mercury (Total)	mg/L	DG_A PZ_WRK301	20/01/2021	0.0001
Mercury (Total)	mg/L	DG_A PZ_WRK302	19/01/2021	0.0001
Mercury (Total)	mg/L	DG_A PZ_WRK302	16/03/2021	0.0001
Mercury (Total)	mg/L	DG_A PZ_GW01	14/01/2021	0.0001
Mercury (Total)	mg/L	DG_A PZ_GW01	17/02/2021	0.0001
Mercury (Total)	mg/L	DG_A PZ_GW01	15/03/2021	0.0001
Mercury (Total)	mg/L	DG_A PZ_GW01	13/04/2021	0.0001
Mercury (Total)	mg/L	DG_A PZ_GW01	19/05/2021	0.0001
Mercury (Total)	mg/L	DG_A PZ_GW01	16/06/2021	0.0001
Mercury (Total)	mg/L	DG_A PZ_GW06	20/01/2021	0.0001
Mercury (Total)	mg/L	DG_A PZ_GW06	16/03/2021	0.0001
Mercury (Total)	mg/L	DG_A PZ_GW07	11/01/2021	0.0001

Variable	Unit	Sample Point	Date	Result
Mercury (Total)	mg/L	DG_A PZ_BW45B	14/01/2021	0.0002
Mercury (Total)	mg/L	DG_A PZ_BW45B	18/02/2021	0.0001
Mercury (Total)	mg/L	DG_A PZ_GW02	14/01/2021	0.0001
Mercury (Total)	mg/L	DG_A PZ_GW02	17/02/2021	0.0001
Mercury (Total)	mg/L	DG_A PZ_GW02	15/03/2021	0.0001
Mercury (Total)	mg/L	DG_A PZ_GW02	8/04/2021	0.0001
Mercury (Total)	mg/L	DG_A PZ_GW02	19/05/2021	0.0001
Mercury (Total)	mg/L	DG_A PZ_GW02	16/06/2021	0.0001
Mercury (Total)	mg/L	DG_A PZ_GW03	14/01/2021	0.0001
Mercury (Total)	mg/L	DG_A PZ_GW03	17/02/2021	0.0001
Mercury (Total)	mg/L	DG_A PZ_GW03	15/03/2021	0.0001
Mercury (Total)	mg/L	DG_A PZ_GW03	8/04/2021	0.0001
Mercury (Total)	mg/L	DG_A PZ_GW03	19/05/2021	0.0001
Mercury (Total)	mg/L	DG_A PZ_GW03	16/06/2021	0.0001
Mercury (Total)	mg/L	DG_A PZ_GW04	18/01/2021	0.0001
Mercury (Total)	mg/L	DG_A PZ_GW05	18/01/2021	0.0001
Mercury (Total)	mg/L	DG_A PZ_GW08	19/01/2021	0.0001
Mercury (Total)	mg/L	DG_A PZ_GW08	16/03/2021	0.0001
Mercury (Total)	mg/L	DG_A PZ_BW50	13/01/2021	0.0001
Mercury (Total)	mg/L	DG_A PZ_BW36A	18/01/2021	0.0001
Mercury (Total)	mg/L	DG_A PZ_BW36A	18/02/2021	0.0001
Mercury (Total)	mg/L	DG_A PZ_GW04A	18/01/2021	0.0001
Mercury (Total)	mg/L	DG_A PZ_GW04A	17/02/2021	0.0001
Mercury (Total)	mg/L	DG_A PZ_GW04A	15/03/2021	0.0001
Mercury (Total)	mg/L	DG_A PZ_GW04A	13/04/2021	0.0001
Mercury (Total)	mg/L	DG_A PZ_GW04A	19/05/2021	0.0001
Mercury (Total)	mg/L	DG_A PZ_GW04A	16/06/2021	0.0001
Molybdenum (Total)	mg/L	DG_A PZ_BW05	12/01/2021	0.002
Molybdenum (Total)	mg/L	DG_A PZ_IWB2	12/01/2021	0.001
Molybdenum (Total)	mg/L	DG_A PZ_IWB6	12/01/2021	0.001
Molybdenum (Total)	mg/L	DG_A PZ_WRK300	21/01/2021	0.001
Molybdenum (Total)	mg/L	DG_A PZ_WRK301	20/01/2021	0.001
Molybdenum (Total)	mg/L	DG_A PZ_WRK302	19/01/2021	0.001
Molybdenum (Total)	mg/L	DG_A PZ_WRK302	16/03/2021	0.001
Molybdenum (Total)	mg/L	DG_A PZ_GW01	14/01/2021	0.001
Molybdenum (Total)	mg/L	DG_A PZ_GW01	17/02/2021	0.001
Molybdenum (Total)	mg/L	DG_A PZ_GW01	15/03/2021	0.001
Molybdenum (Total)	mg/L	DG_A PZ_GW01	13/04/2021	0.001
Molybdenum (Total)	mg/L	DG_A PZ_GW01	19/05/2021	0.001
Molybdenum (Total)	mg/L	DG_A PZ_GW01	16/06/2021	0.001
Molybdenum (Total)	mg/L	DG_A PZ_GW06	20/01/2021	0.001
Molybdenum (Total)	mg/L	DG_A PZ_GW06	16/03/2021	0.001
Molybdenum (Total)	mg/L	DG_A PZ_GW07	11/01/2021	0.001
Molybdenum (Total)	mg/L	DG_A PZ_BW45B	14/01/2021	0.001

Variable	Unit	Sample Point	Date	Result
Molybdenum (Total)	mg/L	DG_A PZ_BW45B	18/02/2021	0.001
Molybdenum (Total)	mg/L	DG_A PZ_GW02	14/01/2021	0.001
Molybdenum (Total)	mg/L	DG_A PZ_GW02	17/02/2021	0.001
Molybdenum (Total)	mg/L	DG_A PZ_GW02	15/03/2021	0.001
Molybdenum (Total)	mg/L	DG_A PZ_GW02	8/04/2021	0.001
Molybdenum (Total)	mg/L	DG_A PZ_GW02	19/05/2021	0.001
Molybdenum (Total)	mg/L	DG_A PZ_GW02	16/06/2021	0.001
Molybdenum (Total)	mg/L	DG_A PZ_GW03	14/01/2021	0.001
Molybdenum (Total)	mg/L	DG_A PZ_GW03	17/02/2021	0.001
Molybdenum (Total)	mg/L	DG_A PZ_GW03	15/03/2021	0.001
Molybdenum (Total)	mg/L	DG_A PZ_GW03	8/04/2021	0.001
Molybdenum (Total)	mg/L	DG_A PZ_GW03	19/05/2021	0.001
Molybdenum (Total)	mg/L	DG_A PZ_GW03	16/06/2021	0.001
Molybdenum (Total)	mg/L	DG_A PZ_GW04	18/01/2021	0.001
Molybdenum (Total)	mg/L	DG_A PZ_GW05	18/01/2021	0.001
Molybdenum (Total)	mg/L	DG_A PZ_GW08	19/01/2021	0.001
Molybdenum (Total)	mg/L	DG_A PZ_GW08	16/03/2021	0.001
Molybdenum (Total)	mg/L	DG_A PZ_BW50	13/01/2021	0.001
Molybdenum (Total)	mg/L	DG_A PZ_BW36A	18/01/2021	0.001
Molybdenum (Total)	mg/L	DG_A PZ_BW36A	18/02/2021	0.001
Molybdenum (Total)	mg/L	DG_A PZ_GW04A	18/01/2021	0.001
Molybdenum (Total)	mg/L	DG_A PZ_GW04A	17/02/2021	0.001
Molybdenum (Total)	mg/L	DG_A PZ_GW04A	15/03/2021	0.001
Molybdenum (Total)	mg/L	DG_A PZ_GW04A	13/04/2021	0.001
Molybdenum (Total)	mg/L	DG_A PZ_GW04A	19/05/2021	0.001
Molybdenum (Total)	mg/L	DG_A PZ_GW04A	16/06/2021	0.001
Nickel (Total)	mg/L	DG_A PZ_BW05	12/01/2021	0.001
Nickel (Total)	mg/L	DG_A PZ_IWB2	12/01/2021	0.003
Nickel (Total)	mg/L	DG_A PZ_IWB6	12/01/2021	0.002
Nickel (Total)	mg/L	DG_A PZ_WRK300	21/01/2021	0.003
Nickel (Total)	mg/L	DG_A PZ_WRK301	20/01/2021	0.002
Nickel (Total)	mg/L	DG_A PZ_WRK302	19/01/2021	0.021
Nickel (Total)	mg/L	DG_A PZ_WRK302	16/03/2021	0.002
Nickel (Total)	mg/L	DG_A PZ_GW01	14/01/2021	0.032
Nickel (Total)	mg/L	DG_A PZ_GW01	17/02/2021	0.034
Nickel (Total)	mg/L	DG_A PZ_GW01	15/03/2021	0.034
Nickel (Total)	mg/L	DG_A PZ_GW01	13/04/2021	0.032
Nickel (Total)	mg/L	DG_A PZ_GW01	19/05/2021	0.031
Nickel (Total)	mg/L	DG_A PZ_GW01	16/06/2021	0.034
Nickel (Total)	mg/L	DG_A PZ_GW06	20/01/2021	0.016
Nickel (Total)	mg/L	DG_A PZ_GW06	16/03/2021	0.001
Nickel (Total)	mg/L	DG_A PZ_GW07	11/01/2021	0.028
Nickel (Total)	mg/L	DG_A PZ_BW45B	14/01/2021	0.053
Nickel (Total)	mg/L	DG_A PZ_BW45B	18/02/2021	0.057

Variable	Unit	Sample Point	Date	Result
Nickel (Total)	mg/L	DG_A PZ_GW02	14/01/2021	0.005
Nickel (Total)	mg/L	DG_A PZ_GW02	17/02/2021	0.006
Nickel (Total)	mg/L	DG_A PZ_GW02	15/03/2021	0.006
Nickel (Total)	mg/L	DG_A PZ_GW02	8/04/2021	0.006
Nickel (Total)	mg/L	DG_A PZ_GW02	19/05/2021	0.005
Nickel (Total)	mg/L	DG_A PZ_GW02	16/06/2021	0.005
Nickel (Total)	mg/L	DG_A PZ_GW03	14/01/2021	0.006
Nickel (Total)	mg/L	DG_A PZ_GW03	17/02/2021	0.006
Nickel (Total)	mg/L	DG_A PZ_GW03	15/03/2021	0.008
Nickel (Total)	mg/L	DG_A PZ_GW03	8/04/2021	0.007
Nickel (Total)	mg/L	DG_A PZ_GW03	19/05/2021	0.007
Nickel (Total)	mg/L	DG_A PZ_GW03	16/06/2021	0.005
Nickel (Total)	mg/L	DG_A PZ_GW04	18/01/2021	0.007
Nickel (Total)	mg/L	DG_A PZ_GW05	18/01/2021	0.008
Nickel (Total)	mg/L	DG_A PZ_GW08	19/01/2021	0.01
Nickel (Total)	mg/L	DG_A PZ_GW08	16/03/2021	0.001
Nickel (Total)	mg/L	DG_A PZ_BW50	13/01/2021	0.001
Nickel (Total)	mg/L	DG_A PZ_BW36A	18/01/2021	0.002
Nickel (Total)	mg/L	DG_A PZ_BW36A	18/02/2021	0.007
Nickel (Total)	mg/L	DG_A PZ_GW04A	18/01/2021	0.01
Nickel (Total)	mg/L	DG_A PZ_GW04A	17/02/2021	0.009
Nickel (Total)	mg/L	DG_A PZ_GW04A	15/03/2021	0.007
Nickel (Total)	mg/L	DG_A PZ_GW04A	13/04/2021	0.006
Nickel (Total)	mg/L	DG_A PZ_GW04A	19/05/2021	0.008
Nickel (Total)	mg/L	DG_A PZ_GW04A	16/06/2021	0.008
Nitrate-Nitrogen	mg/L	DG_A PZ_BW05	12/01/2021	1.1
Nitrate-Nitrogen	mg/L	DG_A PZ_IWB2	12/01/2021	4.8
Nitrate-Nitrogen	mg/L	DG_A PZ_IWB6	12/01/2021	9
Nitrate-Nitrogen	mg/L	DG_A PZ_WRK300	21/01/2021	3.9
Nitrate-Nitrogen	mg/L	DG_A PZ_WRK301	20/01/2021	0.087
Nitrate-Nitrogen	mg/L	DG_A PZ_WRK302	19/01/2021	0.34
Nitrate-Nitrogen	mg/L	DG_A PZ_WRK302	16/03/2021	0.34
Nitrate-Nitrogen	mg/L	DG_A PZ_GW01	14/01/2021	1.9
Nitrate-Nitrogen	mg/L	DG_A PZ_GW01	17/02/2021	1.5
Nitrate-Nitrogen	mg/L	DG_A PZ_GW01	15/03/2021	1.7
Nitrate-Nitrogen	mg/L	DG_A PZ_GW01	13/04/2021	1.9
Nitrate-Nitrogen	mg/L	DG_A PZ_GW01	19/05/2021	1.9
Nitrate-Nitrogen	mg/L	DG_A PZ_GW01	16/06/2021	1.7
Nitrate-Nitrogen	mg/L	DG_A PZ_GW06	20/01/2021	0.14
Nitrate-Nitrogen	mg/L	DG_A PZ_GW06	16/03/2021	0.12
Nitrate-Nitrogen	mg/L	DG_A PZ_GW07	11/01/2021	0.58
Nitrate-Nitrogen	mg/L	DG_A PZ_BW45B	14/01/2021	0.28
Nitrate-Nitrogen	mg/L	DG_A PZ_BW45B	18/02/2021	0.24
Nitrate-Nitrogen	mg/L	DG_A PZ_GW02	14/01/2021	6.3

