Glenmore Landfill
2025 Annual Operations and Monitoring Report
Operational Certificate MR 12218
EMS reference # E104956

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This Annual Operations and Monitoring Report meets the reporting requirements of Operational Certificate 12218 Section 5.4 and addresses:

Operations Report

- Tonnages and categories of waste and recyclable material received at the Facility, and how they were managed,
- Tonnages and categories of waste discharged to the Landfill,
- Leachate volume collected and conveyed to municipal sewer system, and leachate quality;
- Remaining volume and life of the Landfill;
- Summary of DOCP implementation;
- Summary of screening/revegetation efforts;
- Summary of construction report(s);
- Summary of complaints;
- Summary of non-compliance notifications and reporting;
- For the next calendar year, summary of planned DOCP implementation and construction of Significant Works,
- Discussion and determinations required by section 3.5 (Facility Manager and Operator Certification) of this operational certificate,

Environmental Monitoring Report

- Site plan(s), sampling locations, stormwater and surface water flow paths, groundwater elevations, gradients, and flow directions;
- Measurement, monitoring and sampling facilities, locations, frequencies, substances, sampling and analytical procedures, quality assurance, and quality control;
- Data including laboratory analysis and quality assurance and quality control results;
- Data tabulation, trend analysis, graphs, diagrams, and interpretation
- Discussion and determination of compliance with section 3.6 (Stormwater quality) of this operational certificate,
- Discussion and determination of compliance with section 3.7 (Groundwater quality) of this operational certificate,
- Results, conclusions, recommendations, and changes to the environmental monitoring plan.

Reporting Requirements not included in OC 12218 (BC Landfill Gas Management Regulation)

- Landfill Gas Summary
- Collection Efficiency

EXECUTIVE SUMMARY

This 2025 annual report is to provide information relevant to **Operational Certificate MR 12218 (OC)** for the Glenmore Landfill. Under the provisions of the Waste Management Act and in accordance with the approved *Regional District of Central Okanagan Solid Waste Management Plan (SWMP),* the City of Kelowna is authorized to manage recyclable materials and to discharge waste to the ground at the Glenmore Landfill, located at 2720 John Hindle Drive, in the City of Kelowna. In 2025, the Glenmore Landfill operated in compliance with the current SWMP.

As part of the SWMP implementation, the Regional District of Central Okanagan (RDCO) performed an updated waste composition study in 2024. The SWMP and waste composition study can be found on the RDCO's website. In 2025 the RDCO continued to evaluate increasing organics recovery via food waste diversion in the curbside collection program. The food waste recovery included public consultation in 2024, and the evaluation process and feasibility continue in 2025. In June of 2025, it was decided to not expand the organics diversion by the inclusion of food waste at this time, and that this decision be reviewed and incorporated in the next SWMP updates.

In 2025, highlights for the site include

- Began filling the newly constructed Area 3 liner;
- Placing lifts of waste into the sliver fill;
- Starting construction of the surface water bypass;
- Issuing Requests for Proposals for replacing the existing flare; and
- Begin design/procurement for phase 2 of the Aerated Static Pile composting system.

The estimated population from the RDCO contributing to the municipal solid waste managed at the Glenmore Landfill in 2025 was 254,635 based on the BC Government Statistics website (https://www2.gov.bc.ca/gov/content/data/statistics/people-population-community/population/population-estimates accessed on March 28, 2026). The population of Big White has not been included in this estimate.

This population disposed of 152,099 tonnes of waste, 7,610 tonnes of contaminated soil, and 12.2 tonnes of International Waste at the Glenmore Landfill in 2025. In addition to this volume of waste disposed, an additional 44,101 tonnes of organics and 29,003 tonnes of recyclables such as concrete, shingles, metal, and other materials were recycled for a diversion rate of 31.40%. Implementation of an online waste application process in 2024 has allowed for increased diversion of gypsum drywall, and the Glenmore Landfill diverted more than 95% of drywall received in 2025.

OPERATIONS REPORT

The City of Kelowna Glenmore Landfill and Administration Building is located at 2720 John Hindle Drive, Kelowna, BC V1V 2C5. The Scale House has the civic address of 2710 John Hindle Drive. In 2025, 231,017 vehicles accessed the site through the scale house, which is a slight increase from 2024. Green waste and other organics volumes in 2025 were comparable to the 2024 totals.

a. Waste Tonnages and Solid Waste Management Summary

Table 1 – Waste Discharge Quantity (tonnes)

Year	Waste Discharged	Contaminated Soil (IL+)	International waste
Permit	***200,000***	***30,000***	***1,000***
2021	152,246	1,833 (Estimated)	N/A
2022	147,977	10,137 (Estimated)	N/A
2023	146,102	809 (Estimated)	N/A
2024	146,778	5,492	5.84
2025	152,099	7610	12.2

Contaminated soil included all contaminated soils (IL+ and IL-) prior to 2024.
N/A – International waste was included in total waste discharged prior to 2024

Table 2 - Service Population (all annual numbers updated March 28, 2026)

Year	Population
2021	232,159
2022	239,903
2023	246,024
2024	251,610
2025	254,635

Service population data is obtained annually from the BC Statistics Population Estimates of the Central Okanagan Regional District.

Table 3 - Waste Discharge Rate (tonnes/capita updated March 28, 2026)

Year	Waste Discharge Rate (no Contaminated Soil or International Waste)
2021	0.656
2022	0.617
2023*	0.594
2024	0.583
2025	0.597

* - excludes waste shipped out of region during the 2023 wildfires

In 2025, the Glenmore Landfill received a total of 44,101 tonnes of organic materials. These included:

- 13,896 tonnes of clean wood, logs and branches which were composted and/or biomass fuel.
- 985 tonnes of stumps reused as bio filters and biomass fuel.
- 29,220 tonnes of cart waste and grass/leaves which were composted for Glengrow production.

In 2025, the Glenmore landfill received a total of 29,003 tonnes of recoverable materials. The actual volumes reused on site or shipped off to recycling facilities in 2025 included:

- 1,695 tonnes Scrap Metal/White Goods – The Glenmore Landfill works with the Major Appliance Recycling Roundtable (MARR) and a local scrap metal dealer to return this waste to market.
- 70 tonnes (estimated 3,600) of tires were recycled by the Tire Stewardship Program.
- 11,738 tonnes of asphalt and concrete were crushed and used to construct roads and receiving pads on site.
- 6,066 tonnes of drywall were sent to a recycling facility.
- 2,846 tonnes of ground shingles shipped off site for road base and asphalt production.
- 8,184 tonnes of IL- contaminated soil was used as cover at the site.

The volume shipped off is greater than the amount received due to volumes of recyclable materials in inventory that were in stockpiles at the end of 2024.

An estimated 72,831 tonnes of clean fill were received in 2025 and used as cover. Acceptance of clean fill will be limited in 2026 as the soil stockpile is nearing capacity.

b. Leachate Management

The leachate collection system at the Glenmore Landfill consists of leachate collections pipes under the waste mass, force mains and gravity drains that feed leachate lift stations. There are three lift stations and a gravity lift station that may also be used for leachate recirculation. The leachate is then combined with sewage from the City's residential sewer system prior to discharge off-site. Leachate and the combined leachate/sewage effluent are treated with BIOXIDE®, a Calcium Ammonium Nitrate salt solution, and aerated to reduce hydrogen sulfide generation. The treated effluent is discharged into the municipal sanitary sewer system on Glenmore Road and is processed at the City's Wastewater Treatment Facility. Due to site conditions, additional bioxide treatment has been initiated in the wet well at Lift Station 2.

Leachate system works included regular maintenance and cleaning as well as the ongoing increased cleaning of lift station 2 and its force-main to maintain flows. Ongoing maintenance includes cleaning of the manholes, force mains and lift stations, and a replacement of an isolation valve in lift station 2. Design commenced for replacement of a section of force main from lift station 2 which is difficult to clean and is prone to plugging. The replacement is planned for early 2026.

Due to unexpected delays in the commissioning of the new lift station 4 installed in Area 3, the leachate level head was higher than the levels in the landfill guidelines for a portion of the summer season. Once the pump system was fully commissioned, the leachate was pumped out in a phased approach to not overload the sewer system downstream of the landfill. This has likely contributed to some of the odour complaints received by the site.

Leachate discharge volumes, reflective of the amount of leachate generated through various inputs, increased in 2025 compared to previous year manly due to the leachate collected in the newly added Area 3 as well as leachate collected from ASP. It should be noted that leachate discharged from the site does not equal leachate generated as pumping rates are dependent on surface water levels, leachate produced from compost irrigation and potential leachate is recirculated in the landfill.

Discharge volumes are summarized in Table 4 below.

Table 4 – Leachate Discharge to Wastewater Treatment Facility (WWTF)

Year	Quantity Discharged (m^3)
2021	118,740
2022	135,492
2023	128,744
2024	75,340
2025	118,653

c. Glengrow

The production of Glengrow compost is in the 10-hectare site constructed to the south of the Phase 3 area of the landfill. Stockpiling and grinding of the yard waste feed stock is still performed in the receiving area east of Phase 2. Plans for relocating the organics and recyclable receiving area adjacent to the composting facility to the south of the Phase 3 slough are proceeding, with expansion of the paving in the receiving area happening in 2025. Compost overs are screened and cleaned through an air separator to remove plastics and other debris. The remaining mulch is sent off site as a biomass fuel, re-used as biocover for composting operations, and sold as mulch for landscaping uses. An estimated 29,220 tonnes of materials were composted with 21,633 and 264 yards of compost and mulch sold, respectively.

The Aerated Static Pile (ASP) system is designed to improve composting efficiency and accommodate future composting volumes growth. The final design of the ASP work area was completed in 2022 and construction of the first phase started in the spring of 2023. Due to supply chain delays for selected components and the impacts of wildfires, construction was completed in Q3 of 2024 with commissioning of the operations shortly after completion. The second phase of the ASP started design and procurement in 2025 and is scheduled to be constructed in 2026.

As part of the City of Kelowna's sustainability and climate change initiatives, the landfill has converted the compost screening plant and air separator to electrical operations from diesel and acquired a full-sized electric loader to assist in waste recovery and composting in Q1 of 2026.

d. Remaining Site Life & Capacity

A Fill Plan prepared for the City of Kelowna by CH2M Hill (now Jacobs Engineering Group) in 2014 had a design volume of approximately 40,000,000m3. This design meets Criteria in the 2016 BC Landfill Criteria for Municipal Solid Waste and is the basis for the updated DOCP. Details of the estimated site life were reviewed in the 2023 DOCP updates.

The fill rate is projected to increase based on population growth rate projections in the city from 2022-2023 to 2045-2046. The population growth projections are based on the BC Statistics tool for Population Estimates & Projections for British Columbia for Regional District of Central Okanagan. No population growth was assumed beyond 2046. The estimated site life based on the projected fill rates is approximately 100 years.

Using estimated fill volumes from the Carlson GPS system and the previous annual report, the remaining landfill capacity as of December 31, 2025, was estimated at 36,253,593 m^3.

e. Summary of 2025 DOCP Implementation & Construction

Filling operations have alternated between AREA 1 and AREA 3, which are located on the western and north-eastern sections of the site, respectively. The AREA 3 liner installation was completed in early 2025, with leachate infrastructure and remaining works fully commissioned in Q4 of 2025. Filling of AREA 3 started in June with placing a 1-metre-thick lift of soft garbage from the residential programs and shredded waste to place a protective lift on top of the liner. Then a routine lift was placed.

The Sliver Fill is an additional filling area consisting of a thin wedge between AREA 1 and AREA 2 to bring the existing side slope on the western side of the site up from the historic 5:1 slope to be consistent with the 3:1 slope in the approved DOCP. Earthworks and landfill gas header work were constructed in early 2024, with the first lift of garbage from AREA 3 construction being placed and covered. A shredder was used in 2025 to assist in building out the narrow lower lifts of waste, and it is expected that selected demolition waste and materials from the transfer station will add one to two lifts in the sliver fill in 2026.

Additional 2025 projects related to the implementation of the DOCP include:

- Additional investigations related to geotechnical conditions for future DOCP planning
- Initiating a leachate pre-treatment study;
- ASP infrastructure and receiving area;
- Northern section of mid slope road constructed; and
- Additional studies and monitoring of the 2024 wells installation as per the 2023 Hydrogeology and Hydrology Characterization Report (HHCR).

The following As-Builts have been attached to Appendix 1 to this report:

- *Appendix 1 – Record Drawings – Construction of Area 3 Liner and Civil Works Glenmore Landfill, WSP, February 26, 2026*

f. Summary of 2026 Planned DOCP Implementation & Significant Works

Projects related to the implementation of the DOCP in 2026 include:

- Replacement of the forcemain connecting Lift Station 2 and Lift Station 3;
- Completing the design and RFP for starting progressive closure;
- Design second phase of AREA 3 liner installation;
- Complete construction of Surface Water Bypass connecting Tutt Pond to Brandt's Creek;
- ASP phase 2 design and construction, receiving area expansion and potential leachate pump system to sewer via a lift station to be constructed along John Hindle Drive; and
- Procurement of a flare to replace the existing end of life unit for late 2026 installation.

g. Tipping Fees and Financial Security

Tipping fees were reviewed as part of the overall site development and 10-year Capital Plan and selected wastes had rates increases in 2025. Tipping fee rates for garbage will remain at $106/tonne in 2026. Some selected wastes such as mattresses, clean wood and shingles had rate adjustments

to reflect current costs to process these wastes. The city performs ongoing financial analysis to ensure funding for projects based on the 2023 DOCP and the City's 10-year Capital Plan.

The updated Financial Security Plan was completed in the updated DOCP to meet the requirements of the Second Edition of Landfill Criteria For Municipal Solid Waste (June 2016). The Financial Security Plan was calculated based on estimated closure costs plus post-closure Operations and Monitoring of 200 years as determined by the Contaminating Lifespan Analysis in the 2023 DOCP. The Financial Closure Fund will be updated with the assistance of the City Financial department based on the required Accounting Principles.