Variable	Unit	Sample Point	Date	Result
Nitrate-Nitrogen	mg/L	DG_A PZ_GW02	17/02/2021	6.5
Nitrate-Nitrogen	mg/L	DG_A PZ_GW02	15/03/2021	6
Nitrate-Nitrogen	mg/L	DG_A PZ_GW02	8/04/2021	6.5
Nitrate-Nitrogen	mg/L	DG_A PZ_GW02	19/05/2021	6.2
Nitrate-Nitrogen	mg/L	DG_A PZ_GW02	16/06/2021	6.3
Nitrate-Nitrogen	mg/L	DG_A PZ_GW03	14/01/2021	1.9
Nitrate-Nitrogen	mg/L	DG_A PZ_GW03	17/02/2021	1.9
Nitrate-Nitrogen	mg/L	DG_A PZ_GW03	15/03/2021	1.9
Nitrate-Nitrogen	mg/L	DG_A PZ_GW03	8/04/2021	1.9
Nitrate-Nitrogen	mg/L	DG_A PZ_GW03	19/05/2021	1.7
Nitrate-Nitrogen	mg/L	DG_A PZ_GW03	16/06/2021	1.6
Nitrate-Nitrogen	mg/L	DG_A PZ_GW04	18/01/2021	3.3
Nitrate-Nitrogen	mg/L	DG_A PZ_GW05	18/01/2021	4.2
Nitrate-Nitrogen	mg/L	DG_A PZ_GW08	19/01/2021	0.33
Nitrate-Nitrogen	mg/L	DG_A PZ_GW08	16/03/2021	0.3
Nitrate-Nitrogen	mg/L	DG_A PZ_BW50	13/01/2021	1.1
Nitrate-Nitrogen	mg/L	DG_A PZ_BW36A	18/01/2021	0.028
Nitrate-Nitrogen	mg/L	DG_A PZ_BW36A	18/02/2021	0.005
Nitrate-Nitrogen	mg/L	DG_A PZ_GW04A	18/01/2021	3.8
Nitrate-Nitrogen	mg/L	DG_A PZ_GW04A	17/02/2021	3.2
Nitrate-Nitrogen	mg/L	DG_A PZ_GW04A	15/03/2021	3.6
Nitrate-Nitrogen	mg/L	DG_A PZ_GW04A	13/04/2021	4.5
Nitrate-Nitrogen	mg/L	DG_A PZ_GW04A	19/05/2021	3.9
Nitrate-Nitrogen	mg/L	DG_A PZ_GW04A	16/06/2021	4.2
Nitrite (Total)	mg/L	DG_A PZ_BW05	12/01/2021	0.0197
Nitrite (Total)	mg/L	DG_A PZ_IWB2	12/01/2021	0.0066
Nitrite (Total)	mg/L	DG_A PZ_IWB6	12/01/2021	0.0165
Nitrite (Total)	mg/L	DG_A PZ_WRK300	21/01/2021	0.0165
Nitrite (Total)	mg/L	DG_A PZ_WRK301	20/01/2021	0.0033
Nitrite (Total)	mg/L	DG_A PZ_WRK302	19/01/2021	0.0033
Nitrite (Total)	mg/L	DG_A PZ_WRK302	16/03/2021	0.0033
Nitrite (Total)	mg/L	DG_A PZ_GW01	14/01/2021	0.0033
Nitrite (Total)	mg/L	DG_A PZ_GW01	17/02/2021	0.0033
Nitrite (Total)	mg/L	DG_A PZ_GW01	15/03/2021	0.0033
Nitrite (Total)	mg/L	DG_A PZ_GW01	13/04/2021	0.0066
Nitrite (Total)	mg/L	DG_A PZ_GW01	19/05/2021	0.0033
Nitrite (Total)	mg/L	DG_A PZ_GW01	16/06/2021	0.0033
Nitrite (Total)	mg/L	DG_A PZ_GW06	20/01/2021	0.0033
Nitrite (Total)	mg/L	DG_A PZ_GW06	16/03/2021	0.0033
Nitrite (Total)	mg/L	DG_A PZ_GW07	11/01/2021	0.0099
Nitrite (Total)	mg/L	DG_A PZ_BW45B	14/01/2021	0.0033
Nitrite (Total)	mg/L	DG_A PZ_BW45B	18/02/2021	0.0033
Nitrite (Total)	mg/L	DG_A PZ_GW02	14/01/2021	0.0987
Nitrite (Total)	mg/L	DG_A PZ_GW02	17/02/2021	0.102

Variable	Unit	Sample Point	Date	Result
Nitrite (Total)	mg/L	DG_A PZ_GW02	15/03/2021	0.0921
Nitrite (Total)	mg/L	DG_A PZ_GW02	8/04/2021	0.0987
Nitrite (Total)	mg/L	DG_A PZ_GW02	19/05/2021	0.0691
Nitrite (Total)	mg/L	DG_A PZ_GW02	16/06/2021	0.0823
Nitrite (Total)	mg/L	DG_A PZ_GW03	14/01/2021	0.0395
Nitrite (Total)	mg/L	DG_A PZ_GW03	17/02/2021	0.0263
Nitrite (Total)	mg/L	DG_A PZ_GW03	15/03/2021	0.023
Nitrite (Total)	mg/L	DG_A PZ_GW03	8/04/2021	0.023
Nitrite (Total)	mg/L	DG_A PZ_GW03	19/05/2021	0.0197
Nitrite (Total)	mg/L	DG_A PZ_GW03	16/06/2021	0.0428
Nitrite (Total)	mg/L	DG_A PZ_GW04	18/01/2021	0.0099
Nitrite (Total)	mg/L	DG_A PZ_GW05	18/01/2021	0.4935
Nitrite (Total)	mg/L	DG_A PZ_GW08	19/01/2021	0.0033
Nitrite (Total)	mg/L	DG_A PZ_GW08	16/03/2021	0.0033
Nitrite (Total)	mg/L	DG_A PZ_BW50	13/01/2021	0.0066
Nitrite-Nitrogen	mg/L	DG_A PZ_BW05	12/01/2021	0.006
Nitrite-Nitrogen	mg/L	DG_A PZ_IWB2	12/01/2021	0.002
Nitrite-Nitrogen	mg/L	DG_A PZ_IWB6	12/01/2021	0.005
Nitrite-Nitrogen	mg/L	DG_A PZ_WRK300	21/01/2021	0.005
Nitrite-Nitrogen	mg/L	DG_A PZ_WRK301	20/01/2021	0.001
Nitrite-Nitrogen	mg/L	DG_A PZ_WRK302	19/01/2021	0.001
Nitrite-Nitrogen	mg/L	DG_A PZ_WRK302	16/03/2021	0.001
Nitrite-Nitrogen	mg/L	DG_A PZ_GW01	14/01/2021	0.001
Nitrite-Nitrogen	mg/L	DG_A PZ_GW01	17/02/2021	0.001
Nitrite-Nitrogen	mg/L	DG_A PZ_GW01	15/03/2021	0.001
Nitrite-Nitrogen	mg/L	DG_A PZ_GW01	13/04/2021	0.002
Nitrite-Nitrogen	mg/L	DG_A PZ_GW01	19/05/2021	0.001
Nitrite-Nitrogen	mg/L	DG_A PZ_GW01	16/06/2021	0.001
Nitrite-Nitrogen	mg/L	DG_A PZ_GW06	20/01/2021	0.001
Nitrite-Nitrogen	mg/L	DG_A PZ_GW06	16/03/2021	0.001
Nitrite-Nitrogen	mg/L	DG_A PZ_GW07	11/01/2021	0.003
Nitrite-Nitrogen	mg/L	DG_A PZ_BW45B	14/01/2021	0.001
Nitrite-Nitrogen	mg/L	DG_A PZ_BW45B	18/02/2021	0.001
Nitrite-Nitrogen	mg/L	DG_A PZ_GW02	14/01/2021	0.03
Nitrite-Nitrogen	mg/L	DG_A PZ_GW02	17/02/2021	0.031
Nitrite-Nitrogen	mg/L	DG_A PZ_GW02	15/03/2021	0.028
Nitrite-Nitrogen	mg/L	DG_A PZ_GW02	8/04/2021	0.03
Nitrite-Nitrogen	mg/L	DG_A PZ_GW02	19/05/2021	0.021
Nitrite-Nitrogen	mg/L	DG_A PZ_GW02	16/06/2021	0.025
Nitrite-Nitrogen	mg/L	DG_A PZ_GW03	14/01/2021	0.012
Nitrite-Nitrogen	mg/L	DG_A PZ_GW03	17/02/2021	0.008
Nitrite-Nitrogen	mg/L	DG_A PZ_GW03	15/03/2021	0.007
Nitrite-Nitrogen	mg/L	DG_A PZ_GW03	8/04/2021	0.007
Nitrite-Nitrogen	mg/L	DG_A PZ_GW03	19/05/2021	0.006

Variable	Unit	Sample Point	Date	Result
Nitrite-Nitrogen	mg/L	DG_A PZ_GW03	16/06/2021	0.013
Nitrite-Nitrogen	mg/L	DG_A PZ_GW04	18/01/2021	0.003
Nitrite-Nitrogen	mg/L	DG_A PZ_GW05	18/01/2021	0.15
Nitrite-Nitrogen	mg/L	DG_A PZ_GW08	19/01/2021	0.001
Nitrite-Nitrogen	mg/L	DG_A PZ_GW08	16/03/2021	0.001
Nitrite-Nitrogen	mg/L	DG_A PZ_BW50	13/01/2021	0.002
Nitrite-Nitrogen	mg/L	DG_A PZ_BW36A	18/01/2021	0.003
Nitrite-Nitrogen	mg/L	DG_A PZ_BW36A	18/02/2021	0.001
Nitrite-Nitrogen	mg/L	DG_A PZ_GW04A	18/01/2021	0.092
Nitrite-Nitrogen	mg/L	DG_A PZ_GW04A	17/02/2021	0.14
Nitrite-Nitrogen	mg/L	DG_A PZ_GW04A	15/03/2021	0.038
Nitrite-Nitrogen	mg/L	DG_A PZ_GW04A	13/04/2021	0.011
Nitrite-Nitrogen	mg/L	DG_A PZ_GW04A	19/05/2021	0.022
Nitrite-Nitrogen	mg/L	DG_A PZ_GW04A	16/06/2021	0.009
Phosphorus (Ortho)	mg/L	DG_A PZ_BW05	12/01/2021	0.004
Phosphorus (Ortho)	mg/L	DG_A PZ_IWB2	12/01/2021	0.004
Phosphorus (Ortho)	mg/L	DG_A PZ_IWB6	12/01/2021	0.004
Phosphorus (Ortho)	mg/L	DG_A PZ_WRK300	21/01/2021	0.004
Phosphorus (Ortho)	mg/L	DG_A PZ_WRK301	20/01/2021	0.01
Phosphorus (Ortho)	mg/L	DG_A PZ_WRK302	19/01/2021	0.006
Phosphorus (Ortho)	mg/L	DG_A PZ_WRK302	16/03/2021	0.004
Phosphorus (Ortho)	mg/L	DG_A PZ_GW01	14/01/2021	0.004
Phosphorus (Ortho)	mg/L	DG_A PZ_GW01	17/02/2021	0.004
Phosphorus (Ortho)	mg/L	DG_A PZ_GW01	15/03/2021	0.004
Phosphorus (Ortho)	mg/L	DG_A PZ_GW01	13/04/2021	0.004
Phosphorus (Ortho)	mg/L	DG_A PZ_GW01	19/05/2021	0.004
Phosphorus (Ortho)	mg/L	DG_A PZ_GW01	16/06/2021	0.004
Phosphorus (Ortho)	mg/L	DG_A PZ_GW06	20/01/2021	0.012
Phosphorus (Ortho)	mg/L	DG_A PZ_GW06	16/03/2021	0.012
Phosphorus (Ortho)	mg/L	DG_A PZ_GW07	11/01/2021	0.004
Phosphorus (Ortho)	mg/L	DG_A PZ_BW45B	14/01/2021	0.004
Phosphorus (Ortho)	mg/L	DG_A PZ_BW45B	18/02/2021	0.044
Phosphorus (Ortho)	mg/L	DG_A PZ_GW02	14/01/2021	0.004
Phosphorus (Ortho)	mg/L	DG_A PZ_GW02	17/02/2021	0.004
Phosphorus (Ortho)	mg/L	DG_A PZ_GW02	15/03/2021	0.004
Phosphorus (Ortho)	mg/L	DG_A PZ_GW02	8/04/2021	0.004
Phosphorus (Ortho)	mg/L	DG_A PZ_GW02	19/05/2021	0.004
Phosphorus (Ortho)	mg/L	DG_A PZ_GW02	16/06/2021	0.004
Phosphorus (Ortho)	mg/L	DG_A PZ_GW03	14/01/2021	0.018
Phosphorus (Ortho)	mg/L	DG_A PZ_GW03	17/02/2021	0.004
Phosphorus (Ortho)	mg/L	DG_A PZ_GW03	15/03/2021	0.004
Phosphorus (Ortho)	mg/L	DG_A PZ_GW03	8/04/2021	0.004
Phosphorus (Ortho)	mg/L	DG_A PZ_GW03	19/05/2021	0.005
Phosphorus (Ortho)	mg/L	DG_A PZ_GW03	16/06/2021	0.004

Variable	Unit	Sample Point	Date	Result
Phosphorus (Ortho)	mg/L	DG_A PZ_GW04	18/01/2021	0.004
Phosphorus (Ortho)	mg/L	DG_A PZ_GW05	18/01/2021	0.004
Phosphorus (Ortho)	mg/L	DG_A PZ_GW08	19/01/2021	0.004
Phosphorus (Ortho)	mg/L	DG_A PZ_GW08	16/03/2021	0.008
Phosphorus (Ortho)	mg/L	DG_A PZ_BW50	13/01/2021	0.011
Phosphorus (Ortho)	mg/L	DG_A PZ_BW36A	18/01/2021	0.004
Phosphorus (Ortho)	mg/L	DG_A PZ_BW36A	18/02/2021	0.024
Phosphorus (Ortho)	mg/L	DG_A PZ_GW04A	18/01/2021	0.004
Phosphorus (Ortho)	mg/L	DG_A PZ_GW04A	17/02/2021	0.004
Phosphorus (Ortho)	mg/L	DG_A PZ_GW04A	15/03/2021	0.004
Phosphorus (Ortho)	mg/L	DG_A PZ_GW04A	13/04/2021	0.004
Phosphorus (Ortho)	mg/L	DG_A PZ_GW04A	19/05/2021	0.004
Phosphorus (Ortho)	mg/L	DG_A PZ_GW04A	16/06/2021	0.004
Potassium	mg/L	DG_A PZ_BW05	12/01/2021	79
Potassium	mg/L	DG_A PZ_IWB2	12/01/2021	4.9
Potassium	mg/L	DG_A PZ_IWB6	12/01/2021	1.4
Potassium	mg/L	DG_A PZ_WRK300	21/01/2021	16
Potassium	mg/L	DG_A PZ_WRK301	20/01/2021	26
Potassium	mg/L	DG_A PZ_WRK302	19/01/2021	26
Potassium	mg/L	DG_A PZ_WRK302	16/03/2021	26
Potassium	mg/L	DG_A PZ_GW01	14/01/2021	17
Potassium	mg/L	DG_A PZ_GW01	17/02/2021	17
Potassium	mg/L	DG_A PZ_GW01	15/03/2021	17
Potassium	mg/L	DG_A PZ_GW01	13/04/2021	17
Potassium	mg/L	DG_A PZ_GW01	19/05/2021	15
Potassium	mg/L	DG_A PZ_GW01	16/06/2021	21
Potassium	mg/L	DG_A PZ_GW06	20/01/2021	22
Potassium	mg/L	DG_A PZ_GW06	16/03/2021	20
Potassium	mg/L	DG_A PZ_GW07	11/01/2021	17
Potassium	mg/L	DG_A PZ_BW45B	14/01/2021	19
Potassium	mg/L	DG_A PZ_BW45B	18/02/2021	18
Potassium	mg/L	DG_A PZ_GW02	14/01/2021	28
Potassium	mg/L	DG_A PZ_GW02	17/02/2021	26
Potassium	mg/L	DG_A PZ_GW02	15/03/2021	27
Potassium	mg/L	DG_A PZ_GW02	8/04/2021	26
Potassium	mg/L	DG_A PZ_GW02	19/05/2021	26
Potassium	mg/L	DG_A PZ_GW02	16/06/2021	26
Potassium	mg/L	DG_A PZ_GW03	14/01/2021	29
Potassium	mg/L	DG_A PZ_GW03	17/02/2021	28
Potassium	mg/L	DG_A PZ_GW03	15/03/2021	28
Potassium	mg/L	DG_A PZ_GW03	8/04/2021	29
Potassium	mg/L	DG_A PZ_GW03	19/05/2021	27
Potassium	mg/L	DG_A PZ_GW03	16/06/2021	28
Potassium	mg/L	DG_A PZ_GW04	18/01/2021	18