Excess revenues are deposited into a reserve fund that will be used to develop the site for infrastructure and capital costs for items such as continued liner installation, leachate, landfill gas/flare, water management systems, and progressive landfill closure and post closure works.

h. Vegetation Analysis

Observations of vegetation at the landfill perimeter were conducted monthly. There were no visible indications of adverse effects on plants due to leachate or landfill gas migrating to the root zones outside the landfill limit of waste. The trees that were dead and damaged from the 2023 wildfires along Glenmore Road were removed in late summer.

This Glenmore Road landscaping is scheduled to be replaced when internal road alignment work and surface water management infrastructure is addressed in the next two to four years. Additional trees were planted along the east side of AREA 3, and additional trees will be planted along John Hindle Drive to replace trees that did not establish in previous plantings.

i. Complaints

The landfill received 4 service requests plus one verbal complaint related to nuisances from landfill operations in 2025. Three complaints were related to odours, one complaint was received about windblown litter, and one complaint was related to noise. Any additional complaints that were received by phone or in person were not tabulated.

The Glenmore Landfill strives to be a good neighbour and minimize nuisances surrounding the site. As such, the site uses many additional controls to mitigate common landfill issues. These include:

- Litter is controlled by compaction of the waste and minimizing the area of the active face. Fencing for litter control is placed around the fill area as required. In the Spring of 2025, contractors were retained to do a one-week litter pick on the landfill and roadways immediately adjacent to the site and for mowing selected areas. Additional litter control fencing has been constructed on site to minimize wind-blown litter.
- Dust control will continue by applying water to access roads, paving additional major roads, and seeding exposed soil areas.
- Vector control will continue by using a combination of distress calls, harassment, and daily cover. A falconer continues to assist in reducing the impact of nuisance birds and implementing the Starling control program. The City employs two commercial pest control companies to manage other vectors.
- Mud control for internal roads will be accomplished through the construction and maintenance of all-weather access roads to the working face. Crushed shale, concrete or

ground wood chips will be used as a pad at the active face and organics receiving area. A wheel wash system is in place to minimize mud tracking coming off-site.

- Weeds have been mitigated primarily by gas powered weed eaters, mowing, and using an excavator to clear any overgrown areas, with selective application of weed control around the site.
- Visual aesthetics have been addressed by the planting of additional trees and shrubs in the berm along John Hindle Drive and on the hillside to the east of the residential drop off transfer station.
- Performing a turtle salvage and relocation initiative.
- Proactive and voluntary use of a real time nuisance and weather monitoring system to record and investigate nuisances above and beyond the requirements of the OC and guidelines

Further landscaping along the western side of the landfill along Glenmore Road, John Hindle Drive, and in the eastern portion of the site along AREA 3 will be incorporated into other site projects in future years.

j. Non-Compliance Statement

In general, the Glenmore Landfill maintained a high level of compliance with the Operational Certificate in 2025. Three non-compliances were reported by the landfill in 2025, with two related to fire events at the landfill, and one was for a discrepancy in soil vapour probe monitoring frequency that was resolved by preparing an update to the Environmental Monitoring Plan in the DOCP.

Below is a list of non-compliances reported to the BC Ministry of Environment and Parks (BC ENV):

- 2025-03-18 - 12218 EMP - Non-Compliance Notification
- 2025-05-02 - 12218 landfill fire - Non-Compliance Notification
- 2025-08-10 - 12218 landfill fire - Non-Compliance Notification

k. Facility Manager & Operator Certification

The landfill has five staff members that are SWANA Manager of Landfill Operations Certified, including the Manager, one Supervisor, two foreman and one of the senior Environmental Technicians. The second Supervisor and all operators are SWANA Landfill Operations Basics Certified.

ENVIRONMENTAL MONITORING REPORT

As part of the 2023 DOCP updates, the Qualified Professionals from GHD prepared a Hydrogeology and Hydrology Characterization Report (HHCR) and updated the Environmental Monitoring Plans (EMP) for the landfill.

This HHCR report includes the information specified in Section 10.1 Hydrogeology and Hydrology Characterization Report of the BCMOE Second Edition of Landfill Criteria For Municipal Solid Waste (June 2016) and was submitted to the BCMOE with the updated DOCP in December of 2023. All recommendations from the HHCR were either fully implemented in 2024 or added to future work plans and budgets. For the full HHCR report, please see Glenmore Landfill 2023 Annual Report.

Sampling for groundwater, surface water and leachate was performed by City of Kelowna Environmental Technicians as per the EMP. Theses samples were submitted to CARO Analytical Services of Kelowna, BC for analysis, and the data reporting and corresponding interpretation was completed by Keltech of Kelowna, BC. The Keltech findings for the water monitoring program are attached to this report in *Appendix 2 – 2025 Glenmore Landfill Annual Water Quality Report, Keltech Environmental Ltd., March 30, 2026.*

a) Groundwater

Groundwater sampling events took place in the Spring (May/June) and Fall (August/September) as per the EMP and recommendations of the *2024 Glenmore Landfill Annual Water Quality Report (Keltech 2025).*

As noted in the Keltech report, no significant changes to water quality were noted in the results of the 2025 water monitoring program. Certain leachate indicator parameters continue to be elevated at some wells in locations adjacent to or south of the Phase 3 Slough. These are consistent with historical concentrations. The 2025 water level trends were consistent with historical trends.

GHD prepared a technical memorandum based on the elevation levels and monitoring results of the 6 wells that were installed in 2024 as per the 2023 HHCR recommendation:

"Assessments should incorporate the additional monitoring data from the recommended installed wells, and future reports should also include an assessment of groundwater quality compliance following Protocol 9."

GHD's review of the groundwater elevation and quality data from the newly installed monitoring wells concluded that:

- 2025 groundwater elevations and inferred flow directions for the Sand and Gravel and Till units are generally consistent with elevations and flow directions from 2022 as assessed in the HHCR. Groundwater flow direction in the Sand and Gravel and Till units is inferred to generally follow Site topography, with an overall flow direction to the south.
- 2025 groundwater elevations from monitoring wells screened in the Bedrock unit indicate an overall flow direction to the south, similar to the overlying Sand and Gravel and Till units.
- Groundwater quality at the newly installed monitoring wells was generally consistent for samples collected through 2024 and 2025, with a potential increasing trend of lithium concentrations at GL44-1 (screened in the Till unit).

- Major ion chemistry of groundwater samples collected at the newly installed monitoring wells does not indicate leachate influence at the wells screened in the Sand and Gravel or Till units.
- Major ion chemistry of groundwater samples collected at GL-46 (screened in the Bedrock unit) is characterized by generally similar cation proportions to leachate, with lower chloride proportions.

A copy of this Technical Memorandum can be found in:

Appendix 3 – Glenmore – 2025 Groundwater Elevation and Quality Data, GHD, March 25, 2026

Further monitoring at the newly installed wells is needed to assess potential trends in concentrations of leachate indicator parameters and to calculate the 95th percentile site specific background concentrations in future years.

b) Surface Water

Surface water samples were collected quarterly from the four on-site surface water bodies in March, May/June, august/September, and October. At the same time samples were also collected from Bubna Slough and Slough #2, located North of the landfill, as well as Little Robert Lake and Robert Lake, located South of the landfill. The two additional surface water monitoring points that were added in 2024 as per HHCR were sampled in March and December when there was adequate flow.

The surface water quality was consistent with previous years. The 95th percentile site-specific background concentration was updated after each sampling round and was used to compare the concentrations of the next sampling event.

The two surface water monitoring points that were added to the EMP as per HHCR, identified as Culvert 1022026 and South Storm Headwall 186437, were sampled in March and December. Flows were not adequate for sampling during the rest of the year.

As part of the surface water management process, Tutt Pond has been used as an irrigation source for neighbouring fields during the agricultural season. In 2023, GHD completed a Site-Specific Background and Compliance Water Quality Review (GHD, December 7, 2023) to determine background surface concentrations and assess water quality compliance at the Landfill. The report recommends using the guidance provided in CSR Protocol 9, to calculate 95th percentile background surface water concentrations. If surface water quality from the on-site ponds is less than the 95th percentile background concentrations, then water could be used for field irrigation as part of stormwater management. In 2025, irrigation did not occur as the pumphouse at Tutt Pond was being replaced.

As part of the Areas 3 construction, replacement trees were planted on Bredin Hill to replace ones removed during the construction project. These trees were irrigated using approximately 2,800 m3 of water from Bredin Pond during summer and fall of 2025.

c) Leachate Sampling

Bioxide addition at the lift station 2 collection point continued in 2025, and as such some leachate sampling includes the presence of this pre-treatment chemical. Leachate samples were collected at the following sampling points:

- Lift Station 2 – location of Bioxide addition
- P1A2 Leachate MH - upstream of Bioxide addition
- P1 Leachate MH-2 - upstream of Bioxide addition
- N Pumphouse MH – downstream of Bioxide addition
- Lift Station #4 – upstream of Bioxide addition

The quality of leachate is quite variable across the site. Composition at each sampling point reflects the impacts of items such as the age of the waste being sampled, any pre-treatment, and inputs from precipitation and surface water intrusion including the seasonality of the spring freshet.

LANDFILL GAS REPORT

The Glenmore Landfill's gas collection system sustained significant damage in the 2023 wildfires. After repairs were completed in 2024, the Landfill Gas (LFG) system ran at full capacity for the first time in 3 years.

The 2025 highlights related to the LFG management system included the installation of six new horizontal collector runs consisting of approximately 800m of new pipe. Along with this, 15 wells were extended or relocated to accommodate filling activities. Additionally, 23 wellheads were installed on the east side of the landfill in December 2025. With these additional wellheads, a total of 35 horizontal wells can be drawn from both the east and west ends.

Wells in the AREA 2 portion of the landfill continue a staged commissioning process as gas production develops in this area. Landfill gas was monitored and adjusted at the wellheads at least once per month in compliance with the requirements of the Landfill Gas Management Regulation.

Gas quality at the flare and upstream of the FORTIS BC Biogas Plant was monitored on a continual basis with alarming and emergency system shutdowns in place. A replacement flare system was procured in 2025, with construction scheduled to begin in late 2026.

Table 5 – 2025 Landfill Gas Volume Summary

Flare Flow volume	1,450,913 m^3 at 59.9% CH_4
FORTIS BC Biogas Plant Flow volume	2,817,864m^3 at 59.9% CH_4
Total LFG Destroyed by Flare/Biogas	4,268,778 m^3 at 59.9% CH_4
Calculated methane captured (tonnes)	1,734 tonnes
Collection Efficiency (%)	83%

The FORTIS BC biogas plant was the primary method of managing recovered landfill gas for 2025 with 66% of total landfill gas captured being beneficially re-used as renewable natural gas.

The Landfill Gas Management System had 27 unscheduled outages and a total downtime of 196.4 hours for both scheduled and non-scheduled events. This downtime is approximately 2.2% of total operations time compared to 27.62h (0.38%) in 2024 and 272.83 hours (3.11%) downtime in 2023, when systems were shut down due to the impacts of wildfires. The increase from 2024 to 2025 is largely due to two planned maintenance events when the system was shut down for gas collection piping tie ins. Less than 20% of the downtime in 2025 was from unscheduled events.

A summary of downtime hours collected from the SCADA system and field notes is included in Tables 6 and 7 below. Scheduled flare maintenance was performed while the FORTIS BC Biogas Plant was operational as activities allowed to minimize downtime as much as possible.

After hour callouts for unscheduled outages were typically less than two hours. Scheduled maintenance included items such as exercising valves, filling P-Traps, wellhead device changes and maintenance, new gas run connections to the system and flare equipment maintenance work.

Table 6 – 2025 Landfill gas system unscheduled outage summary

Date	Time	Total Time	Reason
22-Jan-25	09:00 to 12:33	3h 33m	pipe hit by equipment
31-Jan-25	11:49 to 12:18	28m	controls error - run signal lost
08-Feb-25	10:49 to 13:47	2h 58m	biogas plant failure
11-Feb-25	11:15 to 11:51	36m	biogas plant failure due to cold weather
	13:02 to 13:25	13m	
16-Feb-25	4:05 to 13:10	9h 5m	air leak into system
22-Feb-25	01:10 to 02:02	52m	Gas plant analyzer fault
	06:35 to 07:40	1h 5m	Failed to restart after power outage
02-Apr-25	16:45 to 17:58	1h 13m	Biogas plant startup issue
02-Jun-25	15:38 to 16:43	1h 5m	Controls issue
	17:26 to 18:05	39m	
21-Jun-25	02:33 to 03:33	1h 0m	biogas plant startup issue
	10:57 to 11:41	44m	
	14:58 to 15:46	48m	
22-Jun-25	13:42 to 17:10	3h 18m	methane sensor malfunction
27-Jun-25	11:38 to 12:22	44m	fault due to power outage
15-Jul-25	10:11 to 10:21	11m	pilot light issue
	10:23 to 10:37	13m	
17-Jul-25	06:09 to 06:45	36m	drive fault caused by power outage
01-Aug-25	07:25 to 07:53	28m	controls issue
	19:50 to 21:30	1h 40m	
02-Aug-25	06:11 to 06:57	46m	controls issue
06-Aug-25	14:29 to 14:53	24m	leaking pipe
08-Aug-25	06:36 to 06:58	22m	controls issue
10-Aug-25	17:49 to 18:33	44m	precautionary shutdown due to landfill fire
01-Sep-25	10:33 to 11:28	55m	controls issue
14-Sep-25	01:50 to 02:50	1h	fault due to power outage

Table 7 -2025 Landfill Gas Management System Downtime

Total Annual hours	8760h
Total run time hours – FORTIS BC or Flare	8563h 36m
Hours of downtime	196h 24m
Percentage of Time operational	97.8%

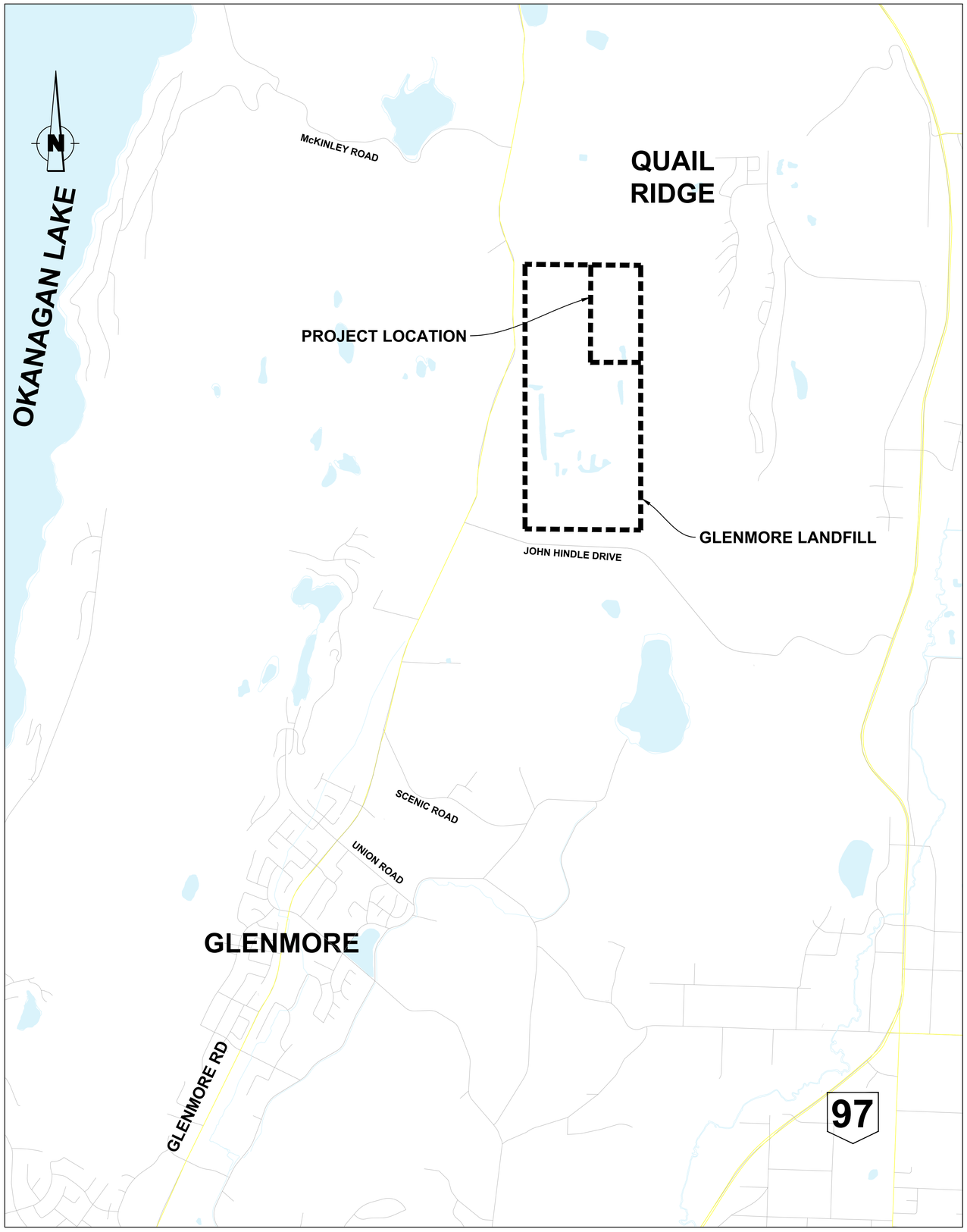
The collection and flare efficiency for the LFG system can be found in the Landfill Gas Collection Efficiency Technical Memo completed by Jacobs of Calgary, AB. This Technical Memo is based on the model and requirements of the BC Landfill Gas Facilities Design Guidelines, 2010 and is attached to this Annual Report as *Appendix 4 – 2025 Landfill Gas Collection Efficiency Study – Glenmore Landfill, Jacobs, March 25, 2026.* Landfill Gas Collection Efficiency was calculated to be 83% for 2025. The city has made progress to achieve the Provincial performance target of 75% via further collection system refinements, adding eastern wells to some of the existing laterals, and enhancements to the monitoring program.

The City monitored 16 perimeter soil vapour monitoring wells four times in 2025. No results were over the regulatory limit, with only two methane results being found at the instrument detection limit during one sampling event. These nominal levels of methane results were not repeated in previous or subsequent sampling events. Three of these soil vapour probes along Bredin Pond are scheduled to be removed in 2026 per the DOCP.

As a Best Management Practice, manual surface emissions monitoring of the landfill was performed three times per year with an Inficon Irwin Portable Leak Detector. Areas where issues were identified were repaired to lower any surface emissions. This program has been performed on a voluntary basis for several years beyond the requirements of the Provincial Landfill Gas Regulation and the Landfill Environmental Monitoring Programs. With the enactment of a new federal Landfill Methane Regulations by Environment and Climate Change Canada (ECCC), the surface emissions monitoring program will be revisited in 2026 in preparation to comply with these new requirements.

LIST OF APPENDICES

Appendix 1 – Record Drawings – Construction of Area 3 Liner and Civil Works Glenmore Landfill, WSP, February 26, 2026
Appendix 2 – 2025 Glenmore Landfill Annual Water Quality Report, Keltech Environmental Ltd., March 30, 2026.
Appendix 3 – Glenmore – 2025 Groundwater Elevation and Quality Data, GHD, March 25, 2026
Appendix 4 – 2025 Landfill Gas Collection Efficiency Study – Glenmore Landfill, Jacobs , March 25, 2026



City of Kelowna

CONSTRUCTION OF AREA 3 LINER AND CIVIL WORKS GLENMORE LANDFILL

CITY FILE: 11593

LIST OF DRAWINGS:		
NAME	DESCRIPTION	INCLUDED
C000	COVER SHEET	Y
C001	GENERAL NOTES	Y
SITE PLAN		
G100	GLENMORE LANDFILL	Y
C100	COMPOSITE UTILITY	Y
OVERLAND WATERMAIN PLAN PROFILE		
C201	STA. 0+000 TO 0+070	Y
C202	STA. 0+070 TO 0+650	Y
C203	STA. 0+650 TO 0+700	Y
LEACHATE COLLECTION PLAN		
C300	NORTH	Y
C301	SOUTH	Y
LEACHATE COLLECTION PLAN PROFILE		
C302	STA. 0+000 TO 0+160	Y
C303	STA. 0+160 TO 0+260	Y
C304	STA. 0+260 TO 0+410	Y
C305	STA. 0+410 TO 0+550	Y
LEACHATE COLLECTION 2 PLAN PROFILE		
C310	STA. 1+000 TO 1+180	Y
C311	STA. 1+180 TO 1+360	Y
C312	STA. 1+360 TO 1+455	Y
RING ROAD PLAN PROFILE		
C400	STA. 0+000 TO 0+180	Y
C401	STA. 0+180 TO 0+360	Y
C402	STA. 0+360 TO 0+540	Y
C403	STA. 0+540 TO 0+720	Y
C404	STA. 0+720 TO 0+910	Y
C405	STA. 0+910 TO 1+000	Y
ACCESS ROAD & LFG & LEACHATE FORCEMAIN PLAN PROFILE		
C500	STA. 0+000 TO 0+140 (LFG ONLY)	Y
C501	STA. 0+000 TO 0+090	Y
C502	STA. 0+090 TO 0+270	Y
C503	STA. 0+270 TO 0+430	Y
C504	STA. 0+430 TO 0+545	Y
C505	LFG SUB-HEADER PROFILES	Y
CULVERT PLAN PROFILE		
C600	CULVERTS	Y
C601	CULVERTS	Y
ELECTRICAL		
C700	SITE PLAN	Y
C701	SITE PLAN	Y
DETAILS		
D100	TYPICAL SECTIONS	Y
D101	BASE LINER	Y
D102	UTILITIES	Y
D103	UTILITIES	Y
D104	UTILITIES	Y

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18M-01541-00-5

C000

ISSUED FOR RECORD DRAWINGS

FEBRUARY 2026

XREFS: LegalParcelsDWG.dwg 18M-01541-00-5-TLBK.dwg 18M-01541-00-5-REV 0.dwg
IMAGES: Overlay Reference 3.jpg, Overlay 3.jpg
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USER: calan.evancio
LAYOUT: 2026-02-27 - 1:57 PM
PLOTTED: 2026-02-27 - 1:57 PM

GENERAL NOTES:

1. ELEVATIONS ARE BASED ON GEODETIC DATUM, SURVEY CONTROL MONUMENTS AND SURVEY DATA PROVIDED BY THE CITY OF KELOWNA AND WSP CANADA INC. AND ACRES ENTERPRISES LTD.
2. ALL MEASUREMENTS AND DIMENSIONS ARE IN METRIC UNLESS NOTED OTHERWISE.
3. HYDRO, TELEPHONE AND GAS UTILITIES SHALL BE INSTALLED IN ACCORDANCE WITH THE MOST RECENT SPECIFICATIONS FOR EACH UTILITY.
4. THE EXISTENCE, LOCATION AND ELEVATION OF UTILITIES AND/OR CONCEALED STRUCTURES AT THE PROJECT SITE ARE NOT GUARANTEED BY WSP CANADA INC.
5. THE CONTRACTOR SHALL FIELD VERIFY LOCATIONS AND INVERTS OF ALL EXISTING UTILITIES AND PROPOSED CROSSINGS PRIOR TO CONSTRUCTION. THE CONTRACTOR TO NOTIFY THE ENGINEER OF ANY DISCREPANCIES OR OMISSIONS AT LEAST 48 PRIOR TO CONSTRUCTION OF THE NEW UNDERGROUND UTILITIES.
6. THE EXISTENCE AND LOCATION OF ALL SURFACE AND SUBSURFACE FEATURES/UTILITIES ARE NOT GUARANTEED TO BE SHOWN, OR LOCATED AS SHOWN. THE CONTRACTOR SHALL BE RESPONSIBLE FOR LOCATING AND PROTECTING ALL UTILITIES. THE LOCATING AND PROTECTING OF ALL EXISTING UTILITY INFRASTRUCTURE AND APPURTENANCES IS INCIDENTAL TO THE WORK.
7. THE CONTRACTOR SHALL CONDUCT A BC ONE CALL AND CONDUCT LINE LOCATES PRIOR TO CONSTRUCTION. ALL APPROPRIATE PARTIES SHALL BE NOTIFIED BY THE CONTRACTOR PRIOR TO CONSTRUCTION. PARTIES INCLUDE AND ARE NOT LIMITED TO THE CITY OF KELOWNA, FORTIS GAS AND FORTIS BC.
8. THE CONTRACTOR SHALL PROTECT EXISTING UTILITIES DURING CONSTRUCTION.
9. THE CONTRACTOR SHALL MAKE ALL NECESSARY ARRANGEMENTS, IF REQUIRED, FOR THE INSPECTION OF ALL REQUIRED UTILITY CONNECTIONS.
10. THE CONTRACTOR SHALL OBTAIN ALL NECESSARY PERMITS FROM THE CITY OF KELOWNA AND ALL OTHER JURISDICTIONS PRIOR TO CONSTRUCTION.
11. STOCKPILE EXCESS EXCAVATION MATERIAL AS DIRECTED BY THE ENGINEER.
12. THE CONTRACTOR SHALL ADJUST AND/OR RESET ALL EXISTING SURFACE FEATURES. SUCH AS MANHOLE LIDS/RIMS WITHIN THE WORKING AREA TO FINISH GRADE.
13. CONTRACTOR TO ADVISE THE ENGINEER TO INSPECT PRIOR TO START OF ROAD BASE AND SUB BASE COURSES.
14. CONTRACTOR TO ADVISE THE ENGINEER TO INSPECT PRIOR TO START OF EACH LAYER WITHIN THE BASE LINER INCLUDING SUB-GRADE.
15. CONTRACTOR TO ADVISE THE ENGINEER TO INSPECT PRIOR TO BACKFILL OF ALL UNDERGROUND SERVICES.
16. ALL DRAWINGS ARE TO BE READ IN CONJUNCTION WITH THE CONTRACT DOCUMENTS AND ALL SPECIFICATIONS.
17. THE CONTRACTOR IS RESPONSIBLE FOR TRAFFIC CONTROL 24 HOURS PER DAY DURING CONSTRUCTION, UNLESS DIRECTED BY THE ENGINEER OTHERWSIDE. ALL TRAFFIC CONTROL SHALL CONFORM TO THE BCMOT MANUAL FOR TEMPORARY TRAFFIC CONTROL.
18. THE CONTRACTOR SHALL MAINTAIN THE SAFE PASSAGE OF TRAFFIC AT ALL TIMES DURING CONSTRUCTION.
19. THE CONTRACTOR IS TO COMMUNICATE WITH THE LANDFILL SUPERVISOR AND THE ENGINEER ANYTIME DISRUPTION TO TRAFFIC MAY OCCUR.
20. CLEAR AND GRUB WITHIN CONSTRUCTION LIMITS AS DIRECTED BY THE ENGINEER.
21. CONTRACTOR TO NOTIFY CITY OF KELOWNA'S LANDFILL SUPERVISOR AND THE EGINEER IF ANY LANDFILL WASTE AND/OR MEDICAL WASTE IS ENCOUNTERED AND TO REQUEST INSTRUCTIONS.
22. LEACHATE IS EXPECTED TO BE WITHIN THE SURFACE AND GROUNDWATER AT THE LANDFILL. THE CONTRACTOR MAY ENCOUNTER LANDFILL LEACHATE AND IS TO TAKE STEPS AVOID CONTACT. WASH THOROUGHLY IF CONTACT DOES OCCUR AND SEEK MEDICAL ATTENTION IF DISCOMFORT OCCURS.
23. THE CONTRACTOR SHALL PREPARE A WRITTEN SAFE WORK PROCEDURE TO ADDRESS THE EXPECTED RISKS TO HEALTH AND SAFETY ASSOCIATED WITH WORK AT THE LANDFILL. THE PROCEDURE SHALL BE PROVIDED TO THE CITY AND CONTRACT ADMINISTRATOR AT LEAST 48 HOURS PRIOR TO STARTING THE WORK.
24. WHERE EXISTING SERVICES ARE TO BE ABANDONED, THE ENGINEER OR HIS DESIGNATED SHALL BE PRESENT DURING THE DECOMMISSIONING WORK, AND SHALL COMPLETE A SERVICE DISCONNECT RECORD SHEET.
25. THE CONTRACTOR SHALL COORDINATE AND SCHEDULE WITH THE CITY OF KELOWNA'S LANDFILL SUPERVISOR ON A DAILY BASIS TO ENSURE LANDFILL OPERATIONS ARE NOT INTERRUPTED AND THAT ACCESS TO ACTIVE AREAS OF THE LANDFILL ARE ACCESSIBLE DURING LANDFILL OPERATING HOURS. (OPERATING HOURS ARE 7:30 A.M. TO 4:45 P.M. 7 DAYS PER WEEK)
26. THE CONTRACTOR CAN HAVE ACCESS AND WORK AT THE LANDFILL OUTSIDE THE LANDFILL OPERATING HOURS, BUT WITHIN THE TIMES ALLOWED BY THE CITY'S BYLAW.
27. NOTE TYPICAL LANDFILL OPERATIONS ARE 1000 VEHICLE TRIPS PER DAY TO THE ACTIVE LANDFILL.
28. ALL WORK SHALL BE CONSTRUCTED IN ACCORDANCE WITH THESE STANDARDS AND SPECIFICATIONS IN ORDER OF PRECEDENCE:

28.3. AS PER SUPPLEMENTARY SPECIFICATIONS
28.4. AS DETAILED WITHIN THIS DRAWING SET
28.5. CITY OF KELOWNA SUPPLEMENTARY SPECIFICATIONS AND DETAIL DRAWINGS
28.6. MMCD 2019 EDITION STANDARDS AND SPECIFICATIONS
28.7. MOTI 2020 STANDARD SPECIFICATIONS FOR HIGHWAY CONSTRUCTION
28.8. CITY OF KELOWNA APPROVED PRODUCTS LIST

IRRIGATION SPECIFIC NOTES:

1. UTILITY TRENCH AS PER CITY OF KELOWNA STANDARD DRAWING SS-G4 AND WORKSAFE BC STANDARDS.
2. GATE VALVE INSTALLATION AS PER MMCD STANDARD DRAWING W3.
3. THRUST BLOCK AS PER MMCD STANDARD DRAWING W1.
4. IRRIGATION TO BE HDPE DR 11 PIPE.
5. ALL BENDS ARE TO BE HDPE DR 11.
6. ALL PIPE DIMENSIONS ARE 2D.
7. ALL MATERIALS AND CONSTRUCTION TO BE IN ACCORDANCE WITH MMCD PLATINUM EDITION AND THE CURRENT CITY OF KELOWNA "SUPPLEMENTARY SPECIFICATIONS AND DETAIL DRAWINGS".
8. CONTRACTOR TO HYDRO EXCAVATE AND LOCATE ALL EXISTING UTILITIES ALONG THE PROPOSED IRRIGATION ALIGNMENT AND NOTIFY THE ENGINEER OF ANY CONFLICTS.
9. THE CONTRACTOR IS RESPONSIBLE TO PRESSURE TEST ALL IRRIGATION MAIN AT 200 PSI (1380 kPa) AT THE LOWEST POINT OF MAIN AS PER MMCD, SECTION 33 11 01, 3.19.2 TESTING PROCEDURE.

LEACHATE/SANITARY SEWER SPECIFIC NOTES:

1. UTILITY TRENCH AS PER CITY OF KELOWNA STANDARD DRAWING SS-G4 AND WORKSAFE BC STANDARDS.
2. LEACHATE/SANITARY SEWER INSTALLATION AS PER THE CITY OF KELOWNA STANDARDS AND SPECIFICATIONS.
3. CLEANOUTS AS PER DETAIL SHEET.
4. AIR RELEASE VALVES AS PER DETAIL SHEET.
5. MANHOLES AS PER CITY OF KELOWNA STANDARD DRAWING SS-S1a.
6. MANHOLE FRAME AND COVER CITY OF KELOWNA STANDARD DRAWING SS-S1c.
7. ALL PERFORATED OR NON-PERFORATED LEACHATE PIPES SHALL BE HDPE DR11 PIPE.
8. LEACHATE FORCEMAIN SHALL BE HDPE DR11 PIPE.
9. ALL FITTINGS SHALL BE HDPE DR11.
10. CONTRACTOR TO VIDEO TEST PIPES AND TO ENSURE TESTING IS DONE BEFORE ACCESS IS LIMITED. FLUSH PIPE PRIOR TO VIDEO TESTING.
11. LEACHATE IS EXPECTED TO BE WITHIN THE SURFACE AND GROUNDWATER AT THE LANDFILL. THE CONTRACTOR MAY ENCOUNTER LANDFILL LEACHATE AND IS TO TAKE STEPS AVOID CONTACT. WASH THOROUGHLY IF CONTACT DOES OCCUR AND SEEK MEDICAL ATTENTION IF DISCOMFORT OCCURS.

STORM SEWER SPECIFIC NOTES:

1. UTILITY TRENCH AS PER CITY OF KELOWNA STANDARD DRAWING SS-G4 AND WORKSAFE BC STANDARDS.
2. STORM SEWER INSTALLATION AS PER THE CITY OF KELOWNA STANDARDS AND SPECIFICATIONS.
3. MANHOLES AS PER CITY OF KELOWNA STANDARD DRAWING SS-S1a.
4. MANHOLE FRAME AND COVER CITY OF KELOWNA STANDARD DRAWING SS-S1c.
5. CATCH BASINS AS PER CITY OF KELOWNA STANDARD DRAWING SS-11a.
6. ALL CATCH BASIN LEADS SHALL BE 200mmø PVC SDR35 SEWER PIPE AT 2.0% MINIMUM UNLESS OTHERWISE NOTED.
7. ALL DOUBLE CATCH BASIN LEADS SHALL BE 250mmø PVC SDR35 SEWER PIPE AT 2.0% MINIMUM UNLESS OTHERWISE NOTED.
8. ALL PROPOSED PIPE CONNECTIONS TO STRUCTURES (MANHOLES, CATCHBASINS) SHALL BE CONSTRUCTED WITH A FLEXIBLE JOINT.
9. ALL CATCH BASINS TO BE PROVIDED WITH A 600mm SUMP.
10. ALL PIPE DIMENSIONS ARE 2D AND SHOWN FROM CENTER OF MANHOLE TO CENTER OF MANHOLE.
11. PIPE BENDS TO BE COMPLETED BY JOINT DEFLECTION OR FITTINGS ONLY. NO PIPE BENDING.
12. STORM HEADWALLS/ENDWALLS TO BE AS PER COK SS-S13B C/W SUMP AND CITY OF KELOWNA STANDARD DRAWING SS-S13B KONKAST #1487 OR APPROVED EQUIVALENT.

LANDFILL GAS SPECIFIC NOTES:

1. UTILITY TRENCH AS PER CITY OF KELOWNA STANDARD DRAWING SS-G4 AND WORKSAFE BC STANDARDS.
2. MANHOLES AS PER CITY OF KELOWNA STANDARD DRAWING SS-S1a.
3. MANHOLE FRAME AND COVER CITY OF KELOWNA STANDARD DRAWING SS-S1c.
4. ISOLATION VALVE AS PER DETAIL SHEET.
5. CLEANOUTS AS PER DETAIL SHEET.
6. LANDFILL GAS PIPE TO BE HDPE DR17 .
7. ALL GASKETS TO BE NITRILE GASKETS OR EQUIVALENT.
8. ALL PIPE DIMENSIONS ARE 2D AND SHOWN FROM CENTER OF MANHOLE TO CENTER OF MANHOLE.
9. CONTRACTOR TO VIDEO TEST PIPES. FLUSH PIPE PRIOR TO VIDEO TESTING.
10. TRACER WIRE 12 GAUGE (COATED COPPER CLAD STEEL WIRE – 30mm MIN. INSULATION) CONTINOUS ALONG ENTIRE LFG PIPE.
11. LANDFILL CONDENSATE TRAP AS PER DETAIL SHEET.

ELECTRICAL NOTES:

1. CONTRACTOR SHALL OBTAIN ALL NECESSARY PERMITS.
2. ALL EMPTY CONDUITS SHALL BE CAPPED AND HAVE A NYLON PULL STRING INSTALLED IN THEM.
3. ALL CONNECTIONS SHALL BE MADE WITH SPLIT BOLT TYPE CONNECTIONS. SEALING OF THE CONNECTIONS SHALL BE WITH DUCT SEAL, SELF-HOLDING TAPE AND PVC TAPE AS DETAILED IN MMCD.
4. EXACT POSITION AND ELEVATION OF ALL EQUIPMENT SHALL BE LAID OUT BY THE CONTRACTOR AND REVIEWED BY THE CONTRACT ADMINISTRATOR IN THE FIELD BEFORE CONSTRUCTION.
5. ALL CONDUITS SHALL BE GRAY RPVC TYPE.
6. CONTRACTOR IS RESPONSIBLE FOR PROTECTING EXISTING POWER POLES AND POWER LINES.
7. PULL BOXES TO BE H-20 RATED AND INSTALLED EVERY 100 METRES.
8. SEPARATE PULL BOXES REQUIRED FOR ELECTRICAL AND COMMUNICATION AND TO BE OFFSET FROM ONE ANOTHER
9. CONDUITS TO BE INSTALLED AT A MINIMUM DEPTH OF 0.9m

ROADWORKS SPECIFIC NOTES:

1. THE CONTRACTOR SHALL LOAD AND HAUL WASTE ASPHALT, CONCRETE AND SURPLUS MATERIAL TO AN APPROVED LOCATION ONSITE.
2. THE CONTRACTOR SHALL USE STOCKPILES ONSITE FOR EMBANKMENT FILL.
3. ROAD STRUCTURE TO BE AS FOLLOWS;

RING ROAD (0+000 TO 0+760):
100mm – AC PAVEMENT SURFACE COURSE (2 LIFTS)
150mm – 25mm MINUS CRUSHED GRANULAR BASE
300mm – 150mm MINUS GRANULAR SUB-BASE

RING ROAD (0+760 TO 0+910):
150mm – 25mm MINUS CRUSHED GRANULAR BASE
300mm – 150mm MINUS GRANULAR SUB-BASE

BREDIN HILL ACCESS ROAD:
150mm – 25mm MINUS CRUSHED GRANULAR BASE
300mm – 150mm MINUS GRANULAR SUB-BASE

BASE LINER SPECIFIC NOTES:

1. SUBGRADE TO BE APPROVED BY THE ENGINEER PRIOR TO PLACEMENT OF 100mm SAND CUSHION LAYER.
2. 100mm SAND CUSHION LAYER AS PER MMCD PIT RUN SAND OR APPROVED EQUIVALENT, TO BE APPROVED BY THE ENGINEER PRIOR TO PLACEMENT OF THE GEOSYNTHETIC CLAY LINER.
3. GEOSYNTHETIC CLAY LINER TO BE BENTOFIX SNRW OR APPROVED EQUIVALENT, TO BE APPROVED BY THE ENGINEER PRIOR TO PLACEMENT OF THE GEOMEMBRANE LINER.
4. GEOMEMBRANE LINER TO BE TEXTURED 60 MIL HDPE ATARFIL TM/TMT OR APPROVED EQUIVALENT, TO BE APPROVED BY THE ENGINEER PRIOR TO PLACEMENT OF THE NON-WOVEN GEOTEXTILE CUSHION.
5. NON-WOVEN GEOTEXTILE CUSHION TO BE TEXEL 160E OR APPROVED EQUIVALENT, TO BE APPROVED BY THE ENGINEER PRIOR TO PLACEMENT OF THE GRANULAR DRAINAGE BLANKET.
6. GRANULAR DRAINAGE LAYER TO BE COARSE DRAIN ROCK, TO BE APPROVED BY THE ENGINEER PRIOR TO PLACEMENT OF THE NON-WOVEN GEOTEXTILE.
7. NON-WOVEN GEOTEXTILE TO BE TEXEL 080E OR APPROVED EQUAL.
8. CONTRACTOR TO CONFORM TO ALL TESTING AND STANDARDS AS PER QA/QC DOCUMENTS.

LEGEND

WATER	EDGE OF ASPH.	STORM MANHOLE	
LEACHATE SEWER	EDGE OF GRAVEL	SAN MANHOLE	
LEACHATE F.M.	TOP OF SLOPE	POWER POLE	P.P.
STORM SEWER	BOT. OF SLOPE	WATER VALVE	
LANDFILL GAS	FENCE	HYDRANT	
ELECTRICAL	IRRIGATION	WELLHEAD	
CONDUITS			
DITCH LINE			

700 - 1631 DICKSON AVENUE
KELOWNA, BC
CANADA V1Y 0B5
PHONE: 250-980-5500
WWW.WSP.COM

NAD 83

INSERTION BASE POINT= 300,000 , 5,500,000

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NO.	YY/MM/DD	BY	REVISION	CH'KD
6	26/02/27	LW	ISSUED FOR RECORD	CE
5	24/04/30	KG	ISSUED FOR CONSTRUCTION	CE
4	24/02/14	KG	ISSUED FOR REQUEST FOR PROPOSAL	CE
3	24/01/22	KU	ISSUED FOR 100% DESIGN	CE
2	23/09/07	KU	ISSUED FOR 75% DESIGN	CE
1	21/03/09	CE	RE-ISSUED FOR REVIEW	DG