Variable	Unit	Sample Point	Date	Result
Potassium	mg/L	DG_A PZ_GW05	18/01/2021	18
Potassium	mg/L	DG_A PZ_GW08	19/01/2021	20
Potassium	mg/L	DG_A PZ_GW08	16/03/2021	19
Potassium	mg/L	DG_A PZ_BW50	13/01/2021	13
Potassium	mg/L	DG_A PZ_BW36A	18/01/2021	18
Potassium	mg/L	DG_A PZ_BW36A	18/02/2021	17
Potassium	mg/L	DG_A PZ_GW04A	18/01/2021	16
Potassium	mg/L	DG_A PZ_GW04A	17/02/2021	14
Potassium	mg/L	DG_A PZ_GW04A	15/03/2021	14
Potassium	mg/L	DG_A PZ_GW04A	13/04/2021	14
Potassium	mg/L	DG_A PZ_GW04A	19/05/2021	13
Potassium	mg/L	DG_A PZ_GW04A	16/06/2021	14
Radium 226	Bq/L	DG_A PZ_BW05	12/01/2021	0.04
Radium 226	Bq/L	DG_A PZ_IWB2	12/01/2021	0.03
Radium 226	Bq/L	DG_A PZ_IWB6	12/01/2021	0.04
Radium 226	Bq/L	DG_A PZ_WRK300	21/01/2021	0.01
Radium 226	Bq/L	DG_A PZ_WRK301	20/01/2021	0.02
Radium 226	Bq/L	DG_A PZ_WRK302	19/01/2021	0.23
Radium 226	Bq/L	DG_A PZ_WRK302	16/03/2021	0.2
Radium 226	Bq/L	DG_A PZ_GW01	14/01/2021	0.48
Radium 226	Bq/L	DG_A PZ_GW06	20/01/2021	0.06
Radium 226	Bq/L	DG_A PZ_GW06	16/03/2021	0.05
Radium 226	Bq/L	DG_A PZ_GW07	11/01/2021	0.16
Radium 226	Bq/L	DG_A PZ_BW45B	14/01/2021	1.05
Radium 226	Bq/L	DG_A PZ_BW45B	18/02/2021	1.14
Radium 226	Bq/L	DG_A PZ_GW02	14/01/2021	0.11
Radium 226	Bq/L	DG_A PZ_GW03	14/01/2021	0.01
Radium 226	Bq/L	DG_A PZ_GW04	18/01/2021	0.16
Radium 226	Bq/L	DG_A PZ_GW05	18/01/2021	0.08
Radium 226	Bq/L	DG_A PZ_GW08	19/01/2021	0.05
Radium 226	Bq/L	DG_A PZ_GW08	16/03/2021	0.05
Radium 226	Bq/L	DG_A PZ_BW50	13/01/2021	0.06
Radium 226	Bq/L	DG_A PZ_BW36A	18/01/2021	0.04
Radium 226	Bq/L	DG_A PZ_BW36A	18/02/2021	0.04
Radium 226	Bq/L	DG_A PZ_GW04A	18/01/2021	0.16
Radium 228	Bq/L	DG_A PZ_BW05	12/01/2021	0.08
Radium 228	Bq/L	DG_A PZ_IWB2	12/01/2021	0.08
Radium 228	Bq/L	DG_A PZ_IWB6	12/01/2021	0.08
Radium 228	Bq/L	DG_A PZ_WRK300	21/01/2021	0.08
Radium 228	Bq/L	DG_A PZ_WRK301	20/01/2021	0.08
Radium 228	Bq/L	DG_A PZ_WRK302	19/01/2021	1.02
Radium 228	Bq/L	DG_A PZ_WRK302	16/03/2021	0.83
Radium 228	Bq/L	DG_A PZ_GW01	14/01/2021	1.06
Radium 228	Bq/L	DG_A PZ_GW06	20/01/2021	0.2

Variable	Unit	Sample Point	Date	Result
Radium 228	Bq/L	DG_A PZ_GW06	16/03/2021	0.17
Radium 228	Bq/L	DG_A PZ_GW07	11/01/2021	0.33
Radium 228	Bq/L	DG_A PZ_BW45B	14/01/2021	4
Radium 228	Bq/L	DG_A PZ_BW45B	18/02/2021	4.56
Radium 228	Bq/L	DG_A PZ_GW02	14/01/2021	0.34
Radium 228	Bq/L	DG_A PZ_GW03	14/01/2021	0.08
Radium 228	Bq/L	DG_A PZ_GW04	18/01/2021	0.28
Radium 228	Bq/L	DG_A PZ_GW05	18/01/2021	0.11
Radium 228	Bq/L	DG_A PZ_GW08	19/01/2021	0.08
Radium 228	Bq/L	DG_A PZ_GW08	16/03/2021	0.09
Radium 228	Bq/L	DG_A PZ_BW50	13/01/2021	0.12
Radium 228	Bq/L	DG_A PZ_BW36A	18/01/2021	0.15
Radium 228	Bq/L	DG_A PZ_BW36A	18/02/2021	0.18
Radium 228	Bq/L	DG_A PZ_GW04A	18/01/2021	0.38
Selenium (Total)	mg/L	DG_A PZ_BW05	12/01/2021	0.016
Selenium (Total)	mg/L	DG_A PZ_IWB2	12/01/2021	0.001
Selenium (Total)	mg/L	DG_A PZ_IWB6	12/01/2021	0.003
Selenium (Total)	mg/L	DG_A PZ_WRK300	21/01/2021	0.003
Selenium (Total)	mg/L	DG_A PZ_WRK301	20/01/2021	0.004
Selenium (Total)	mg/L	DG_A PZ_WRK302	19/01/2021	0.009
Selenium (Total)	mg/L	DG_A PZ_WRK302	16/03/2021	0.001
Selenium (Total)	mg/L	DG_A PZ_GW01	14/01/2021	0.062
Selenium (Total)	mg/L	DG_A PZ_GW01	17/02/2021	0.031
Selenium (Total)	mg/L	DG_A PZ_GW01	15/03/2021	0.026
Selenium (Total)	mg/L	DG_A PZ_GW01	13/04/2021	0.025
Selenium (Total)	mg/L	DG_A PZ_GW01	19/05/2021	0.019
Selenium (Total)	mg/L	DG_A PZ_GW01	16/06/2021	0.057
Selenium (Total)	mg/L	DG_A PZ_GW06	20/01/2021	0.007
Selenium (Total)	mg/L	DG_A PZ_GW06	16/03/2021	0.001
Selenium (Total)	mg/L	DG_A PZ_GW07	11/01/2021	0.017
Selenium (Total)	mg/L	DG_A PZ_BW45B	14/01/2021	0.045
Selenium (Total)	mg/L	DG_A PZ_BW45B	18/02/2021	0.016
Selenium (Total)	mg/L	DG_A PZ_GW02	14/01/2021	0.003
Selenium (Total)	mg/L	DG_A PZ_GW02	17/02/2021	0.004
Selenium (Total)	mg/L	DG_A PZ_GW02	15/03/2021	0.002
Selenium (Total)	mg/L	DG_A PZ_GW02	8/04/2021	0.002
Selenium (Total)	mg/L	DG_A PZ_GW02	19/05/2021	0.002
Selenium (Total)	mg/L	DG_A PZ_GW02	16/06/2021	0.003
Selenium (Total)	mg/L	DG_A PZ_GW03	14/01/2021	0.001
Selenium (Total)	mg/L	DG_A PZ_GW03	17/02/2021	0.002
Selenium (Total)	mg/L	DG_A PZ_GW03	15/03/2021	0.002
Selenium (Total)	mg/L	DG_A PZ_GW03	8/04/2021	0.001
Selenium (Total)	mg/L	DG_A PZ_GW03	19/05/2021	0.001
Selenium (Total)	mg/L	DG_A PZ_GW03	16/06/2021	0.001

Variable	Unit	Sample Point	Date	Result
Selenium (Total)	mg/L	DG_A PZ_GW04	18/01/2021	0.014
Selenium (Total)	mg/L	DG_A PZ_GW05	18/01/2021	0.004
Selenium (Total)	mg/L	DG_A PZ_GW08	19/01/2021	0.016
Selenium (Total)	mg/L	DG_A PZ_GW08	16/03/2021	0.002
Selenium (Total)	mg/L	DG_A PZ_BW50	13/01/2021	0.005
Selenium (Total)	mg/L	DG_A PZ_BW36A	18/01/2021	0.03
Selenium (Total)	mg/L	DG_A PZ_BW36A	18/02/2021	0.002
Selenium (Total)	mg/L	DG_A PZ_GW04A	18/01/2021	0.028
Selenium (Total)	mg/L	DG_A PZ_GW04A	17/02/2021	0.012
Selenium (Total)	mg/L	DG_A PZ_GW04A	15/03/2021	0.013
Selenium (Total)	mg/L	DG_A PZ_GW04A	13/04/2021	0.012
Selenium (Total)	mg/L	DG_A PZ_GW04A	19/05/2021	0.012
Selenium (Total)	mg/L	DG_A PZ_GW04A	16/06/2021	0.013
Silver (Total)	mg/L	DG_A PZ_BW05	12/01/2021	0.001
Silver (Total)	mg/L	DG_A PZ_IWB2	12/01/2021	0.001
Silver (Total)	mg/L	DG_A PZ_IWB6	12/01/2021	0.001
Silver (Total)	mg/L	DG_A PZ_WRK300	21/01/2021	0.001
Silver (Total)	mg/L	DG_A PZ_WRK301	20/01/2021	0.001
Silver (Total)	mg/L	DG_A PZ_WRK302	19/01/2021	0.001
Silver (Total)	mg/L	DG_A PZ_WRK302	16/03/2021	0.001
Silver (Total)	mg/L	DG_A PZ_GW01	14/01/2021	0.001
Silver (Total)	mg/L	DG_A PZ_GW01	17/02/2021	0.001
Silver (Total)	mg/L	DG_A PZ_GW01	15/03/2021	0.001
Silver (Total)	mg/L	DG_A PZ_GW01	13/04/2021	0.001
Silver (Total)	mg/L	DG_A PZ_GW01	19/05/2021	0.001
Silver (Total)	mg/L	DG_A PZ_GW01	16/06/2021	0.001
Silver (Total)	mg/L	DG_A PZ_GW06	20/01/2021	0.001
Silver (Total)	mg/L	DG_A PZ_GW06	16/03/2021	0.001
Silver (Total)	mg/L	DG_A PZ_GW07	11/01/2021	0.001
Silver (Total)	mg/L	DG_A PZ_BW45B	14/01/2021	0.001
Silver (Total)	mg/L	DG_A PZ_BW45B	18/02/2021	0.001
Silver (Total)	mg/L	DG_A PZ_GW02	14/01/2021	0.001
Silver (Total)	mg/L	DG_A PZ_GW02	17/02/2021	0.001
Silver (Total)	mg/L	DG_A PZ_GW02	15/03/2021	0.001
Silver (Total)	mg/L	DG_A PZ_GW02	8/04/2021	0.001
Silver (Total)	mg/L	DG_A PZ_GW02	19/05/2021	0.001
Silver (Total)	mg/L	DG_A PZ_GW02	16/06/2021	0.001
Silver (Total)	mg/L	DG_A PZ_GW03	14/01/2021	0.001
Silver (Total)	mg/L	DG_A PZ_GW03	17/02/2021	0.001
Silver (Total)	mg/L	DG_A PZ_GW03	15/03/2021	0.001
Silver (Total)	mg/L	DG_A PZ_GW03	8/04/2021	0.001
Silver (Total)	mg/L	DG_A PZ_GW03	19/05/2021	0.001
Silver (Total)	mg/L	DG_A PZ_GW03	16/06/2021	0.001
Silver (Total)	mg/L	DG_A PZ_GW04	18/01/2021	0.003

Variable	Unit	Sample Point	Date	Result
Silver (Total)	mg/L	DG_A PZ_GW05	18/01/2021	0.003
Silver (Total)	mg/L	DG_A PZ_GW08	19/01/2021	0.001
Silver (Total)	mg/L	DG_A PZ_GW08	16/03/2021	0.001
Silver (Total)	mg/L	DG_A PZ_BW50	13/01/2021	0.004
Silver (Total)	mg/L	DG_A PZ_BW36A	18/01/2021	0.002
Silver (Total)	mg/L	DG_A PZ_BW36A	18/02/2021	0.001
Silver (Total)	mg/L	DG_A PZ_GW04A	18/01/2021	0.002
Silver (Total)	mg/L	DG_A PZ_GW04A	17/02/2021	0.001
Silver (Total)	mg/L	DG_A PZ_GW04A	15/03/2021	0.001
Silver (Total)	mg/L	DG_A PZ_GW04A	13/04/2021	0.001
Silver (Total)	mg/L	DG_A PZ_GW04A	19/05/2021	0.001
Silver (Total)	mg/L	DG_A PZ_GW04A	16/06/2021	0.001
Sodium	mg/L	DG_A PZ_BW05	12/01/2021	4700
Sodium	mg/L	DG_A PZ_IWB2	12/01/2021	680
Sodium	mg/L	DG_A PZ_IWB6	12/01/2021	320
Sodium	mg/L	DG_A PZ_WRK300	21/01/2021	970
Sodium	mg/L	DG_A PZ_WRK301	20/01/2021	1800
Sodium	mg/L	DG_A PZ_WRK302	19/01/2021	3600
Sodium	mg/L	DG_A PZ_WRK302	16/03/2021	3600
Sodium	mg/L	DG_A PZ_GW01	14/01/2021	1900
Sodium	mg/L	DG_A PZ_GW01	17/02/2021	1900
Sodium	mg/L	DG_A PZ_GW01	15/03/2021	1800
Sodium	mg/L	DG_A PZ_GW01	13/04/2021	1900
Sodium	mg/L	DG_A PZ_GW01	19/05/2021	1900
Sodium	mg/L	DG_A PZ_GW01	16/06/2021	1900
Sodium	mg/L	DG_A PZ_GW06	20/01/2021	3600
Sodium	mg/L	DG_A PZ_GW06	16/03/2021	4100
Sodium	mg/L	DG_A PZ_GW07	11/01/2021	3300
Sodium	mg/L	DG_A PZ_BW45B	14/01/2021	3000
Sodium	mg/L	DG_A PZ_BW45B	18/02/2021	2900
Sodium	mg/L	DG_A PZ_GW02	14/01/2021	1400
Sodium	mg/L	DG_A PZ_GW02	17/02/2021	1300
Sodium	mg/L	DG_A PZ_GW02	15/03/2021	1300
Sodium	mg/L	DG_A PZ_GW02	8/04/2021	1200
Sodium	mg/L	DG_A PZ_GW02	19/05/2021	1300
Sodium	mg/L	DG_A PZ_GW02	16/06/2021	1300
Sodium	mg/L	DG_A PZ_GW03	14/01/2021	2000
Sodium	mg/L	DG_A PZ_GW03	17/02/2021	1900
Sodium	mg/L	DG_A PZ_GW03	15/03/2021	1800
Sodium	mg/L	DG_A PZ_GW03	8/04/2021	1800
Sodium	mg/L	DG_A PZ_GW03	19/05/2021	2000
Sodium	mg/L	DG_A PZ_GW03	16/06/2021	1900
Sodium	mg/L	DG_A PZ_GW04	18/01/2021	1800
Sodium	mg/L	DG_A PZ_GW05	18/01/2021	1900

Variable	Unit	Sample Point	Date	Result
Sodium	mg/L	DG_A PZ_GW08	19/01/2021	3600
Sodium	mg/L	DG_A PZ_GW08	16/03/2021	3500
Sodium	mg/L	DG_A PZ_BW50	13/01/2021	1400
Sodium	mg/L	DG_A PZ_BW36A	18/01/2021	1400
Sodium	mg/L	DG_A PZ_BW36A	18/02/2021	1400
Sodium	mg/L	DG_A PZ_GW04A	18/01/2021	1500
Sodium	mg/L	DG_A PZ_GW04A	17/02/2021	1400
Sodium	mg/L	DG_A PZ_GW04A	15/03/2021	1400
Sodium	mg/L	DG_A PZ_GW04A	13/04/2021	1300
Sodium	mg/L	DG_A PZ_GW04A	19/05/2021	1400
Sodium	mg/L	DG_A PZ_GW04A	16/06/2021	1400
Strontium (Total)	mg/L	DG_A PZ_BW05	12/01/2021	10
Strontium (Total)	mg/L	DG_A PZ_IWB2	12/01/2021	0.34
Strontium (Total)	mg/L	DG_A PZ_IWB6	12/01/2021	0.065
Strontium (Total)	mg/L	DG_A PZ_WRK300	21/01/2021	1.7
Strontium (Total)	mg/L	DG_A PZ_WRK301	20/01/2021	3.7
Strontium (Total)	mg/L	DG_A PZ_WRK302	19/01/2021	6.4
Strontium (Total)	mg/L	DG_A PZ_WRK302	16/03/2021	0.73
Strontium (Total)	mg/L	DG_A PZ_GW01	14/01/2021	1.2
Strontium (Total)	mg/L	DG_A PZ_GW01	17/02/2021	1.4
Strontium (Total)	mg/L	DG_A PZ_GW01	15/03/2021	1.3
Strontium (Total)	mg/L	DG_A PZ_GW01	13/04/2021	1.3
Strontium (Total)	mg/L	DG_A PZ_GW01	19/05/2021	1.1
Strontium (Total)	mg/L	DG_A PZ_GW01	16/06/2021	1.3
Strontium (Total)	mg/L	DG_A PZ_GW06	20/01/2021	9.1
Strontium (Total)	mg/L	DG_A PZ_GW06	16/03/2021	0.99
Strontium (Total)	mg/L	DG_A PZ_GW07	11/01/2021	8.6
Strontium (Total)	mg/L	DG_A PZ_BW45B	14/01/2021	3.7
Strontium (Total)	mg/L	DG_A PZ_BW45B	18/02/2021	3.6
Strontium (Total)	mg/L	DG_A PZ_GW02	14/01/2021	0.55
Strontium (Total)	mg/L	DG_A PZ_GW02	17/02/2021	0.54
Strontium (Total)	mg/L	DG_A PZ_GW02	15/03/2021	0.57
Strontium (Total)	mg/L	DG_A PZ_GW02	8/04/2021	0.52
Strontium (Total)	mg/L	DG_A PZ_GW02	19/05/2021	0.49
Strontium (Total)	mg/L	DG_A PZ_GW02	16/06/2021	0.51
Strontium (Total)	mg/L	DG_A PZ_GW03	14/01/2021	2.1
Strontium (Total)	mg/L	DG_A PZ_GW03	17/02/2021	2.1
Strontium (Total)	mg/L	DG_A PZ_GW03	15/03/2021	2.3
Strontium (Total)	mg/L	DG_A PZ_GW03	8/04/2021	2
Strontium (Total)	mg/L	DG_A PZ_GW03	19/05/2021	2
Strontium (Total)	mg/L	DG_A PZ_GW03	16/06/2021	2
Strontium (Total)	mg/L	DG_A PZ_GW04	18/01/2021	1.5
Strontium (Total)	mg/L	DG_A PZ_GW05	18/01/2021	1.2
Strontium (Total)	mg/L	DG_A PZ_GW08	19/01/2021	6.3

Variable	Unit	Sample Point	Date	Result
Strontium (Total)	mg/L	DG_A PZ_GW08	16/03/2021	0.63
Strontium (Total)	mg/L	DG_A PZ_BW50	13/01/2021	4.1
Strontium (Total)	mg/L	DG_A PZ_BW36A	18/01/2021	1.2
Strontium (Total)	mg/L	DG_A PZ_BW36A	18/02/2021	1.2
Strontium (Total)	mg/L	DG_A PZ_GW04A	18/01/2021	1.6
Strontium (Total)	mg/L	DG_A PZ_GW04A	17/02/2021	1.5
Strontium (Total)	mg/L	DG_A PZ_GW04A	15/03/2021	1.7
Strontium (Total)	mg/L	DG_A PZ_GW04A	13/04/2021	1.5
Strontium (Total)	mg/L	DG_A PZ_GW04A	19/05/2021	1.5
Strontium (Total)	mg/L	DG_A PZ_GW04A	16/06/2021	1.5
Sulfate	mg/L	DG_A PZ_BW05	12/01/2021	860
Sulfate	mg/L	DG_A PZ_IWB2	12/01/2021	150
Sulfate	mg/L	DG_A PZ_IWB6	12/01/2021	200
Sulfate	mg/L	DG_A PZ_WRK300	21/01/2021	330
Sulfate	mg/L	DG_A PZ_WRK301	20/01/2021	680
Sulfate	mg/L	DG_A PZ_WRK302	19/01/2021	1400
Sulfate	mg/L	DG_A PZ_WRK302	16/03/2021	1300
Sulfate	mg/L	DG_A PZ_GW01	14/01/2021	480
Sulfate	mg/L	DG_A PZ_GW01	17/02/2021	540
Sulfate	mg/L	DG_A PZ_GW01	15/03/2021	480
Sulfate	mg/L	DG_A PZ_GW01	13/04/2021	460
Sulfate	mg/L	DG_A PZ_GW01	19/05/2021	400
Sulfate	mg/L	DG_A PZ_GW01	16/06/2021	470
Sulfate	mg/L	DG_A PZ_GW06	20/01/2021	1600
Sulfate	mg/L	DG_A PZ_GW06	16/03/2021	1500
Sulfate	mg/L	DG_A PZ_GW07	11/01/2021	960
Sulfate	mg/L	DG_A PZ_BW45B	14/01/2021	1000
Sulfate	mg/L	DG_A PZ_BW45B	18/02/2021	960
Sulfate	mg/L	DG_A PZ_GW02	14/01/2021	350
Sulfate	mg/L	DG_A PZ_GW02	17/02/2021	360
Sulfate	mg/L	DG_A PZ_GW02	15/03/2021	390
Sulfate	mg/L	DG_A PZ_GW02	8/04/2021	370
Sulfate	mg/L	DG_A PZ_GW02	19/05/2021	420
Sulfate	mg/L	DG_A PZ_GW02	16/06/2021	410
Sulfate	mg/L	DG_A PZ_GW03	14/01/2021	630
Sulfate	mg/L	DG_A PZ_GW03	17/02/2021	580
Sulfate	mg/L	DG_A PZ_GW03	15/03/2021	480
Sulfate	mg/L	DG_A PZ_GW03	8/04/2021	550
Sulfate	mg/L	DG_A PZ_GW03	19/05/2021	560
Sulfate	mg/L	DG_A PZ_GW03	16/06/2021	540
Sulfate	mg/L	DG_A PZ_GW04	18/01/2021	660
Sulfate	mg/L	DG_A PZ_GW05	18/01/2021	730
Sulfate	mg/L	DG_A PZ_GW08	19/01/2021	1400
Sulfate	mg/L	DG_A PZ_GW08	16/03/2021	1300

Variable	Unit	Sample Point	Date	Result
Sulfate	mg/L	DG_A PZ_BW50	13/01/2021	340
Sulfate	mg/L	DG_A PZ_BW36A	18/01/2021	290
Sulfate	mg/L	DG_A PZ_BW36A	18/02/2021	270
Sulfate	mg/L	DG_A PZ_GW04A	18/01/2021	410
Sulfate	mg/L	DG_A PZ_GW04A	17/02/2021	380
Sulfate	mg/L	DG_A PZ_GW04A	15/03/2021	380
Sulfate	mg/L	DG_A PZ_GW04A	13/04/2021	400
Sulfate	mg/L	DG_A PZ_GW04A	19/05/2021	380
Sulfate	mg/L	DG_A PZ_GW04A	16/06/2021	380
Thallium (Total)	mg/L	DG_A PZ_BW05	12/01/2021	0.001
Thallium (Total)	mg/L	DG_A PZ_IWB2	12/01/2021	0.001
Thallium (Total)	mg/L	DG_A PZ_IWB6	12/01/2021	0.001
Thallium (Total)	mg/L	DG_A PZ_WRK300	21/01/2021	0.001
Thallium (Total)	mg/L	DG_A PZ_WRK301	20/01/2021	0.001
Thallium (Total)	mg/L	DG_A PZ_WRK302	19/01/2021	0.001
Thallium (Total)	mg/L	DG_A PZ_WRK302	16/03/2021	0.001
Thallium (Total)	mg/L	DG_A PZ_GW01	14/01/2021	0.001
Thallium (Total)	mg/L	DG_A PZ_GW01	17/02/2021	0.001
Thallium (Total)	mg/L	DG_A PZ_GW01	15/03/2021	0.001
Thallium (Total)	mg/L	DG_A PZ_GW01	13/04/2021	0.001
Thallium (Total)	mg/L	DG_A PZ_GW01	19/05/2021	0.001
Thallium (Total)	mg/L	DG_A PZ_GW01	16/06/2021	0.001
Thallium (Total)	mg/L	DG_A PZ_GW06	20/01/2021	0.001
Thallium (Total)	mg/L	DG_A PZ_GW06	16/03/2021	0.001
Thallium (Total)	mg/L	DG_A PZ_GW07	11/01/2021	0.001
Thallium (Total)	mg/L	DG_A PZ_BW45B	14/01/2021	0.001
Thallium (Total)	mg/L	DG_A PZ_BW45B	18/02/2021	0.001
Thallium (Total)	mg/L	DG_A PZ_GW02	14/01/2021	0.001
Thallium (Total)	mg/L	DG_A PZ_GW02	17/02/2021	0.001
Thallium (Total)	mg/L	DG_A PZ_GW02	15/03/2021	0.001
Thallium (Total)	mg/L	DG_A PZ_GW02	8/04/2021	0.001
Thallium (Total)	mg/L	DG_A PZ_GW02	19/05/2021	0.001
Thallium (Total)	mg/L	DG_A PZ_GW02	16/06/2021	0.001
Thallium (Total)	mg/L	DG_A PZ_GW03	14/01/2021	0.001
Thallium (Total)	mg/L	DG_A PZ_GW03	17/02/2021	0.001
Thallium (Total)	mg/L	DG_A PZ_GW03	15/03/2021	0.001
Thallium (Total)	mg/L	DG_A PZ_GW03	8/04/2021	0.001
Thallium (Total)	mg/L	DG_A PZ_GW03	19/05/2021	0.001
Thallium (Total)	mg/L	DG_A PZ_GW03	16/06/2021	0.001
Thallium (Total)	mg/L	DG_A PZ_GW04	18/01/2021	0.004
Thallium (Total)	mg/L	DG_A PZ_GW05	18/01/2021	0.004
Thallium (Total)	mg/L	DG_A PZ_GW08	19/01/2021	0.001
Thallium (Total)	mg/L	DG_A PZ_GW08	16/03/2021	0.001
Thallium (Total)	mg/L	DG_A PZ_BW50	13/01/2021	0.001