WSP Canada Inc.
Engineers & Geoscientists BC
Permit #1000200

PROFESSIONAL ENGINEER
PROVINCE OF BRITISH COLUMBIA
C. EVANCIO
53165
ENGINEER
2026-02-27

BASE	DESIGN
CE	CE
APPROVED	
DG	
DECEMBER 2020	

SCALE NOT ACCURATE OVER LONG DISTANCES

THE CITY OF KELOWNA
DESIGN AND CONSTRUCTION

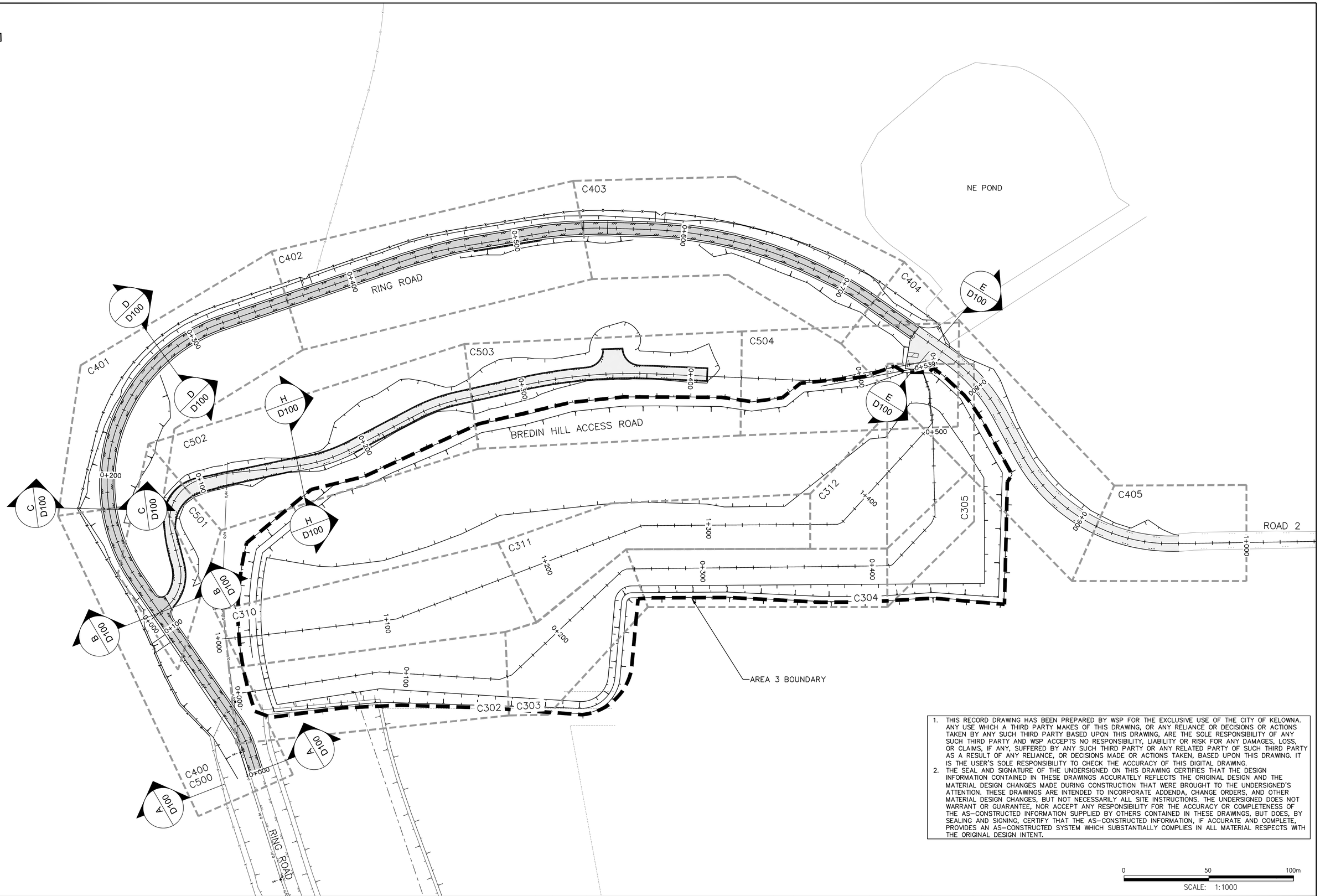
GLENMORE LANDFILL – AREA 3
GENERAL NOTES

DIVISION

DRAWING NO. C001

REV NO 6

FILE LOCATION: \\corp.pbwan.net\ca\data$\CAKWL500\Projects\2018\18M-01541-00 Glenmore Landfill - Cells and Civil Works\3_TECH\3_Cad\5_Area 3\3_Sheets\18M-01541-00-5-CO-COVER & NOTES.dwg PRINTED ON: 2/26/2026 12:15 PM



1. THIS RECORD DRAWING HAS BEEN PREPARED BY WSP FOR THE EXCLUSIVE USE OF THE CITY OF KELOWNA. ANY USE WHICH A THIRD PARTY MAKES OF THIS DRAWING, OR ANY RELIANCE OR DECISIONS OR ACTIONS TAKEN BY ANY SUCH THIRD PARTY BASED UPON THIS DRAWING, ARE THE SOLE RESPONSIBILITY OF ANY SUCH THIRD PARTY AND WSP ACCEPTS NO RESPONSIBILITY, LIABILITY OR RISK FOR ANY DAMAGES, LOSS, OR CLAIMS, IF ANY, SUFFERED BY ANY SUCH THIRD PARTY OR ANY RELATED PARTY OF SUCH THIRD PARTY AS A RESULT OF ANY RELIANCE, OR DECISIONS MADE OR ACTIONS TAKEN, BASED UPON THIS DRAWING. IT IS THE USER'S SOLE RESPONSIBILITY TO CHECK THE ACCURACY OF THIS DIGITAL DRAWING.
2. THE SEAL AND SIGNATURE OF THE UNDERSIGNED ON THIS DRAWING CERTIFIES THAT THE DESIGN INFORMATION CONTAINED IN THESE DRAWINGS ACCURATELY REFLECTS THE ORIGINAL DESIGN AND THE MATERIAL DESIGN CHANGES MADE DURING CONSTRUCTION THAT WERE BROUGHT TO THE UNDERSIGNED'S ATTENTION. THESE DRAWINGS ARE INTENDED TO INCORPORATE ADDENDA, CHANGE ORDERS, AND OTHER MATERIAL DESIGN CHANGES, BUT NOT NECESSARILY ALL SITE INSTRUCTIONS. THE UNDERSIGNED DOES NOT WARRANT OR GUARANTEE, NOR ACCEPT ANY RESPONSIBILITY FOR THE ACCURACY OR COMPLETENESS OF THE AS-CONSTRUCTED INFORMATION SUPPLIED BY OTHERS CONTAINED IN THESE DRAWINGS, BUT DOES, BY SEALING AND SIGNING, CERTIFY THAT THE AS-CONSTRUCTED INFORMATION, IF ACCURATE AND COMPLETE, PROVIDES AN AS-CONSTRUCTED SYSTEM WHICH SUBSTANTIALLY COMPLIES IN ALL MATERIAL RESPECTS WITH THE ORIGINAL DESIGN INTENT.

0 50 100m

SCALE: 1:1000

LEGEND

WATER	EDGE OF ASPH.	STORM MANHOLE	
LEACHATE SEWER	EDGE OF GRAVEL	SAN MANHOLE	
LEACHATE F.M.	TOP OF SLOPE	POWER POLE	P.P.
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1	21/03/09	CE	RE-ISSUED FOR REVIEW	DG

WSP Canada Inc.
Engineers & Geoscientists BC
Permit #1000200

PROFESSIONAL ENGINEER
C. EVANCIO
53165
PROVINCE OF BRITISH COLUMBIA
ENGINEER
2026-02-27

BASE	DESIGN
CE	CE
APPROVED	
DG	
DECEMBER 2020	
SCALE 1:1000	

SCALE NOT ACCURATE OVER LONG DISTANCES

THE CITY OF KELOWNA
DESIGN AND CONSTRUCTION

GLENMORE LANDFILL – AREA 3
KEY PLAN

DIVISION

DRAWING NO. G001

REV NO 6

FILE LOCATION: P:\2018\V8M-01541-00 Glenmore Landfill - Cells and Civil Work\3_TECH\3_Cad\5_Area 3\3_Sheets\V8M-01541-00-5-G0-KEY PLAN.dwg PRINTED ON: 2/27/2026 2:00 PM

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2. THE SEAL AND SIGNATURE OF THE UNDERSIGNED ON THIS DRAWING CERTIFIES THAT THE DESIGN INFORMATION CONTAINED IN THESE DRAWINGS ACCURATELY REFLECTS THE ORIGINAL DESIGN AND THE MATERIAL DESIGN CHANGES MADE DURING CONSTRUCTION THAT WERE BROUGHT TO THE UNDERSIGNED'S ATTENTION. THESE DRAWINGS ARE INTENDED TO INCORPORATE ADDENDA, CHANGE ORDERS, AND OTHER MATERIAL DESIGN CHANGES, BUT NOT NECESSARILY ALL SITE INSTRUCTIONS. THE UNDERSIGNED DOES NOT WARRANT OR GUARANTEE, NOR ACCEPT ANY RESPONSIBILITY FOR THE ACCURACY OR COMPLETENESS OF THE AS-CONSTRUCTED INFORMATION SUPPLIED BY OTHERS CONTAINED IN THESE DRAWINGS, BUT DOES, BY SEALING AND SIGNING, CERTIFY THAT THE AS-CONSTRUCTED INFORMATION, IF ACCURATE AND COMPLETE, PROVIDES AN AS-CONSTRUCTED SYSTEM WHICH SUBSTANTIALLY COMPLIES IN ALL MATERIAL RESPECTS WITH THE ORIGINAL DESIGN INTENT.

CHAIN LINK GATE
PAIGE WIRE FENCE
RING ROAD
RING ROAD WIDTHS – 7.0m ASPHALT AND 1.0m GRAVEL SHOULDERS TYP. REFER TO D100
CHAIN LINK GATE
TOP OF SLOPE (TYP.)
600mm CORRUGATED STEEL PIPE CULVERT c/w HEADWALLS
600mm CORRUGATED STEEL PIPE CULVERT c/w HEADWALLS
BREDIN HILL ACCESS ROAD WIDTHS SHALL BE 8.0m GRAVEL ROAD. REFER TO D100
4–75mm CONDUITS c/w JUNCTION BOXES (2–ELEC AND 2–COMM)
LEACHATE COLLECTION SUMP RISER PUMP SYSTEM SEE DETAILS A ON DWG D103 AND CENTRIX DRAWINGS
BREDIN HILL ACCESS ROAD
BOTTOM OF SLOPE (TYP.)
DITCH (TYP.)
EX OVERHEAD POWERLINES
150mm HDPE IRRIGATION
DESIGN ALIGNMENT
100mm HDPE LEACHATE FORCEMAIN
TOP OF LINER
LEACHATE COLLECTION SYSTEM
EX. 100mm HDPE FORCEMAIN (ABANDONED)
EX 150mm HDPE IRRIGATION
600mm CORRUGATED STEEL PIPE CULVERTS c/w HEADWALLS
FUTURE 500mm HDPE LANDFILL GAS HEADER
400mm HDPE LANDFILL GAS SUB-HEADER
600mm HDPE CULVERTS c/w HEADWALLS
CHAIN LINK GATE
500mm HDPE LANDFILL GAS HEADER
EX 500mm HDPE LANDFILL GAS HEADER
EX. HYDRANT
EX 300mm PVC WAT
TIE IN TO EXISTING LINER
AREA 2 LEACHATE COLLECTION SYSTEM
EX DITCH
RING ROAD
AREA 2
EX 4–75mm CONDUITS c/w JUNCTION BOXES
EX 150mm HDPE IRRIGATION
NE POND
EX 150mm HDPE WAT
ROAD 2
EX 400mm HDPE STM
EX 200mm HDPE PERF. LEACHATE
AREA 3 BOUNDARY
EX. LANDFILL GAS COLLECTION SYSTEM

0 50 100m
SCALE: 1:1000

LEGEND

WATER	EDGE OF ASPH.	STORM MANHOLE	
LEACHATE SEWER	EDGE OF GRAVEL	SAN MANHOLE	
LEACHATE F.M.	TOP OF SLOPE	POWER POLE	P.P.
STORM SEWER	BOT. OF SLOPE	WATER VALVE	
LANDFILL GAS	FENCE	HYDRANT	
ELECTRICAL	IRRIGATION	WELLHEAD	
CONDUITS			
DITCH LINE			

wsp
700 - 1631 DICKSON AVENUE
KELOWNA, BC
CANADA V1Y 0B5
PHONE: 250-980-5500
WWW.WSP.COM

NAD 83

INSERTION BASE POINT= 300,000 , 5,500,000

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3	24/01/22	KU	ISSUED FOR 100% DESIGN	CE
2	23/09/07	KU	ISSUED FOR 75% DESIGN	CE
1	21/03/09	CE	RE-ISSUED FOR REVIEW	DG

WSP Canada Inc. Engineers & Geoscientists BC Permit #1000200
PROFESSIONAL ENGINEER C. EVANCIO # 53165 BRITISH COLUMBIA
2026-02-27