Variable	Unit	Sample Point	Date	Result
Thallium (Total)	mg/L	DG_A PZ_BW36A	18/01/2021	0.004
Thallium (Total)	mg/L	DG_A PZ_BW36A	18/02/2021	0.001
Thallium (Total)	mg/L	DG_A PZ_GW04A	18/01/2021	0.004
Thallium (Total)	mg/L	DG_A PZ_GW04A	17/02/2021	0.001
Thallium (Total)	mg/L	DG_A PZ_GW04A	15/03/2021	0.001
Thallium (Total)	mg/L	DG_A PZ_GW04A	13/04/2021	0.001
Thallium (Total)	mg/L	DG_A PZ_GW04A	19/05/2021	0.001
Thallium (Total)	mg/L	DG_A PZ_GW04A	16/06/2021	0.001
Thorium (Total)	mg/L	DG_A PZ_BW05	12/01/2021	0.006
Thorium (Total)	mg/L	DG_A PZ_IWB2	12/01/2021	0.006
Thorium (Total)	mg/L	DG_A PZ_IWB6	12/01/2021	0.006
Thorium (Total)	mg/L	DG_A PZ_WRK300	21/01/2021	0.002
Thorium (Total)	mg/L	DG_A PZ_WRK301	20/01/2021	0.002
Thorium (Total)	mg/L	DG_A PZ_WRK302	19/01/2021	0.002
Thorium (Total)	mg/L	DG_A PZ_WRK302	16/03/2021	0.002
Thorium (Total)	mg/L	DG_A PZ_GW01	14/01/2021	0.008
Thorium (Total)	mg/L	DG_A PZ_GW01	17/02/2021	0.002
Thorium (Total)	mg/L	DG_A PZ_GW01	15/03/2021	0.002
Thorium (Total)	mg/L	DG_A PZ_GW01	13/04/2021	0.002
Thorium (Total)	mg/L	DG_A PZ_GW01	19/05/2021	0.002
Thorium (Total)	mg/L	DG_A PZ_GW01	16/06/2021	0.002
Thorium (Total)	mg/L	DG_A PZ_GW06	20/01/2021	0.002
Thorium (Total)	mg/L	DG_A PZ_GW06	16/03/2021	0.002
Thorium (Total)	mg/L	DG_A PZ_GW07	11/01/2021	0.006
Thorium (Total)	mg/L	DG_A PZ_BW45B	14/01/2021	0.008
Thorium (Total)	mg/L	DG_A PZ_BW45B	18/02/2021	0.002
Thorium (Total)	mg/L	DG_A PZ_GW02	14/01/2021	0.008
Thorium (Total)	mg/L	DG_A PZ_GW02	17/02/2021	0.002
Thorium (Total)	mg/L	DG_A PZ_GW02	15/03/2021	0.002
Thorium (Total)	mg/L	DG_A PZ_GW02	8/04/2021	0.002
Thorium (Total)	mg/L	DG_A PZ_GW02	19/05/2021	0.002
Thorium (Total)	mg/L	DG_A PZ_GW02	16/06/2021	0.002
Thorium (Total)	mg/L	DG_A PZ_GW03	14/01/2021	0.008
Thorium (Total)	mg/L	DG_A PZ_GW03	17/02/2021	0.002
Thorium (Total)	mg/L	DG_A PZ_GW03	15/03/2021	0.002
Thorium (Total)	mg/L	DG_A PZ_GW03	8/04/2021	0.002
Thorium (Total)	mg/L	DG_A PZ_GW03	19/05/2021	0.002
Thorium (Total)	mg/L	DG_A PZ_GW03	16/06/2021	0.002
Thorium (Total)	mg/L	DG_A PZ_GW04	18/01/2021	0.007
Thorium (Total)	mg/L	DG_A PZ_GW05	18/01/2021	0.008
Thorium (Total)	mg/L	DG_A PZ_GW08	19/01/2021	0.002
Thorium (Total)	mg/L	DG_A PZ_GW08	16/03/2021	0.002
Thorium (Total)	mg/L	DG_A PZ_BW50	13/01/2021	0.002
Thorium (Total)	mg/L	DG_A PZ_BW36A	18/01/2021	0.007

Variable	Unit	Sample Point	Date	Result
Thorium (Total)	mg/L	DG_A PZ_BW36A	18/02/2021	0.002
Thorium (Total)	mg/L	DG_A PZ_GW04A	18/01/2021	0.007
Thorium (Total)	mg/L	DG_A PZ_GW04A	17/02/2021	0.002
Thorium (Total)	mg/L	DG_A PZ_GW04A	15/03/2021	0.002
Thorium (Total)	mg/L	DG_A PZ_GW04A	13/04/2021	0.002
Thorium (Total)	mg/L	DG_A PZ_GW04A	19/05/2021	0.002
Thorium (Total)	mg/L	DG_A PZ_GW04A	16/06/2021	0.002
Tin (Total)	mg/L	DG_A PZ_BW05	12/01/2021	0.001
Tin (Total)	mg/L	DG_A PZ_IWB2	12/01/2021	0.001
Tin (Total)	mg/L	DG_A PZ_IWB6	12/01/2021	0.001
Tin (Total)	mg/L	DG_A PZ_WRK300	21/01/2021	0.001
Tin (Total)	mg/L	DG_A PZ_WRK301	20/01/2021	0.001
Tin (Total)	mg/L	DG_A PZ_WRK302	19/01/2021	0.001
Tin (Total)	mg/L	DG_A PZ_WRK302	16/03/2021	0.001
Tin (Total)	mg/L	DG_A PZ_GW01	14/01/2021	0.001
Tin (Total)	mg/L	DG_A PZ_GW01	17/02/2021	0.002
Tin (Total)	mg/L	DG_A PZ_GW01	15/03/2021	0.001
Tin (Total)	mg/L	DG_A PZ_GW01	13/04/2021	0.001
Tin (Total)	mg/L	DG_A PZ_GW01	19/05/2021	0.001
Tin (Total)	mg/L	DG_A PZ_GW01	16/06/2021	0.001
Tin (Total)	mg/L	DG_A PZ_GW06	20/01/2021	0.001
Tin (Total)	mg/L	DG_A PZ_GW06	16/03/2021	0.001
Tin (Total)	mg/L	DG_A PZ_GW07	11/01/2021	0.001
Tin (Total)	mg/L	DG_A PZ_BW45B	14/01/2021	0.001
Tin (Total)	mg/L	DG_A PZ_BW45B	18/02/2021	0.001
Tin (Total)	mg/L	DG_A PZ_GW02	14/01/2021	0.001
Tin (Total)	mg/L	DG_A PZ_GW02	17/02/2021	0.001
Tin (Total)	mg/L	DG_A PZ_GW02	15/03/2021	0.001
Tin (Total)	mg/L	DG_A PZ_GW02	8/04/2021	0.001
Tin (Total)	mg/L	DG_A PZ_GW02	19/05/2021	0.001
Tin (Total)	mg/L	DG_A PZ_GW02	16/06/2021	0.001
Tin (Total)	mg/L	DG_A PZ_GW03	14/01/2021	0.004
Tin (Total)	mg/L	DG_A PZ_GW03	17/02/2021	0.001
Tin (Total)	mg/L	DG_A PZ_GW03	15/03/2021	0.001
Tin (Total)	mg/L	DG_A PZ_GW03	8/04/2021	0.001
Tin (Total)	mg/L	DG_A PZ_GW03	19/05/2021	0.001
Tin (Total)	mg/L	DG_A PZ_GW03	16/06/2021	0.001
Tin (Total)	mg/L	DG_A PZ_GW04	18/01/2021	0.001
Tin (Total)	mg/L	DG_A PZ_GW05	18/01/2021	0.001
Tin (Total)	mg/L	DG_A PZ_GW08	19/01/2021	0.001
Tin (Total)	mg/L	DG_A PZ_GW08	16/03/2021	0.001
Tin (Total)	mg/L	DG_A PZ_BW50	13/01/2021	0.001
Tin (Total)	mg/L	DG_A PZ_BW36A	18/01/2021	0.001
Tin (Total)	mg/L	DG_A PZ_BW36A	18/02/2021	0.001

Variable	Unit	Sample Point	Date	Result
Tin (Total)	mg/L	DG_A PZ_GW04A	18/01/2021	0.001
Tin (Total)	mg/L	DG_A PZ_GW04A	17/02/2021	0.001
Tin (Total)	mg/L	DG_A PZ_GW04A	15/03/2021	0.002
Tin (Total)	mg/L	DG_A PZ_GW04A	13/04/2021	0.001
Tin (Total)	mg/L	DG_A PZ_GW04A	19/05/2021	0.001
Tin (Total)	mg/L	DG_A PZ_GW04A	16/06/2021	0.001
Titanium (Total)	mg/L	DG_A PZ_BW05	12/01/2021	0.011
Titanium (Total)	mg/L	DG_A PZ_IWB2	12/01/2021	0.003
Titanium (Total)	mg/L	DG_A PZ_IWB6	12/01/2021	0.065
Titanium (Total)	mg/L	DG_A PZ_WRK300	21/01/2021	0.001
Titanium (Total)	mg/L	DG_A PZ_WRK301	20/01/2021	0.001
Titanium (Total)	mg/L	DG_A PZ_WRK302	19/01/2021	0.001
Titanium (Total)	mg/L	DG_A PZ_WRK302	16/03/2021	0.001
Titanium (Total)	mg/L	DG_A PZ_GW01	14/01/2021	0.002
Titanium (Total)	mg/L	DG_A PZ_GW01	17/02/2021	0.003
Titanium (Total)	mg/L	DG_A PZ_GW01	15/03/2021	0.003
Titanium (Total)	mg/L	DG_A PZ_GW01	13/04/2021	0.001
Titanium (Total)	mg/L	DG_A PZ_GW01	19/05/2021	0.001
Titanium (Total)	mg/L	DG_A PZ_GW01	16/06/2021	0.001
Titanium (Total)	mg/L	DG_A PZ_GW06	20/01/2021	0.001
Titanium (Total)	mg/L	DG_A PZ_GW06	16/03/2021	0.001
Titanium (Total)	mg/L	DG_A PZ_GW07	11/01/2021	0.001
Titanium (Total)	mg/L	DG_A PZ_BW45B	14/01/2021	0.001
Titanium (Total)	mg/L	DG_A PZ_BW45B	18/02/2021	0.001
Titanium (Total)	mg/L	DG_A PZ_GW02	14/01/2021	0.001
Titanium (Total)	mg/L	DG_A PZ_GW02	17/02/2021	0.001
Titanium (Total)	mg/L	DG_A PZ_GW02	15/03/2021	0.001
Titanium (Total)	mg/L	DG_A PZ_GW02	8/04/2021	0.001
Titanium (Total)	mg/L	DG_A PZ_GW02	19/05/2021	0.001
Titanium (Total)	mg/L	DG_A PZ_GW02	16/06/2021	0.001
Titanium (Total)	mg/L	DG_A PZ_GW03	14/01/2021	0.001
Titanium (Total)	mg/L	DG_A PZ_GW03	17/02/2021	0.001
Titanium (Total)	mg/L	DG_A PZ_GW03	15/03/2021	0.001
Titanium (Total)	mg/L	DG_A PZ_GW03	8/04/2021	0.001
Titanium (Total)	mg/L	DG_A PZ_GW03	19/05/2021	0.001
Titanium (Total)	mg/L	DG_A PZ_GW03	16/06/2021	0.001
Titanium (Total)	mg/L	DG_A PZ_GW04	18/01/2021	0.001
Titanium (Total)	mg/L	DG_A PZ_GW05	18/01/2021	0.001
Titanium (Total)	mg/L	DG_A PZ_GW08	19/01/2021	0.001
Titanium (Total)	mg/L	DG_A PZ_GW08	16/03/2021	0.001
Titanium (Total)	mg/L	DG_A PZ_BW50	13/01/2021	0.004
Titanium (Total)	mg/L	DG_A PZ_BW36A	18/01/2021	0.001
Titanium (Total)	mg/L	DG_A PZ_BW36A	18/02/2021	0.001
Titanium (Total)	mg/L	DG_A PZ_GW04A	18/01/2021	0.001

Variable	Unit	Sample Point	Date	Result
Titanium (Total)	mg/L	DG_A PZ_GW04A	17/02/2021	0.001
Titanium (Total)	mg/L	DG_A PZ_GW04A	15/03/2021	0.001
Titanium (Total)	mg/L	DG_A PZ_GW04A	13/04/2021	0.001
Titanium (Total)	mg/L	DG_A PZ_GW04A	19/05/2021	0.001
Titanium (Total)	mg/L	DG_A PZ_GW04A	16/06/2021	0.001
Total Dissolved Solids	mg/L	DG_A PZ_BW05	12/01/2021	16080
Total Dissolved Solids	mg/L	DG_A PZ_BW05	12/01/2021	15000
Total Dissolved Solids	mg/L	DG_A PZ_IWB2	12/01/2021	2613
Total Dissolved Solids	mg/L	DG_A PZ_IWB2	12/01/2021	1000
Total Dissolved Solids	mg/L	DG_A PZ_IWB6	12/01/2021	1139
Total Dissolved Solids	mg/L	DG_A PZ_IWB6	12/01/2021	1139
Total Dissolved Solids	mg/L	DG_A PZ_IWB6	12/01/2021	420
Total Dissolved Solids	mg/L	DG_A PZ_WRK300	21/01/2021	4087
Total Dissolved Solids	mg/L	DG_A PZ_WRK300	21/01/2021	3800
Total Dissolved Solids	mg/L	DG_A PZ_WRK301	20/01/2021	7370
Total Dissolved Solids	mg/L	DG_A PZ_WRK301	20/01/2021	7370
Total Dissolved Solids	mg/L	DG_A PZ_WRK301	20/01/2021	6800
Total Dissolved Solids	mg/L	DG_A PZ_WRK302	19/01/2021	12730
Total Dissolved Solids	mg/L	DG_A PZ_WRK302	16/03/2021	13400
Total Dissolved Solids	mg/L	DG_A PZ_WRK302	19/01/2021	13000
Total Dissolved Solids	mg/L	DG_A PZ_WRK302	16/03/2021	13000
Total Dissolved Solids	mg/L	DG_A PZ_GW01	14/01/2021	7370
Total Dissolved Solids	mg/L	DG_A PZ_GW01	17/02/2021	7370
Total Dissolved Solids	mg/L	DG_A PZ_GW01	15/03/2021	7370
Total Dissolved Solids	mg/L	DG_A PZ_GW01	13/04/2021	7370
Total Dissolved Solids	mg/L	DG_A PZ_GW01	19/05/2021	7370
Total Dissolved Solids	mg/L	DG_A PZ_GW01	16/06/2021	7370
Total Dissolved Solids	mg/L	DG_A PZ_GW01	14/01/2021	6400
Total Dissolved Solids	mg/L	DG_A PZ_GW01	17/02/2021	6800
Total Dissolved Solids	mg/L	DG_A PZ_GW01	15/03/2021	6600
Total Dissolved Solids	mg/L	DG_A PZ_GW01	13/04/2021	6300
Total Dissolved Solids	mg/L	DG_A PZ_GW01	19/05/2021	6500
Total Dissolved Solids	mg/L	DG_A PZ_GW01	16/06/2021	6600
Total Dissolved Solids	mg/L	DG_A PZ_GW06	20/01/2021	14070
Total Dissolved Solids	mg/L	DG_A PZ_GW06	16/03/2021	14070
Total Dissolved Solids	mg/L	DG_A PZ_GW06	20/01/2021	14000
Total Dissolved Solids	mg/L	DG_A PZ_GW06	16/03/2021	15000
Total Dissolved Solids	mg/L	DG_A PZ_GW07	11/01/2021	12060
Total Dissolved Solids	mg/L	DG_A PZ_GW07	11/01/2021	12060
Total Dissolved Solids	mg/L	DG_A PZ_GW07	11/01/2021	12000
Total Dissolved Solids	mg/L	DG_A PZ_BW45B	14/01/2021	11390
Total Dissolved Solids	mg/L	DG_A PZ_BW45B	18/02/2021	11390
Total Dissolved Solids	mg/L	DG_A PZ_BW45B	14/01/2021	11000
Total Dissolved Solids	mg/L	DG_A PZ_BW45B	18/02/2021	11000

Variable	Unit	Sample Point	Date	Result
Total Dissolved Solids	mg/L	DG_A PZ_GW02	14/01/2021	5092
Total Dissolved Solids	mg/L	DG_A PZ_GW02	17/02/2021	5092
Total Dissolved Solids	mg/L	DG_A PZ_GW02	15/03/2021	5092
Total Dissolved Solids	mg/L	DG_A PZ_GW02	8/04/2021	5092
Total Dissolved Solids	mg/L	DG_A PZ_GW02	19/05/2021	5092
Total Dissolved Solids	mg/L	DG_A PZ_GW02	16/06/2021	5025
Total Dissolved Solids	mg/L	DG_A PZ_GW02	14/01/2021	4400
Total Dissolved Solids	mg/L	DG_A PZ_GW02	17/02/2021	4100
Total Dissolved Solids	mg/L	DG_A PZ_GW02	15/03/2021	4400
Total Dissolved Solids	mg/L	DG_A PZ_GW02	8/04/2021	4300
Total Dissolved Solids	mg/L	DG_A PZ_GW02	19/05/2021	4200
Total Dissolved Solids	mg/L	DG_A PZ_GW02	16/06/2021	4200
Total Dissolved Solids	mg/L	DG_A PZ_GW03	14/01/2021	7370
Total Dissolved Solids	mg/L	DG_A PZ_GW03	17/02/2021	7370
Total Dissolved Solids	mg/L	DG_A PZ_GW03	15/03/2021	7370
Total Dissolved Solids	mg/L	DG_A PZ_GW03	8/04/2021	7370
Total Dissolved Solids	mg/L	DG_A PZ_GW03	19/05/2021	7370
Total Dissolved Solids	mg/L	DG_A PZ_GW03	16/06/2021	7370
Total Dissolved Solids	mg/L	DG_A PZ_GW03	14/01/2021	6800
Total Dissolved Solids	mg/L	DG_A PZ_GW03	17/02/2021	6300
Total Dissolved Solids	mg/L	DG_A PZ_GW03	15/03/2021	6600
Total Dissolved Solids	mg/L	DG_A PZ_GW03	8/04/2021	6400
Total Dissolved Solids	mg/L	DG_A PZ_GW03	19/05/2021	6600
Total Dissolved Solids	mg/L	DG_A PZ_GW03	16/06/2021	6600
Total Dissolved Solids	mg/L	DG_A PZ_GW04	18/01/2021	6499
Total Dissolved Solids	mg/L	DG_A PZ_GW04	18/01/2021	5500
Total Dissolved Solids	mg/L	DG_A PZ_GW05	18/01/2021	6164
Total Dissolved Solids	mg/L	DG_A PZ_GW05	18/01/2021	5200
Total Dissolved Solids	mg/L	DG_A PZ_GW08	19/01/2021	14070
Total Dissolved Solids	mg/L	DG_A PZ_GW08	16/03/2021	14070
Total Dissolved Solids	mg/L	DG_A PZ_GW08	19/01/2021	13000
Total Dissolved Solids	mg/L	DG_A PZ_GW08	16/03/2021	15000
Total Dissolved Solids	mg/L	DG_A PZ_BW50	13/01/2021	5628
Total Dissolved Solids	mg/L	DG_A PZ_BW50	13/01/2021	5600
Total Dissolved Solids	mg/L	DG_A PZ_BW36A	18/01/2021	4200
Total Dissolved Solids	mg/L	DG_A PZ_BW36A	18/02/2021	4400
Total Dissolved Solids	mg/L	DG_A PZ_GW04A	18/01/2021	4800
Total Dissolved Solids	mg/L	DG_A PZ_GW04A	17/02/2021	5000
Total Dissolved Solids	mg/L	DG_A PZ_GW04A	15/03/2021	5000
Total Dissolved Solids	mg/L	DG_A PZ_GW04A	13/04/2021	5100
Total Dissolved Solids	mg/L	DG_A PZ_GW04A	19/05/2021	5000
Total Dissolved Solids	mg/L	DG_A PZ_GW04A	16/06/2021	4900
Uranium (Total)	mg/L	DG_A PZ_BW05	12/01/2021	0.002
Uranium (Total)	mg/L	DG_A PZ_BW05	12/01/2021	0.008

Variable	Unit	Sample Point	Date	Result
Uranium (Total)	mg/L	DG_A PZ_IWB2	12/01/2021	0.002
Uranium (Total)	mg/L	DG_A PZ_IWB2	12/01/2021	0.005
Uranium (Total)	mg/L	DG_A PZ_IWB6	12/01/2021	0.002
Uranium (Total)	mg/L	DG_A PZ_IWB6	12/01/2021	0.005
Uranium (Total)	mg/L	DG_A PZ_WRK300	21/01/2021	0.004
Uranium (Total)	mg/L	DG_A PZ_WRK300	21/01/2021	0.001
Uranium (Total)	mg/L	DG_A PZ_WRK301	20/01/2021	0.005
Uranium (Total)	mg/L	DG_A PZ_WRK301	20/01/2021	0.006
Uranium (Total)	mg/L	DG_A PZ_WRK302	19/01/2021	0.09
Uranium (Total)	mg/L	DG_A PZ_WRK302	16/03/2021	0.002
Uranium (Total)	mg/L	DG_A PZ_WRK302	19/01/2021	0.001
Uranium (Total)	mg/L	DG_A PZ_WRK302	16/03/2021	0.001
Uranium (Total)	mg/L	DG_A PZ_GW01	14/01/2021	0.002
Uranium (Total)	mg/L	DG_A PZ_GW01	16/06/2021	0.002
Uranium (Total)	mg/L	DG_A PZ_GW01	14/01/2021	0.002
Uranium (Total)	mg/L	DG_A PZ_GW01	17/02/2021	0.002
Uranium (Total)	mg/L	DG_A PZ_GW01	15/03/2021	0.002
Uranium (Total)	mg/L	DG_A PZ_GW01	13/04/2021	0.003
Uranium (Total)	mg/L	DG_A PZ_GW01	19/05/2021	0.003
Uranium (Total)	mg/L	DG_A PZ_GW01	16/06/2021	0.002
Uranium (Total)	mg/L	DG_A PZ_GW06	16/03/2021	0.097
Uranium (Total)	mg/L	DG_A PZ_GW06	20/01/2021	0.003
Uranium (Total)	mg/L	DG_A PZ_GW06	16/03/2021	0.001
Uranium (Total)	mg/L	DG_A PZ_GW07	11/01/2021	0.002
Uranium (Total)	mg/L	DG_A PZ_GW07	11/01/2021	0.006
Uranium (Total)	mg/L	DG_A PZ_BW45B	14/01/2021	0.004
Uranium (Total)	mg/L	DG_A PZ_BW45B	18/02/2021	0.005
Uranium (Total)	mg/L	DG_A PZ_BW45B	14/01/2021	0.024
Uranium (Total)	mg/L	DG_A PZ_BW45B	18/02/2021	0.024
Uranium (Total)	mg/L	DG_A PZ_GW02	14/01/2021	0.002
Uranium (Total)	mg/L	DG_A PZ_GW02	16/06/2021	0.002
Uranium (Total)	mg/L	DG_A PZ_GW02	14/01/2021	0.001
Uranium (Total)	mg/L	DG_A PZ_GW02	17/02/2021	0.001
Uranium (Total)	mg/L	DG_A PZ_GW02	15/03/2021	0.001
Uranium (Total)	mg/L	DG_A PZ_GW02	8/04/2021	0.001
Uranium (Total)	mg/L	DG_A PZ_GW02	19/05/2021	0.001
Uranium (Total)	mg/L	DG_A PZ_GW02	16/06/2021	0.001
Uranium (Total)	mg/L	DG_A PZ_GW03	14/01/2021	0.002
Uranium (Total)	mg/L	DG_A PZ_GW03	16/06/2021	0.002
Uranium (Total)	mg/L	DG_A PZ_GW03	14/01/2021	0.001
Uranium (Total)	mg/L	DG_A PZ_GW03	17/02/2021	0.001
Uranium (Total)	mg/L	DG_A PZ_GW03	15/03/2021	0.001
Uranium (Total)	mg/L	DG_A PZ_GW03	8/04/2021	0.001
Uranium (Total)	mg/L	DG_A PZ_GW03	19/05/2021	0.001

Variable	Unit	Sample Point	Date	Result
Uranium (Total)	mg/L	DG_A PZ_GW03	16/06/2021	0.001
Uranium (Total)	mg/L	DG_A PZ_GW04	18/01/2021	0.002
Uranium (Total)	mg/L	DG_A PZ_GW04	18/01/2021	0.003
Uranium (Total)	mg/L	DG_A PZ_GW05	18/01/2021	0.002
Uranium (Total)	mg/L	DG_A PZ_GW05	18/01/2021	0.004
Uranium (Total)	mg/L	DG_A PZ_GW08	16/03/2021	0.021
Uranium (Total)	mg/L	DG_A PZ_GW08	19/01/2021	0.002
Uranium (Total)	mg/L	DG_A PZ_GW08	16/03/2021	0.001
Uranium (Total)	mg/L	DG_A PZ_BW50	13/01/2021	0.006
Uranium (Total)	mg/L	DG_A PZ_BW50	13/01/2021	0.005
Uranium (Total)	mg/L	DG_A PZ_BW36A	18/01/2021	0.002
Uranium (Total)	mg/L	DG_A PZ_BW36A	18/02/2021	0.003
Uranium (Total)	mg/L	DG_A PZ_BW36A	18/01/2021	0.003
Uranium (Total)	mg/L	DG_A PZ_BW36A	18/02/2021	0.001
Uranium (Total)	mg/L	DG_A PZ_GW04A	18/01/2021	0.002
Uranium (Total)	mg/L	DG_A PZ_GW04A	16/06/2021	0.002
Uranium (Total)	mg/L	DG_A PZ_GW04A	18/01/2021	0.003
Uranium (Total)	mg/L	DG_A PZ_GW04A	17/02/2021	0.001
Uranium (Total)	mg/L	DG_A PZ_GW04A	15/03/2021	0.001
Uranium (Total)	mg/L	DG_A PZ_GW04A	13/04/2021	0.001
Uranium (Total)	mg/L	DG_A PZ_GW04A	19/05/2021	0.001
Uranium (Total)	mg/L	DG_A PZ_GW04A	16/06/2021	0.001
Uranium 238	Bq/L	DG_A PZ_BW05	12/01/2021	0.025
Uranium 238	Bq/L	DG_A PZ_IWB2	12/01/2021	0.025
Uranium 238	Bq/L	DG_A PZ_IWB6	12/01/2021	0.025
Uranium 238	Bq/L	DG_A PZ_WRK300	21/01/2021	0.049
Uranium 238	Bq/L	DG_A PZ_WRK301	20/01/2021	0.062
Uranium 238	Bq/L	DG_A PZ_WRK302	19/01/2021	1.11
Uranium 238	Bq/L	DG_A PZ_WRK302	16/03/2021	0.025
Uranium 238	Bq/L	DG_A PZ_GW01	14/01/2021	0.025
Uranium 238	Bq/L	DG_A PZ_GW01	15/04/2021	0.025
Uranium 238	Bq/L	DG_A PZ_GW01	19/05/2021	0.025
Uranium 238	Bq/L	DG_A PZ_GW01	16/06/2021	0.025
Uranium 238	Bq/L	DG_A PZ_GW06	16/03/2021	1.2
Uranium 238	Bq/L	DG_A PZ_GW07	11/01/2021	0.025
Uranium 238	Bq/L	DG_A PZ_BW45B	14/01/2021	0.049
Uranium 238	Bq/L	DG_A PZ_BW45B	18/02/2021	0.062
Uranium 238	Bq/L	DG_A PZ_GW02	14/01/2021	0.025
Uranium 238	Bq/L	DG_A PZ_GW02	9/04/2021	0.025
Uranium 238	Bq/L	DG_A PZ_GW02	19/05/2021	0.025
Uranium 238	Bq/L	DG_A PZ_GW02	16/06/2021	0.025
Uranium 238	Bq/L	DG_A PZ_GW03	14/01/2021	0.025
Uranium 238	Bq/L	DG_A PZ_GW03	19/05/2021	0.025
Uranium 238	Bq/L	DG_A PZ_GW03	16/06/2021	0.025

Variable	Unit	Sample Point	Date	Result
Uranium 238	Bq/L	DG_A PZ_GW04	18/01/2021	0.025
Uranium 238	Bq/L	DG_A PZ_GW05	18/01/2021	0.025
Uranium 238	Bq/L	DG_A PZ_GW08	16/03/2021	0.259
Uranium 238	Bq/L	DG_A PZ_BW50	13/01/2021	0.074
Uranium 238	Bq/L	DG_A PZ_BW36A	18/01/2021	0.025
Uranium 238	Bq/L	DG_A PZ_BW36A	18/02/2021	0.037
Uranium 238	Bq/L	DG_A PZ_GW04A	18/01/2021	0.025
Uranium 238	Bq/L	DG_A PZ_GW04A	15/04/2021	0.025
Uranium 238	Bq/L	DG_A PZ_GW04A	19/05/2021	0.025
Uranium 238	Bq/L	DG_A PZ_GW04A	16/06/2021	0.025
Vanadium (Total)	mg/L	DG_A PZ_BW05	12/01/2021	0.003
Vanadium (Total)	mg/L	DG_A PZ_IWB2	12/01/2021	0.002
Vanadium (Total)	mg/L	DG_A PZ_IWB6	12/01/2021	0.028
Vanadium (Total)	mg/L	DG_A PZ_WRK300	21/01/2021	0.003
Vanadium (Total)	mg/L	DG_A PZ_WRK301	20/01/2021	0.005
Vanadium (Total)	mg/L	DG_A PZ_WRK302	19/01/2021	0.001
Vanadium (Total)	mg/L	DG_A PZ_WRK302	16/03/2021	0.001
Vanadium (Total)	mg/L	DG_A PZ_GW01	14/01/2021	0.001
Vanadium (Total)	mg/L	DG_A PZ_GW01	17/02/2021	0.008
Vanadium (Total)	mg/L	DG_A PZ_GW01	15/03/2021	0.009
Vanadium (Total)	mg/L	DG_A PZ_GW01	13/04/2021	0.008
Vanadium (Total)	mg/L	DG_A PZ_GW01	19/05/2021	0.001
Vanadium (Total)	mg/L	DG_A PZ_GW01	16/06/2021	0.002
Vanadium (Total)	mg/L	DG_A PZ_GW06	20/01/2021	0.009
Vanadium (Total)	mg/L	DG_A PZ_GW06	16/03/2021	0.001
Vanadium (Total)	mg/L	DG_A PZ_GW07	11/01/2021	0.001
Vanadium (Total)	mg/L	DG_A PZ_BW45B	14/01/2021	0.001
Vanadium (Total)	mg/L	DG_A PZ_BW45B	18/02/2021	0.003
Vanadium (Total)	mg/L	DG_A PZ_GW02	14/01/2021	0.001
Vanadium (Total)	mg/L	DG_A PZ_GW02	17/02/2021	0.008
Vanadium (Total)	mg/L	DG_A PZ_GW02	15/03/2021	0.008
Vanadium (Total)	mg/L	DG_A PZ_GW02	8/04/2021	0.006
Vanadium (Total)	mg/L	DG_A PZ_GW02	19/05/2021	0.001
Vanadium (Total)	mg/L	DG_A PZ_GW02	16/06/2021	0.002
Vanadium (Total)	mg/L	DG_A PZ_GW03	14/01/2021	0.002
Vanadium (Total)	mg/L	DG_A PZ_GW03	17/02/2021	0.008
Vanadium (Total)	mg/L	DG_A PZ_GW03	15/03/2021	0.006
Vanadium (Total)	mg/L	DG_A PZ_GW03	8/04/2021	0.004
Vanadium (Total)	mg/L	DG_A PZ_GW03	19/05/2021	0.001
Vanadium (Total)	mg/L	DG_A PZ_GW03	16/06/2021	0.003
Vanadium (Total)	mg/L	DG_A PZ_GW04	18/01/2021	0.001
Vanadium (Total)	mg/L	DG_A PZ_GW05	18/01/2021	0.001
Vanadium (Total)	mg/L	DG_A PZ_GW08	19/01/2021	0.019
Vanadium (Total)	mg/L	DG_A PZ_GW08	16/03/2021	0.002