BASE CE	DESIGN CE
APPROVED DG	
DECEMBER 2020	
SCALE 1:1000	

SCALE NOT ACCURATE OVER LONG DISTANCES

THE CITY OF KELOWNA
DESIGN AND CONSTRUCTION

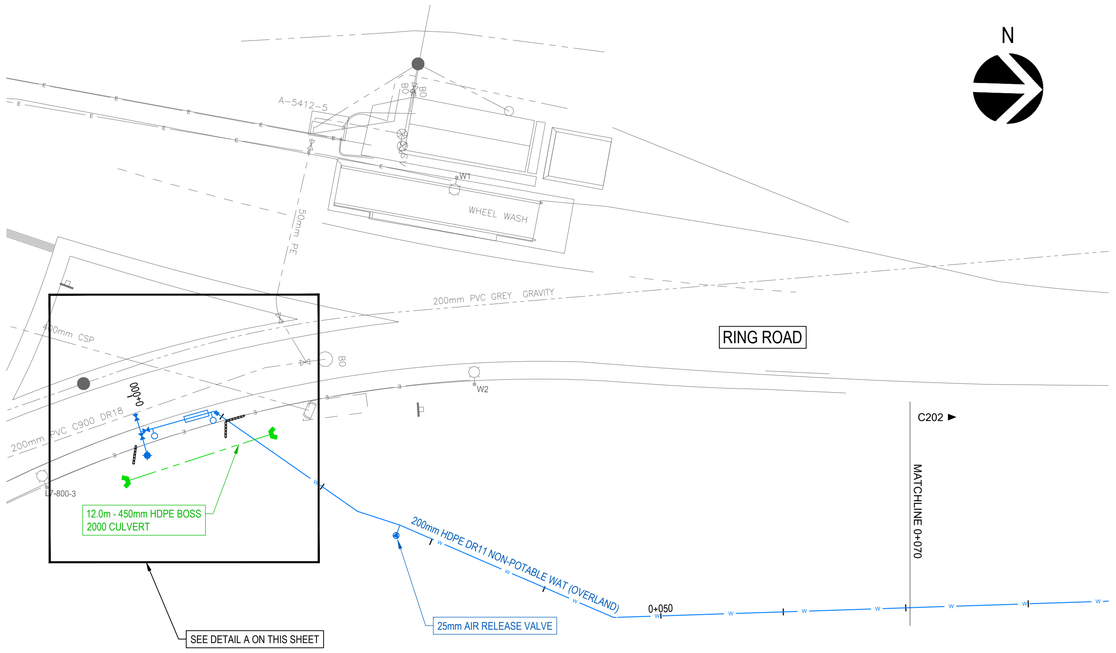
GLENMORE LANDFILL – AREA 3
COMPOSITE UTILITY
PLAN

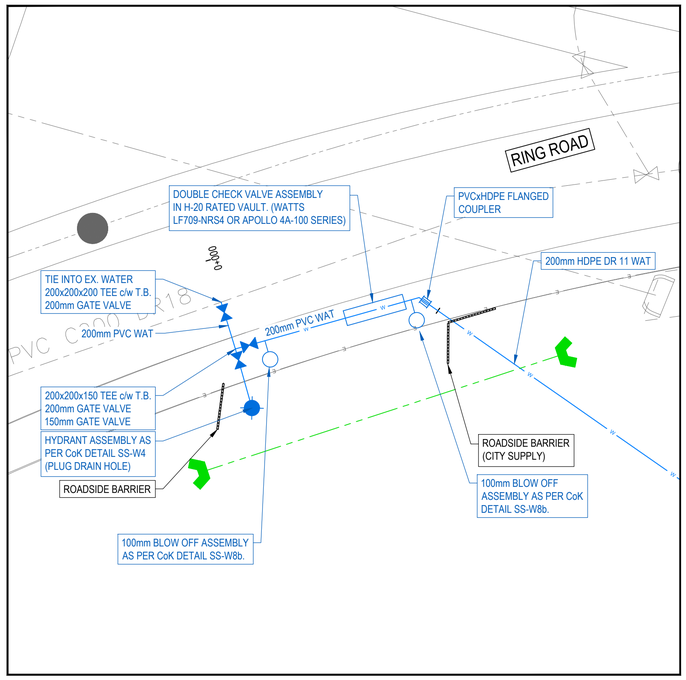
DIVISION

DRAWING NO. C100

REV NO 6

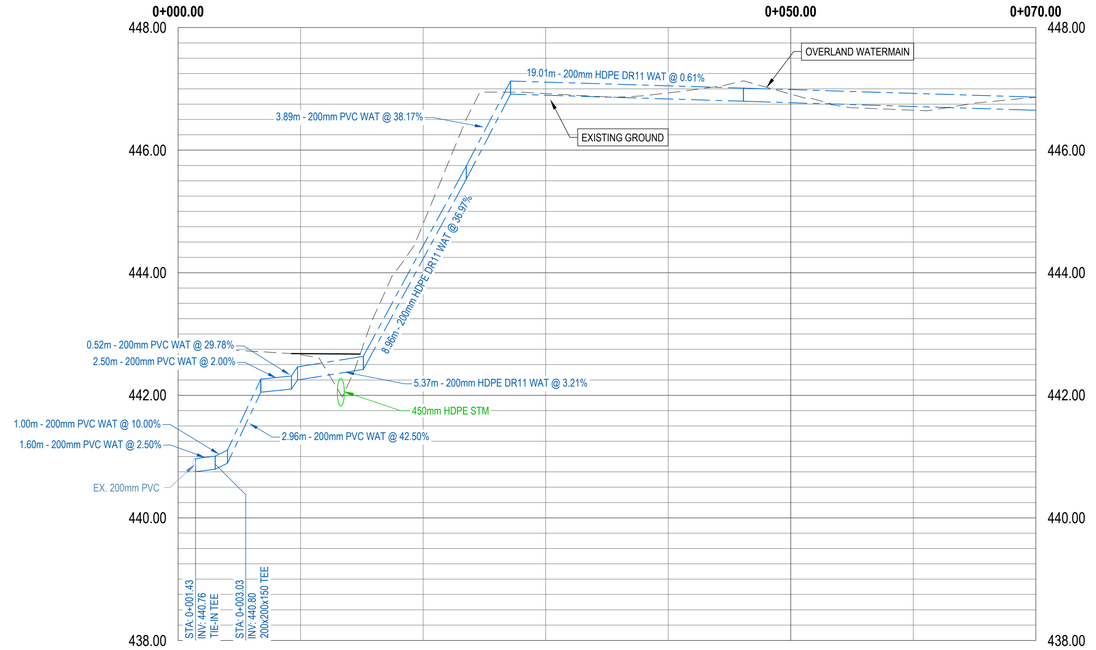
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NOTES:

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2. AIR RELEASE VALVE/VACUUM VALVE TO BE VENT-O-MAT RBX c/w 200x200x75mm TEE AND ISOLATION VALVE IN IRRIGATION VALVE BOX.
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6. OVERLAND WATERMAIN IS CONSIDERED TEMPORARY AND DOES NOT PROVIDE ADEQUATE FIRE FLOW.



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0 5 10 15 20 25m

SCALE: 1:250

LEGEND

WATER	EDGE OF ASPH.	STORM MANHOLE	
LEACHATE SEWER	EDGE OF GRAVEL	SAN MANHOLE	
LEACHATE F.M.	TOP OF SLOPE	POWER POLE	P.P.
STORM SEWER	BOT. OF SLOPE	WATER VALVE	
LANDFILL GAS	FENCE	HYDRANT	
ELECTRICAL	IRRIGATION	WELLHEAD	
CONDUITS			
DITCH LINE			

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NAD 83

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WSP Canada Inc.
Engineers & Geoscientists BC
Permit #1000200

PROFESSIONAL ENGINEER
PROVINCE OF BRITISH COLUMBIA
C. EVANCIO
53165
ENGINEER
2026-02-27

BASE CE	DESIGN CE
APPROVED DG	
MAY 2024	
SCALE HORIZ. 1:250 VERT. 1:50	

SCALE NOT ACCURATE OVER LONG DISTANCES

THE CITY OF KELOWNA

DESIGN AND CONSTRUCTION

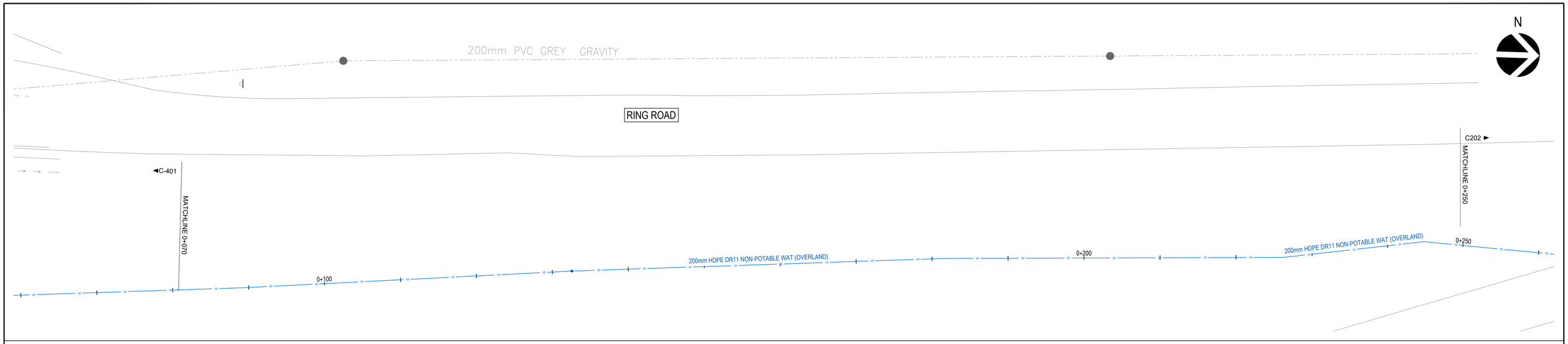
GLENMORE LANDFILL OVERLAND WATERMAIN

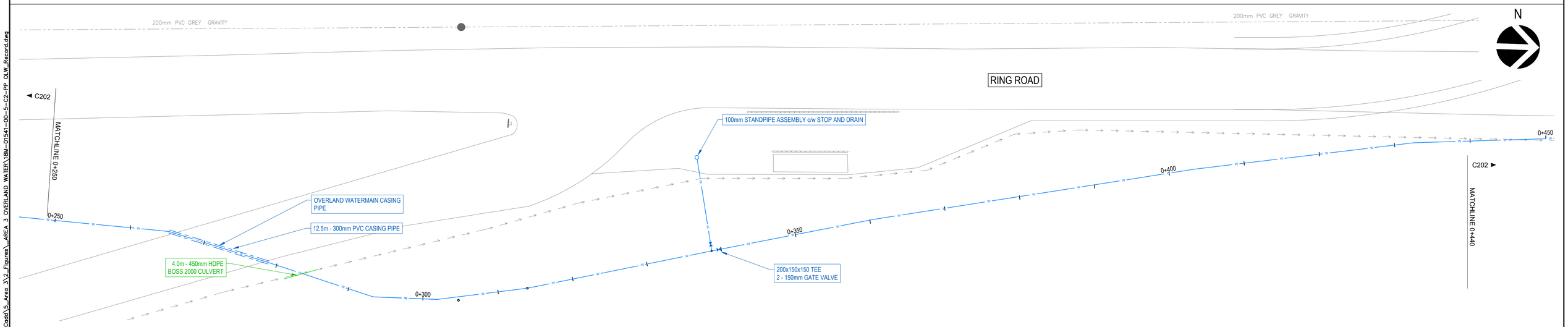
DIVISION

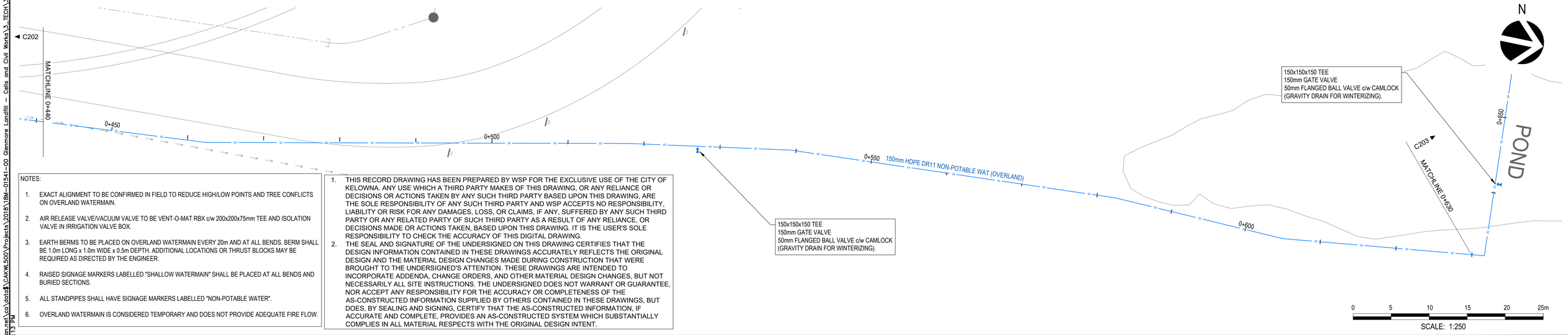
DRAWING NO. C201

REV NO 3

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PRINTED: Thursday, February 26, 2026 2:54 PM







NOTES:

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LEGEND

WATER	EDGE OF ASPH.	STORM MANHOLE	
LEACHATE SEWER	EDGE OF GRAVEL	SAN MANHOLE	
LEACHATE F.M.	TOP OF SLOPE	POWER POLE	P.P.
STORM SEWER	BOT. OF SLOPE	WATER VALVE	
LANDFILL GAS	FENCE	HYDRANT	
ELECTRICAL	IRRIGATION	WELLHEAD	
CONDUITS			
DITCH LINE			

WSP
700 - 1631 DICKSON AVENUE
KELOWNA, BC
CANADA V1Y 0B5
PHONE: 250-980-5500
WWW.WSP.COM

NAD 83

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WSP Canada Inc.
Engineers & Geoscientists BC
Permit #1000200
PROFESSIONAL ENGINEER
PROVINCE OF BRITISH COLUMBIA
C. EVANCIO
53165
ENGINEER
2026-02-27

BASE CE	DESIGN CE
APPROVED DG	
MAY 2024	
SCALE	HORIZ. 1:250 VERT. 1:50

SCALE NOT ACCURATE OVER LONG DISTANCES

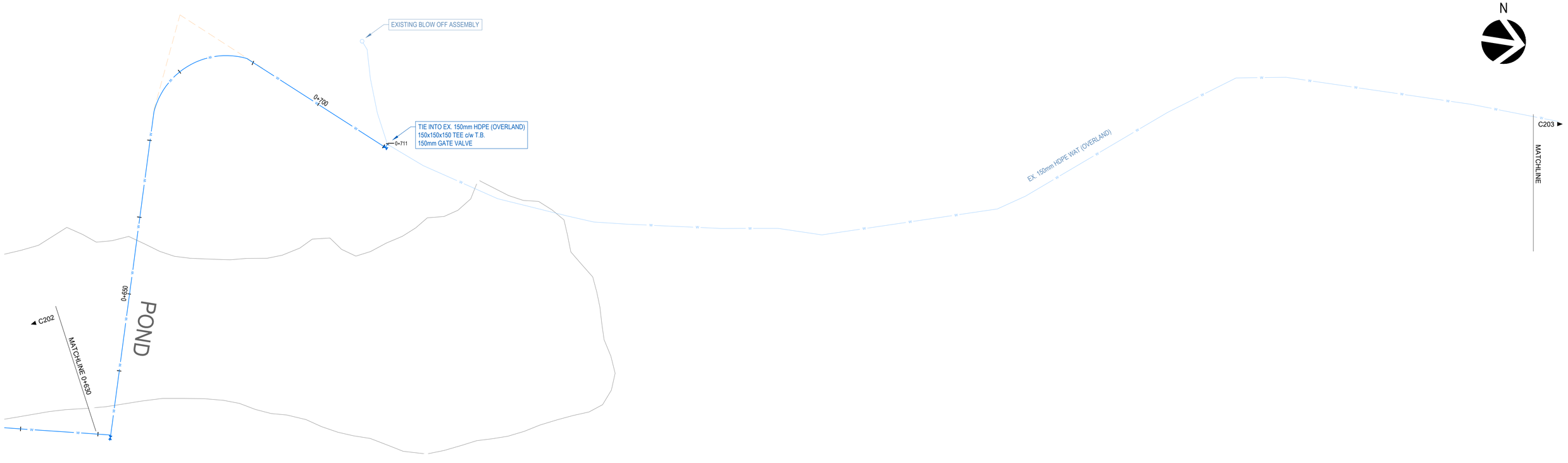
THE CITY OF KELOWNA
DESIGN AND CONSTRUCTION

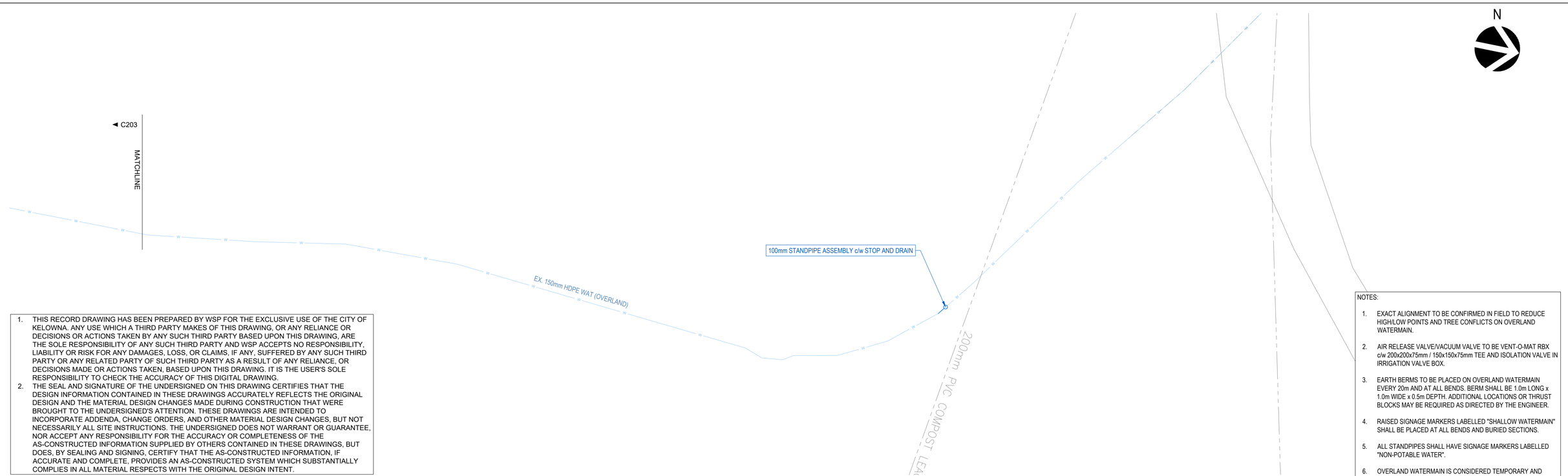
GLENMORE LANDFILL
OVERLAND WATERMAIN

DIVISION

DRAWING NO.	REV NO.
C202	3

FILE LOCATION: \\corp.pbwan.net\ca\data$\CAKWL500\Projects\2018\VBM-01541-00-5-C2-PP OLW_Record.dwg
PRINTED ON: 2026/02/27 2:13 PM





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0 5 10 15 20 25m

SCALE: 1:250

LEGEND

WATER	EDGE OF ASPH.	STORM MANHOLE	
LEACHATE SEWER	EDGE OF GRAVEL	SAN MANHOLE	
LEACHATE F.M.	TOP OF SLOPE	POWER POLE	P.P.
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CONDUITS			
DITCH LINE			

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NAD 83

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53165
BRITISH COLUMBIA
2026-02-27

BASE CE	DESIGN CE
APPROVED DG	
MAY 2024	
SCALE HORIZ. 1:250 VERT. 1:50	

SCALE NOT ACCURATE OVER LONG DISTANCES

THE CITY OF KELOWNA
DESIGN AND CONSTRUCTION

GLENMORE LANDFILL OVERLAND WATERMAIN

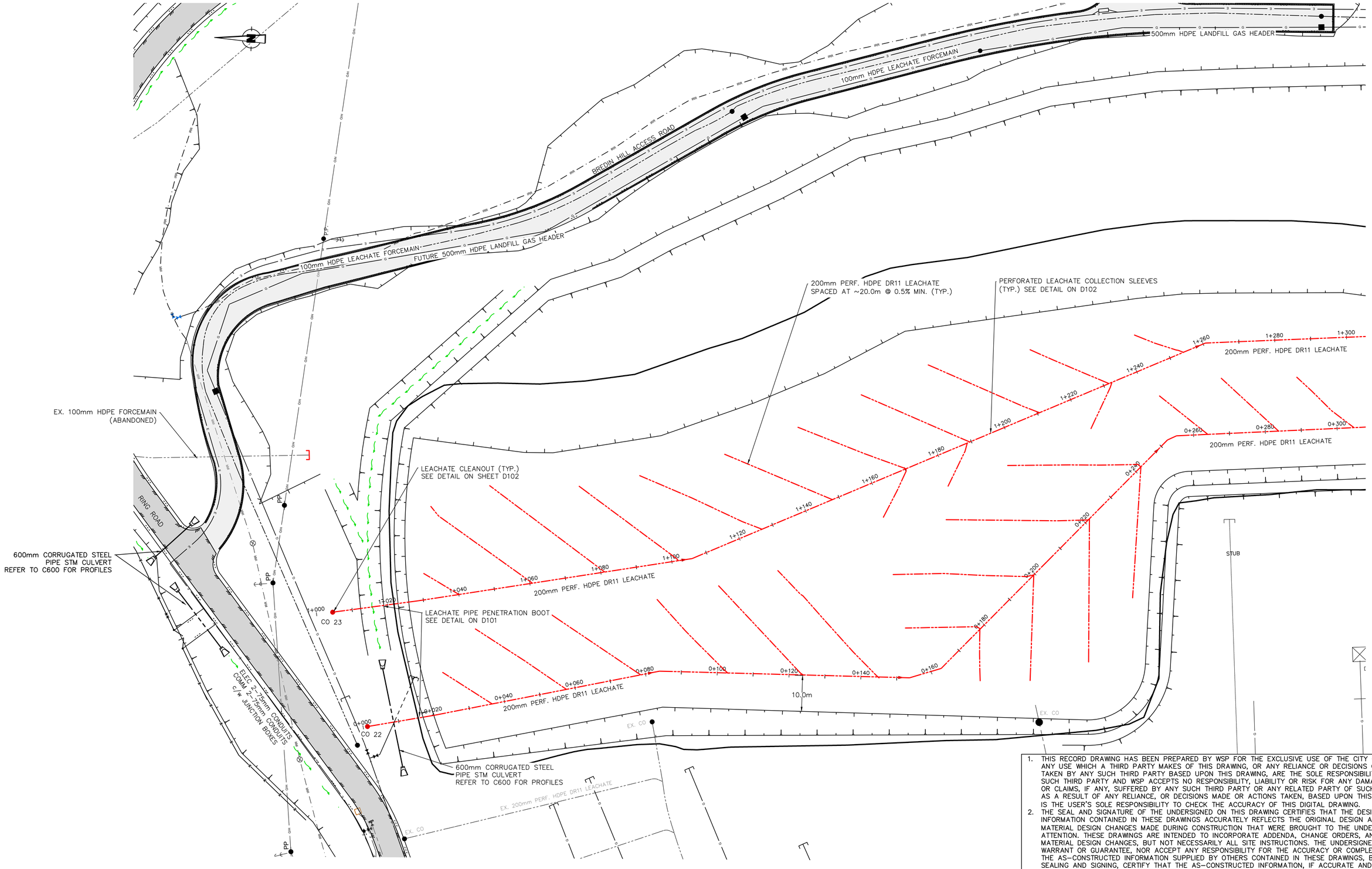
DIVISION

DRAWING NO. C203

REV NO 3

FILE LOCATION: \\corp.pbwan.net\ca\data$\CAKW.500\Projects\2018\18M-01541-00 Glenmore Landfill - Cells and Civil Works\3_TECH\3_Cadd\5_Area 3\2_Figures\AREA 3 OVERLAND WATERMAIN_Record.dwg
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0 10 20 30 40 50m

SCALE: 1:500

LEGEND

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LEACHATE SEWER	EDGE OF GRAVEL	SAN MANHOLE	
LEACHATE F.M.	TOP OF SLOPE	POWER POLE	P.P.
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DECEMBER 2020	
SCALE 1:500	

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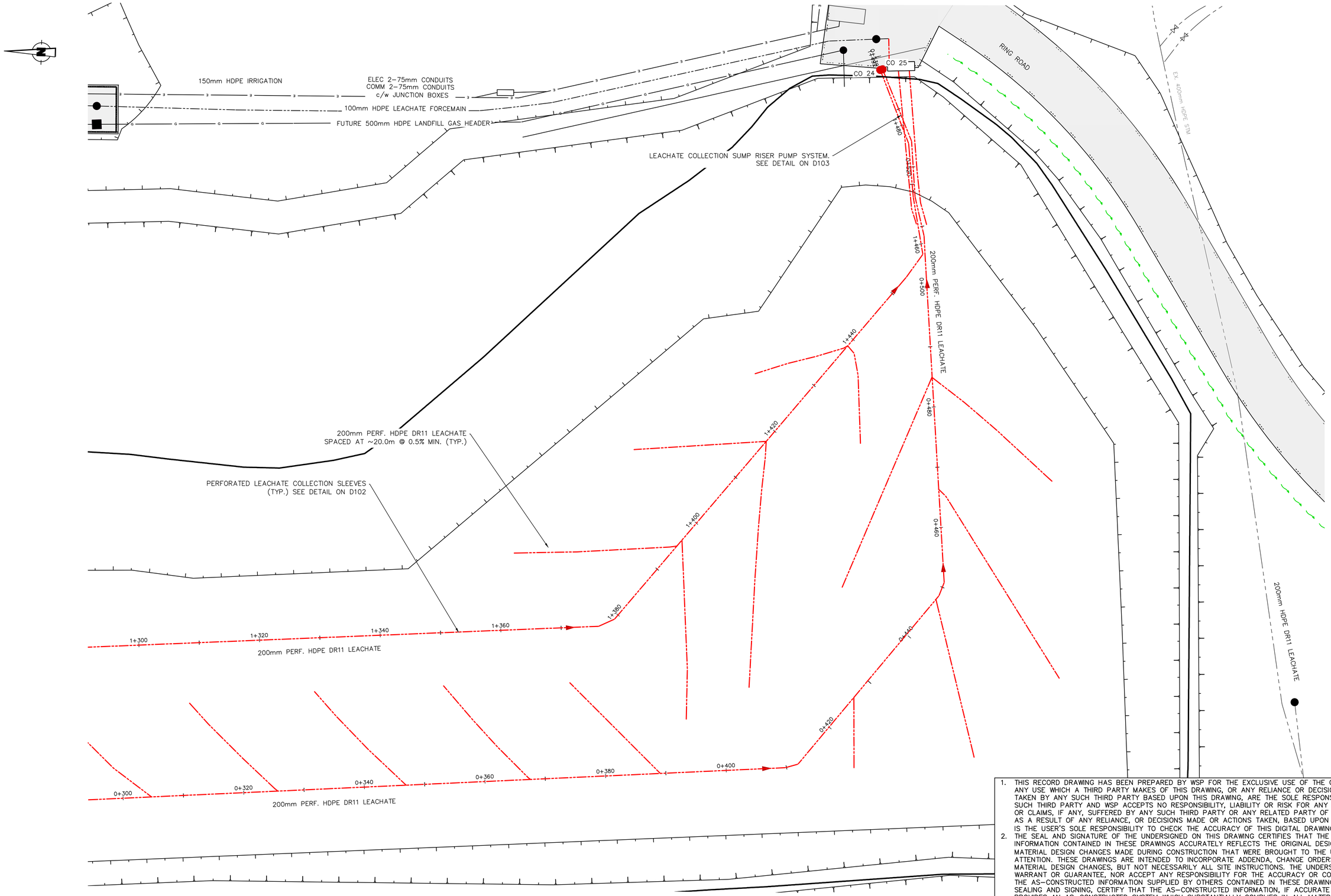
THE CITY OF KELOWNA
DESIGN AND CONSTRUCTION

GLENMORE LANDFILL – AREA 3 LEACHATE COLLECTION PLAN NORTH

DIVISION

DRAWING NO. C300

REV NO 6



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0 3 6 9 30m

SCALE: 1:300

LEGEND

WATER	EDGE OF ASPH.	STORM MANHOLE	
LEACHATE SEWER	EDGE OF GRAVEL	SAN MANHOLE	
LEACHATE F.M.	TOP OF SLOPE	POWER POLE	P.P.
STORM SEWER	BOT. OF SLOPE	WATER VALVE	
LANDFILL GAS	FENCE	HYDRANT	
ELECTRICAL	IRRIGATION	WELLHEAD	
CONDUITS			
DITCH LINE			

WSP
700 - 1631 DICKSON AVENUE
KELOWNA, BC
CANADA V1Y 0B5
PHONE: 250-980-5500
WWW.WSP.COM

NAD 83

INSERTION BASE POINT= 300,000 , 5,500,000

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2	23/09/07	KU	ISSUED FOR 75% DESIGN	CE
1	21/03/09	CE	RE-ISSUED FOR REVIEW	DG

WSP Canada Inc.
Engineers & Geoscientists BC
Permit #1000200
PROFESSIONAL ENGINEER
PROVINCE OF BRITISH COLUMBIA
C. EVANCIO
53165
ENGINEER
2026-02-27