Variable	Unit	Sample Point	Date	Result
Vanadium (Total)	mg/L	DG_A PZ_BW50	13/01/2021	0.004
Vanadium (Total)	mg/L	DG_A PZ_BW36A	18/01/2021	0.001
Vanadium (Total)	mg/L	DG_A PZ_BW36A	18/02/2021	0.003
Vanadium (Total)	mg/L	DG_A PZ_GW04A	18/01/2021	0.001
Vanadium (Total)	mg/L	DG_A PZ_GW04A	17/02/2021	0.007
Vanadium (Total)	mg/L	DG_A PZ_GW04A	15/03/2021	0.008
Vanadium (Total)	mg/L	DG_A PZ_GW04A	13/04/2021	0.006
Vanadium (Total)	mg/L	DG_A PZ_GW04A	19/05/2021	0.001
Vanadium (Total)	mg/L	DG_A PZ_GW04A	16/06/2021	0.002
Zinc (Total)	mg/L	DG_A PZ_BW05	12/01/2021	0.004
Zinc (Total)	mg/L	DG_A PZ_IWB2	12/01/2021	0.003
Zinc (Total)	mg/L	DG_A PZ_IWB6	12/01/2021	0.003
Zinc (Total)	mg/L	DG_A PZ_WRK300	21/01/2021	0.041
Zinc (Total)	mg/L	DG_A PZ_WRK301	20/01/2021	0.039
Zinc (Total)	mg/L	DG_A PZ_WRK302	19/01/2021	0.032
Zinc (Total)	mg/L	DG_A PZ_WRK302	16/03/2021	0.001
Zinc (Total)	mg/L	DG_A PZ_GW01	14/01/2021	0.007
Zinc (Total)	mg/L	DG_A PZ_GW01	17/02/2021	0.027
Zinc (Total)	mg/L	DG_A PZ_GW01	15/03/2021	0.011
Zinc (Total)	mg/L	DG_A PZ_GW01	13/04/2021	0.008
Zinc (Total)	mg/L	DG_A PZ_GW01	19/05/2021	0.034
Zinc (Total)	mg/L	DG_A PZ_GW01	16/06/2021	0.015
Zinc (Total)	mg/L	DG_A PZ_GW06	20/01/2021	0.001
Zinc (Total)	mg/L	DG_A PZ_GW06	16/03/2021	0.001
Zinc (Total)	mg/L	DG_A PZ_GW07	11/01/2021	0.007
Zinc (Total)	mg/L	DG_A PZ_BW45B	14/01/2021	0.02
Zinc (Total)	mg/L	DG_A PZ_BW45B	18/02/2021	0.022
Zinc (Total)	mg/L	DG_A PZ_GW02	14/01/2021	0.007
Zinc (Total)	mg/L	DG_A PZ_GW02	17/02/2021	0.011
Zinc (Total)	mg/L	DG_A PZ_GW02	15/03/2021	0.01
Zinc (Total)	mg/L	DG_A PZ_GW02	8/04/2021	0.009
Zinc (Total)	mg/L	DG_A PZ_GW02	19/05/2021	0.01
Zinc (Total)	mg/L	DG_A PZ_GW02	16/06/2021	0.007
Zinc (Total)	mg/L	DG_A PZ_GW03	14/01/2021	0.01
Zinc (Total)	mg/L	DG_A PZ_GW03	17/02/2021	0.032
Zinc (Total)	mg/L	DG_A PZ_GW03	15/03/2021	0.036
Zinc (Total)	mg/L	DG_A PZ_GW03	8/04/2021	0.065
Zinc (Total)	mg/L	DG_A PZ_GW03	19/05/2021	0.12
Zinc (Total)	mg/L	DG_A PZ_GW03	16/06/2021	0.048
Zinc (Total)	mg/L	DG_A PZ_GW04	18/01/2021	0.024
Zinc (Total)	mg/L	DG_A PZ_GW05	18/01/2021	0.01
Zinc (Total)	mg/L	DG_A PZ_GW08	19/01/2021	0.029
Zinc (Total)	mg/L	DG_A PZ_GW08	16/03/2021	0.001
Zinc (Total)	mg/L	DG_A PZ_BW50	13/01/2021	0.002

Variable	Unit	Sample Point	Date	Result
Zinc (Total)	mg/L	DG_A_I_PZ_BW36A	18/01/2021	0.035
Zinc (Total)	mg/L	DG_A_I_PZ_BW36A	18/02/2021	0.016
Zinc (Total)	mg/L	DG_A_I_PZ_GW04A	18/01/2021	0.039
Zinc (Total)	mg/L	DG_A_I_PZ_GW04A	17/02/2021	0.044
Zinc (Total)	mg/L	DG_A_I_PZ_GW04A	15/03/2021	0.025
Zinc (Total)	mg/L	DG_A_I_PZ_GW04A	13/04/2021	0.015
Zinc (Total)	mg/L	DG_A_I_PZ_GW04A	19/05/2021	0.028
Zinc (Total)	mg/L	DG_A_I_PZ_GW04A	16/06/2021	0.036

Appendix C: Monitoring Data (Field) – Groundwater

Variable	Unit	Sample Point	Date	Result
Dissolved Oxygen	%	DG_A PZ_BW05	12/01/2021	2
Dissolved Oxygen	%	DG_A PZ_BW28A	12/01/2021	0
Dissolved Oxygen	%	DG_A PZ_BW28A	18/02/2021	0
Dissolved Oxygen	%	DG_A PZ_BW36A	18/01/2021	0
Dissolved Oxygen	%	DG_A PZ_BW36A	18/02/2021	0
Dissolved Oxygen	%	DG_A PZ_BW45B	14/01/2021	10
Dissolved Oxygen	%	DG_A PZ_BW45B	18/02/2021	0
Dissolved Oxygen	%	DG_A PZ_BW50	13/01/2021	36
Dissolved Oxygen	%	DG_A PZ_GW01	14/01/2021	56
Dissolved Oxygen	%	DG_A PZ_GW01	17/02/2021	0
Dissolved Oxygen	%	DG_A PZ_GW01	15/03/2021	47
Dissolved Oxygen	%	DG_A PZ_GW01	30/04/2021	53
Dissolved Oxygen	%	DG_A PZ_GW01	19/05/2021	55
Dissolved Oxygen	%	DG_A PZ_GW01	16/06/2021	59
Dissolved Oxygen	%	DG_A PZ_GW02	14/01/2021	15
Dissolved Oxygen	%	DG_A PZ_GW02	17/02/2021	0
Dissolved Oxygen	%	DG_A PZ_GW02	15/03/2021	3
Dissolved Oxygen	%	DG_A PZ_GW02	8/04/2021	10
Dissolved Oxygen	%	DG_A PZ_GW02	19/05/2021	0
Dissolved Oxygen	%	DG_A PZ_GW02	16/06/2021	0
Dissolved Oxygen	%	DG_A PZ_GW03	14/01/2021	10
Dissolved Oxygen	%	DG_A PZ_GW03	17/02/2021	0
Dissolved Oxygen	%	DG_A PZ_GW03	15/03/2021	36
Dissolved Oxygen	%	DG_A PZ_GW03	8/04/2021	29
Dissolved Oxygen	%	DG_A PZ_GW03	19/05/2021	33
Dissolved Oxygen	%	DG_A PZ_GW03	16/06/2021	34
Dissolved Oxygen	%	DG_A PZ_GW04	18/01/2021	75
Dissolved Oxygen	%	DG_A PZ_GW04A	18/01/2021	17
Dissolved Oxygen	%	DG_A PZ_GW04A	17/02/2021	0
Dissolved Oxygen	%	DG_A PZ_GW04A	15/03/2021	10
Dissolved Oxygen	%	DG_A PZ_GW04A	30/04/2021	22
Dissolved Oxygen	%	DG_A PZ_GW04A	19/05/2021	23
Dissolved Oxygen	%	DG_A PZ_GW04A	16/06/2021	34
Dissolved Oxygen	%	DG_A PZ_GW05	18/01/2021	5
Dissolved Oxygen	%	DG_A PZ_GW06	20/01/2021	87
Dissolved Oxygen	%	DG_A PZ_GW07	11/01/2021	94
Dissolved Oxygen	%	DG_A PZ_GW08	19/01/2021	74
Dissolved Oxygen	%	DG_A PZ_IWB2	12/01/2021	0
Dissolved Oxygen	%	DG_A PZ_IWB6	12/01/2021	36
Dissolved Oxygen	%	DG_A PZ_WRK300	21/01/2021	8
Dissolved Oxygen	%	DG_A PZ_WRK301	20/01/2021	13
Dissolved Oxygen	%	DG_A PZ_WRK302	19/01/2021	68

Variable	Unit	Sample Point	Date	Result
Electrical Conductivity	µS/cm	DG_A PZ_BW05	12/01/2021	24000
Electrical Conductivity	µS/cm	DG_A PZ_BW28A	12/01/2021	22000
Electrical Conductivity	µS/cm	DG_A PZ_BW28A	18/02/2021	21000
Electrical Conductivity	µS/cm	DG_A PZ_BW36A	18/01/2021	8200
Electrical Conductivity	µS/cm	DG_A PZ_BW36A	18/02/2021	8400
Electrical Conductivity	µS/cm	DG_A PZ_BW45B	14/01/2021	17000
Electrical Conductivity	µS/cm	DG_A PZ_BW45B	18/02/2021	17000
Electrical Conductivity	µS/cm	DG_A PZ_BW50	13/01/2021	8400
Electrical Conductivity	µS/cm	DG_A PZ_GW01	14/01/2021	11000
Electrical Conductivity	µS/cm	DG_A PZ_GW01	17/02/2021	11000
Electrical Conductivity	µS/cm	DG_A PZ_GW01	15/03/2021	11000
Electrical Conductivity	µS/cm	DG_A PZ_GW01	13/04/2021	11000
Electrical Conductivity	µS/cm	DG_A PZ_GW01	19/05/2021	11000
Electrical Conductivity	µS/cm	DG_A PZ_GW01	16/06/2021	11000
Electrical Conductivity	µS/cm	DG_A PZ_GW02	14/01/2021	7600
Electrical Conductivity	µS/cm	DG_A PZ_GW02	17/02/2021	7600
Electrical Conductivity	µS/cm	DG_A PZ_GW02	15/03/2021	7600
Electrical Conductivity	µS/cm	DG_A PZ_GW02	8/04/2021	7600
Electrical Conductivity	µS/cm	DG_A PZ_GW02	19/05/2021	7600
Electrical Conductivity	µS/cm	DG_A PZ_GW02	16/06/2021	7500
Electrical Conductivity	µS/cm	DG_A PZ_GW03	14/01/2021	11000
Electrical Conductivity	µS/cm	DG_A PZ_GW03	17/02/2021	11000
Electrical Conductivity	µS/cm	DG_A PZ_GW03	15/03/2021	11000
Electrical Conductivity	µS/cm	DG_A PZ_GW03	8/04/2021	11000
Electrical Conductivity	µS/cm	DG_A PZ_GW03	19/05/2021	11000
Electrical Conductivity	µS/cm	DG_A PZ_GW03	16/06/2021	11000
Electrical Conductivity	µS/cm	DG_A PZ_GW04	18/01/2021	9700
Electrical Conductivity	µS/cm	DG_A PZ_GW04A	18/01/2021	8400
Electrical Conductivity	µS/cm	DG_A PZ_GW04A	17/02/2021	8400
Electrical Conductivity	µS/cm	DG_A PZ_GW04A	15/03/2021	8500
Electrical Conductivity	µS/cm	DG_A PZ_GW04A	13/04/2021	8600
Electrical Conductivity	µS/cm	DG_A PZ_GW04A	19/05/2021	8400
Electrical Conductivity	µS/cm	DG_A PZ_GW04A	16/06/2021	8500
Electrical Conductivity	µS/cm	DG_A PZ_GW05	18/01/2021	9200
Electrical Conductivity	µS/cm	DG_A PZ_GW06	20/01/2021	21000
Electrical Conductivity	µS/cm	DG_A PZ_GW06	16/03/2021	21000
Electrical Conductivity	µS/cm	DG_A PZ_GW07	11/01/2021	18000
Electrical Conductivity	µS/cm	DG_A PZ_GW08	19/01/2021	21000
Electrical Conductivity	µS/cm	DG_A PZ_GW08	16/03/2021	21000
Electrical Conductivity	µS/cm	DG_A PZ_IWB2	12/01/2021	3900
Electrical Conductivity	µS/cm	DG_A PZ_IWB6	12/01/2021	1700
Electrical Conductivity	µS/cm	DG_A PZ_WRK300	21/01/2021	6100
Electrical Conductivity	µS/cm	DG_A PZ_WRK301	20/01/2021	11000
Electrical Conductivity	µS/cm	DG_A PZ_WRK302	19/01/2021	19000

Variable	Unit	Sample Point	Date	Result
Electrical Conductivity	µS/cm	DG_A PZ_WRK302	16/03/2021	20000
Electrical Conductivity	µS/cm	DG_A PZ_GW01	15/03/2021	11000
Electrical Conductivity	µS/cm	DG_A PZ_GW01	30/04/2021	10683
Electrical Conductivity	µS/cm	DG_A PZ_GW01	19/05/2021	11000
Electrical Conductivity	µS/cm	DG_A PZ_GW01	16/06/2021	11000
Electrical Conductivity	µS/cm	DG_A PZ_GW02	15/03/2021	7600
Electrical Conductivity	µS/cm	DG_A PZ_GW02	8/04/2021	7600
Electrical Conductivity	µS/cm	DG_A PZ_GW02	19/05/2021	7600
Electrical Conductivity	µS/cm	DG_A PZ_GW02	16/06/2021	7500
Electrical Conductivity	µS/cm	DG_A PZ_GW03	15/03/2021	11000
Electrical Conductivity	µS/cm	DG_A PZ_GW03	8/04/2021	11000
Electrical Conductivity	µS/cm	DG_A PZ_GW03	19/05/2021	11000
Electrical Conductivity	µS/cm	DG_A PZ_GW03	16/06/2021	11000
Electrical Conductivity	µS/cm	DG_A PZ_GW04A	15/03/2021	8500
Electrical Conductivity	µS/cm	DG_A PZ_GW04A	30/04/2021	8200
Electrical Conductivity	µS/cm	DG_A PZ_GW04A	19/05/2021	8893
Electrical Conductivity	µS/cm	DG_A PZ_GW04A	16/06/2021	8500
pH	pH units	DG_A PZ_BW05	12/01/2021	6.96
pH	pH units	DG_A PZ_BW28A	12/01/2021	6.43
pH	pH units	DG_A PZ_BW28A	18/02/2021	6.5
pH	pH units	DG_A PZ_BW36A	18/01/2021	6.56
pH	pH units	DG_A PZ_BW36A	18/02/2021	6.62
pH	pH units	DG_A PZ_BW45B	14/01/2021	4.02
pH	pH units	DG_A PZ_BW45B	18/02/2021	4.06
pH	pH units	DG_A PZ_BW50	13/01/2021	6.92
pH	pH units	DG_A PZ_GW01	14/01/2021	5.09
pH	pH units	DG_A PZ_GW01	17/02/2021	5.17
pH	pH units	DG_A PZ_GW01	15/03/2021	5.1
pH	pH units	DG_A PZ_GW01	13/04/2021	5.3
pH	pH units	DG_A PZ_GW01	19/05/2021	5.1
pH	pH units	DG_A PZ_GW01	16/06/2021	5.2
pH	pH units	DG_A PZ_GW02	14/01/2021	5.46
pH	pH units	DG_A PZ_GW02	17/02/2021	5.49
pH	pH units	DG_A PZ_GW02	15/03/2021	5.6
pH	pH units	DG_A PZ_GW02	8/04/2021	5.7
pH	pH units	DG_A PZ_GW02	19/05/2021	5.7
pH	pH units	DG_A PZ_GW02	16/06/2021	5.6
pH	pH units	DG_A PZ_GW03	14/01/2021	6.1
pH	pH units	DG_A PZ_GW03	17/02/2021	6.16
pH	pH units	DG_A PZ_GW03	15/03/2021	6.3
pH	pH units	DG_A PZ_GW03	8/04/2021	6.2
pH	pH units	DG_A PZ_GW03	19/05/2021	6.5
pH	pH units	DG_A PZ_GW03	16/06/2021	6.4
pH	pH units	DG_A PZ_GW04	18/01/2021	5.6

Variable	Unit	Sample Point	Date	Result
pH	pH units	DG_A PZ_GW04A	18/01/2021	6.07
pH	pH units	DG_A PZ_GW04A	17/02/2021	6.14
pH	pH units	DG_A PZ_GW04A	15/03/2021	6.2
pH	pH units	DG_A PZ_GW04A	13/04/2021	6.2
pH	pH units	DG_A PZ_GW04A	19/05/2021	6.2
pH	pH units	DG_A PZ_GW04A	16/06/2021	6.2
pH	pH units	DG_A PZ_GW05	18/01/2021	5.9
pH	pH units	DG_A PZ_GW06	20/01/2021	6.47
pH	pH units	DG_A PZ_GW06	16/03/2021	6.7
pH	pH units	DG_A PZ_GW07	11/01/2021	6.3
pH	pH units	DG_A PZ_GW08	19/01/2021	6.18
pH	pH units	DG_A PZ_GW08	16/03/2021	6.3
pH	pH units	DG_A PZ_IWB2	12/01/2021	5.45
pH	pH units	DG_A PZ_IWB6	12/01/2021	5.27
pH	pH units	DG_A PZ_WRK300	21/01/2021	6.57
pH	pH units	DG_A PZ_WRK301	20/01/2021	6.95
pH	pH units	DG_A PZ_WRK302	19/01/2021	5.87
pH	pH units	DG_A PZ_WRK302	16/03/2021	6.1
Redox Potential (Eh)	mV	DG_A PZ_BW05	12/01/2021	-22
Redox Potential (Eh)	mV	DG_A PZ_BW28A	12/01/2021	8
Redox Potential (Eh)	mV	DG_A PZ_BW28A	18/02/2021	2
Redox Potential (Eh)	mV	DG_A PZ_BW36A	18/01/2021	-81
Redox Potential (Eh)	mV	DG_A PZ_BW36A	18/02/2021	-103
Redox Potential (Eh)	mV	DG_A PZ_BW45B	14/01/2021	403
Redox Potential (Eh)	mV	DG_A PZ_BW45B	18/02/2021	423
Redox Potential (Eh)	mV	DG_A PZ_BW50	13/01/2021	-92
Redox Potential (Eh)	mV	DG_A PZ_GW01	14/01/2021	330
Redox Potential (Eh)	mV	DG_A PZ_GW01	17/02/2021	303
Redox Potential (Eh)	mV	DG_A PZ_GW01	15/03/2021	210
Redox Potential (Eh)	mV	DG_A PZ_GW01	30/04/2021	197
Redox Potential (Eh)	mV	DG_A PZ_GW01	19/05/2021	565
Redox Potential (Eh)	mV	DG_A PZ_GW01	16/06/2021	251
Redox Potential (Eh)	mV	DG_A PZ_GW02	14/01/2021	274
Redox Potential (Eh)	mV	DG_A PZ_GW02	17/02/2021	426
Redox Potential (Eh)	mV	DG_A PZ_GW02	15/03/2021	199
Redox Potential (Eh)	mV	DG_A PZ_GW02	8/04/2021	196
Redox Potential (Eh)	mV	DG_A PZ_GW02	19/05/2021	280
Redox Potential (Eh)	mV	DG_A PZ_GW02	16/06/2021	220
Redox Potential (Eh)	mV	DG_A PZ_GW03	14/01/2021	99
Redox Potential (Eh)	mV	DG_A PZ_GW03	17/02/2021	125
Redox Potential (Eh)	mV	DG_A PZ_GW03	15/03/2021	80
Redox Potential (Eh)	mV	DG_A PZ_GW03	8/04/2021	55
Redox Potential (Eh)	mV	DG_A PZ_GW03	19/05/2021	57
Redox Potential (Eh)	mV	DG_A PZ_GW03	16/06/2021	66

Variable	Unit	Sample Point	Date	Result
Redox Potential (Eh)	mV	DG_A PZ_GW04	18/01/2021	185
Redox Potential (Eh)	mV	DG_A PZ_GW04A	18/01/2021	186
Redox Potential (Eh)	mV	DG_A PZ_GW04A	17/02/2021	545
Redox Potential (Eh)	mV	DG_A PZ_GW04A	15/03/2021	168
Redox Potential (Eh)	mV	DG_A PZ_GW04A	30/04/2021	177
Redox Potential (Eh)	mV	DG_A PZ_GW04A	19/05/2021	580
Redox Potential (Eh)	mV	DG_A PZ_GW04A	16/06/2021	143
Redox Potential (Eh)	mV	DG_A PZ_GW05	18/01/2021	194
Redox Potential (Eh)	mV	DG_A PZ_GW06	20/01/2021	469
Redox Potential (Eh)	mV	DG_A PZ_GW07	11/01/2021	444
Redox Potential (Eh)	mV	DG_A PZ_GW08	19/01/2021	217
Redox Potential (Eh)	mV	DG_A PZ_IWB2	12/01/2021	340
Redox Potential (Eh)	mV	DG_A PZ_IWB6	12/01/2021	367
Redox Potential (Eh)	mV	DG_A PZ_WRK300	21/01/2021	204
Redox Potential (Eh)	mV	DG_A PZ_WRK301	20/01/2021	271
Redox Potential (Eh)	mV	DG_A PZ_WRK302	19/01/2021	300
Temperature	°C	DG_A PZ_BW05	12/01/2021	16.8
Temperature	°C	DG_A PZ_BW28A	12/01/2021	17.7
Temperature	°C	DG_A PZ_BW28A	18/02/2021	17.7
Temperature	°C	DG_A PZ_BW36A	18/01/2021	21.9
Temperature	°C	DG_A PZ_BW36A	18/02/2021	25
Temperature	°C	DG_A PZ_BW45B	14/01/2021	18.1
Temperature	°C	DG_A PZ_BW45B	18/02/2021	18.3
Temperature	°C	DG_A PZ_BW50	13/01/2021	16.7
Temperature	°C	DG_A PZ_GW01	14/01/2021	17.7
Temperature	°C	DG_A PZ_GW01	17/02/2021	18.6
Temperature	°C	DG_A PZ_GW01	15/03/2021	17.7
Temperature	°C	DG_A PZ_GW01	30/04/2021	17.2
Temperature	°C	DG_A PZ_GW01	19/05/2021	17.5
Temperature	°C	DG_A PZ_GW01	16/06/2021	17.3
Temperature	°C	DG_A PZ_GW02	14/01/2021	17.9
Temperature	°C	DG_A PZ_GW02	17/02/2021	18
Temperature	°C	DG_A PZ_GW02	15/03/2021	17.7
Temperature	°C	DG_A PZ_GW02	8/04/2021	17.6
Temperature	°C	DG_A PZ_GW02	19/05/2021	17.7
Temperature	°C	DG_A PZ_GW02	16/06/2021	17.3
Temperature	°C	DG_A PZ_GW03	14/01/2021	17.8
Temperature	°C	DG_A PZ_GW03	17/02/2021	19.9
Temperature	°C	DG_A PZ_GW03	15/03/2021	19
Temperature	°C	DG_A PZ_GW03	8/04/2021	19.1
Temperature	°C	DG_A PZ_GW03	19/05/2021	17
Temperature	°C	DG_A PZ_GW03	16/06/2021	17
Temperature	°C	DG_A PZ_GW04	18/01/2021	17.7
Temperature	°C	DG_A PZ_GW04A	18/01/2021	15.2

Variable	Unit	Sample Point	Date	Result
Temperature	°C	DG_A_I_PZ_GW04A	17/02/2021	23
Temperature	°C	DG_A_I_PZ_GW04A	15/03/2021	18.4
Temperature	°C	DG_A_I_PZ_GW04A	30/04/2021	14.5
Temperature	°C	DG_A_I_PZ_GW04A	19/05/2021	18.7
Temperature	°C	DG_A_I_PZ_GW04A	16/06/2021	14.4
Temperature	°C	DG_A_I_PZ_GW05	18/01/2021	17.3
Temperature	°C	DG_A_I_PZ_GW06	20/01/2021	18
Temperature	°C	DG_A_I_PZ_GW07	11/01/2021	18.5
Temperature	°C	DG_A_I_PZ_GW08	19/01/2021	18.1
Temperature	°C	DG_A_I_PZ_IWB2	12/01/2021	15.1
Temperature	°C	DG_A_I_PZ_IWB6	12/01/2021	17.2
Temperature	°C	DG_A_I_PZ_WRK300	21/01/2021	22
Temperature	°C	DG_A_I_PZ_WRK301	20/01/2021	21.9
Temperature	°C	DG_A_I_PZ_WRK302	19/01/2021	17.4

APPENDIX E

Important Information

The document ("Report") to which this page is attached and which this page forms a part of, has been issued by Golder Associates Pty Ltd ("Golder") subject to the important limitations and other qualifications set out below.

This Report constitutes or is part of services ("Services") provided by Golder to its client ("Client") under and subject to a contract between Golder and its Client ("Contract"). The contents of this page are not intended to and do not alter Golder's obligations (including any limits on those obligations) to its Client under the Contract.

This Report is provided for use solely by Golder's Client and persons acting on the Client's behalf, such as its professional advisers. Golder is responsible only to its Client for this Report. Golder has no responsibility to any other person who relies or makes decisions based upon this Report or who makes any other use of this Report. Golder accepts no responsibility for any loss or damage suffered by any person other than its Client as a result of any reliance upon any part of this Report, decisions made based upon this Report or any other use of it.

This Report has been prepared in the context of the circumstances and purposes referred to in, or derived from, the Contract and Golder accepts no responsibility for use of the Report, in whole or in part, in any other context or circumstance or for any other purpose.

The scope of Golder's Services and the period of time they relate to are determined by the Contract and are subject to restrictions and limitations set out in the Contract. If a service or other work is not expressly referred to in this Report, do not assume that it has been provided or performed. If a matter is not addressed in this Report, do not assume that any determination has been made by Golder in regards to it.

At any location relevant to the Services conditions may exist which were not detected by Golder, in particular due to the specific scope of the investigation Golder has been engaged to undertake. Conditions can only be verified at the exact location of any tests undertaken. Variations in conditions may occur between tested locations and there may be conditions which have not been revealed by the investigation and which have not therefore been taken into account in this Report.

Golder accepts no responsibility for and makes no representation as to the accuracy or completeness of the information provided to it by or on behalf of the Client or sourced from any third party. Golder has assumed that such information is correct unless otherwise stated and no responsibility is accepted by Golder for incomplete or inaccurate data supplied by its Client or any other person for whom Golder is not responsible. Golder has not taken account of matters that may have existed when the Report was prepared but which were only later disclosed to Golder.

Having regard to the matters referred to in the previous paragraphs on this page in particular, carrying out the Services has allowed Golder to form no more than an opinion as to the actual conditions at any relevant location. That opinion is necessarily constrained by the extent of the information collected by Golder or otherwise made available to Golder. Further, the passage of time may affect the accuracy, applicability or usefulness of the opinions, assessments or other information in this Report. This Report is based upon the information and other circumstances that existed and were known to Golder when the Services were performed and this Report was prepared. Golder has not considered the effect of any possible future developments including physical changes to any relevant location or changes to any laws or regulations relevant to such location.

Where permitted by the Contract, Golder may have retained subconsultants affiliated with Golder to provide some or all of the Services. However, it is Golder which remains solely responsible for the Services and there is no legal recourse against any of Golder's affiliated companies or the employees, officers or directors of any of them.

By date, or revision, the Report supersedes any prior report or other document issued by Golder dealing with any matter that is addressed in the Report.

Any uncertainty as to the extent to which this Report can be used or relied upon in any respect should be referred to Golder for clarification



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