BASE CE	DESIGN CE
APPROVED DG	
DECEMBER 2020	
SCALE 1:300	

SCALE NOT ACCURATE OVER LONG DISTANCES

THE CITY OF KELOWNA

DESIGN AND CONSTRUCTION

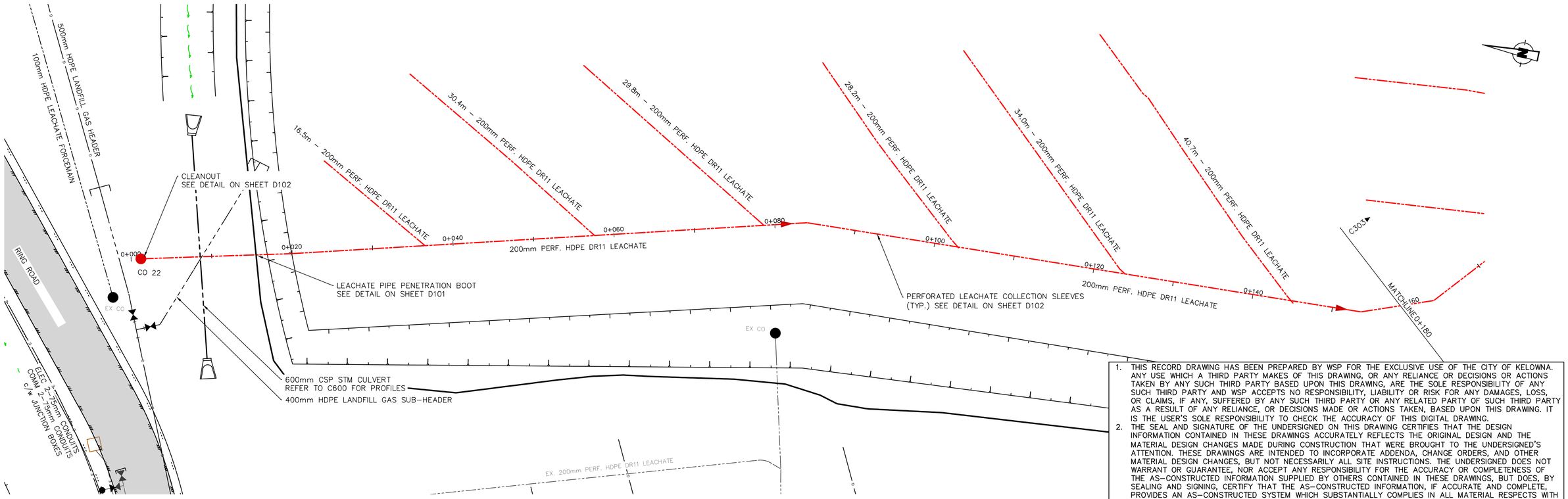
GLENMORE LANDFILL – AREA 3 LEACHATE COLLECTION PLAN SOUTH

DIVISION

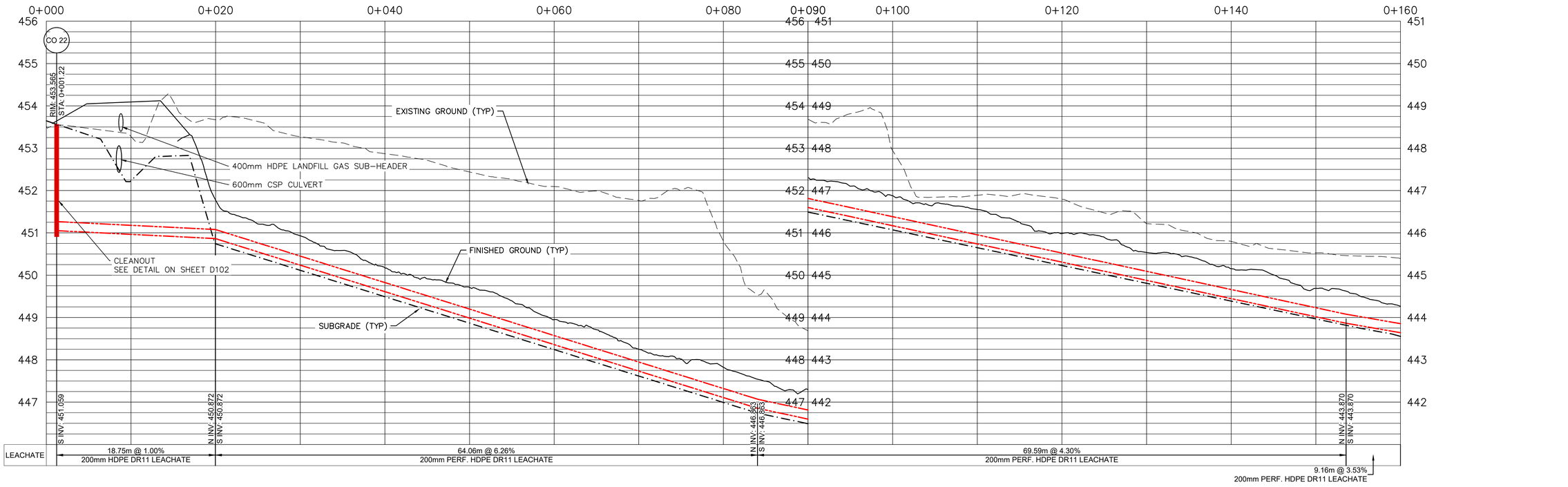
DRAWING NO. C301

REV NO 6

FILE LOCATION: \\corp.pbwan.net\ca\data$\CAKWL500\Projects\2019\BM-01541-00 Glenmore Landfill - Cells and Civil Works\3_TECH\3_Cad\5_Area 3\3_Sheets\[BM-01541-00-5-C3A-PP LEACHATE.dwg PRINTED ON: 2/26/2026
PLOT BY:



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0 5 10 15 20 25m

SCALE: 1:250

LEGEND

WATER, LEACHATE SEWER, LEACHATE F.M., STORM SEWER, LANDFILL GAS, ELECTRICAL, CONDUITS, DITCH LINE
EDGE OF ASPH., EDGE OF GRAVEL, TOP OF SLOPE, BOT. OF SLOPE, FENCE, IRRIGATION
STORM MANHOLE, SAN MANHOLE, POWER POLE, WATER VALVE, HYDRANT, WELLHEAD

WSP
700 - 1631 DICKSON AVENUE
KELOWNA, BC
CANADA V1Y 0B5
PHONE: 250-980-5500
WWW.WSP.COM

NAD 83

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2	23/09/07	KU	ISSUED FOR 75% DESIGN	CE
1	21/03/09	CE	RE-ISSUED FOR REVIEW	DG

WSP Canada Inc. Engineers & Geoscientists BC Permit #1000200
PROFESSIONAL ENGINEER C. EVANCIO # 53165 BRITISH COLUMBIA
2026-02-27

BASE	DESIGN
CE	CE
APPROVED	
DG	
DECEMBER 2020	
SCALE	HORIZ. 1:250 VERT. 1:50

SCALE NOT ACCURATE OVER LONG DISTANCES

THE CITY OF KELOWNA
DESIGN AND CONSTRUCTION

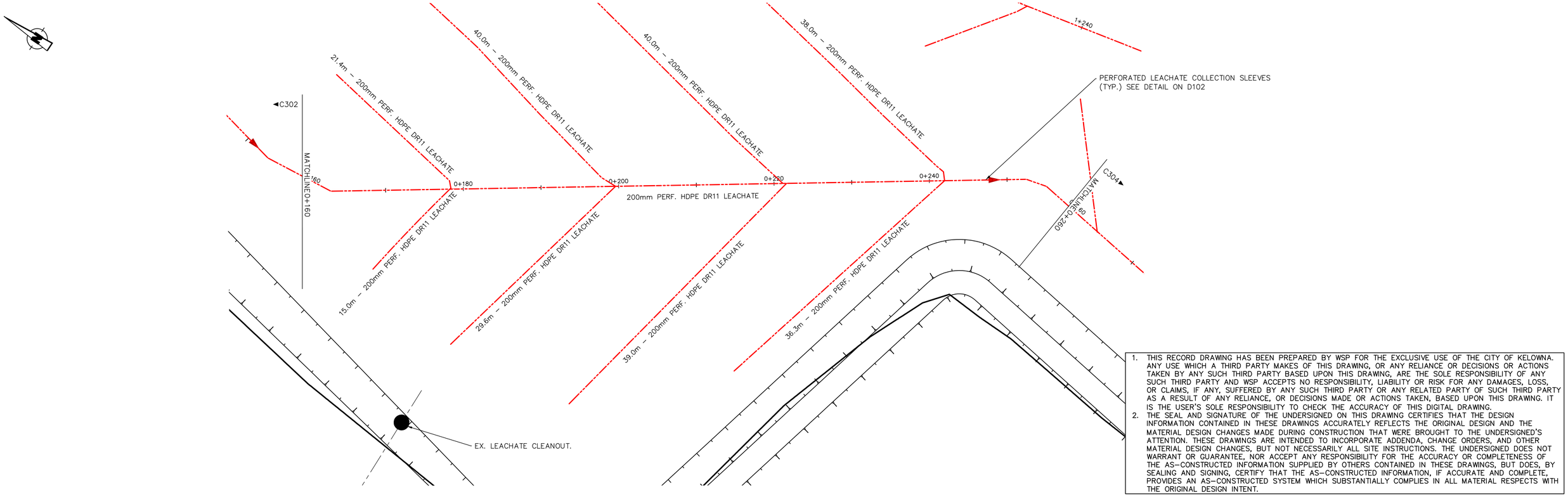
GLENMORE LANDFILL – AREA 3
LEACHATE COLLECTION PLAN PROFILE
STA. 0+000 TO 0+160

DIVISION

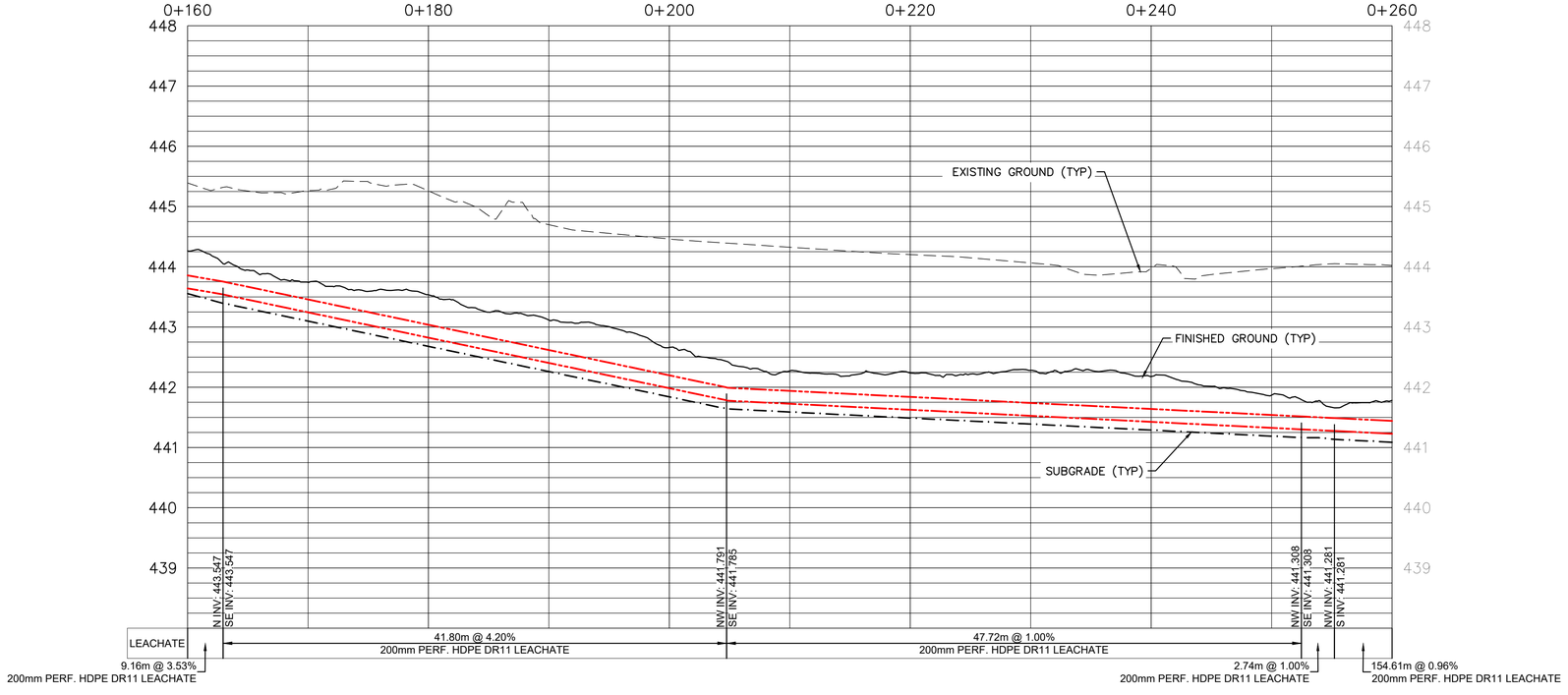
DRAWING NO. C302

REV NO 6

FILE LOCATION: P:\2018\BM-01541-00 Glenmore Landfill - Cells and Civil Works\3_TECH\3_Cadd\5_Area 3\3_Sheets\BM-01541-00-5-C3A-PP LEACHATE.dwg PRINTED ON: 2/27/2026 2:20 PM



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0 5 10 15 20 25m

SCALE: 1:250

LEGEND

WATER, LEACHATE SEWER, LEACHATE F.M., STORM SEWER, LANDFILL GAS, ELECTRICAL, CONDUITS, DITCH LINE
EDGE OF ASPH., EDGE OF GRAVEL, TOP OF SLOPE, BOT. OF SLOPE, FENCE, IRRIGATION
STORM MANHOLE, SAN MANHOLE, POWER POLE, WATER VALVE, HYDRANT, WELLHEAD

700 - 1631 DICKSON AVENUE
KELOWNA, BC
CANADA V1Y 0B5
PHONE: 250-980-5500
WWW.WSP.COM

NAD 83

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WSP Canada Inc.
Engineers & Geoscientists BC
Permit #1000200

PROFESSIONAL ENGINEER
PROVINCE OF BRITISH COLUMBIA
C. EVANCIO
53165
ENGINEER
2026-02-27

BASE	DESIGN
CE	CE
APPROVED	
DG	
DECEMBER 2020	
SCALE HORIZ. 1:250 VERT. 1:50	

SCALE NOT ACCURATE OVER LONG DISTANCES

THE CITY OF KELOWNA

DESIGN AND CONSTRUCTION

GLENMORE LANDFILL – AREA 3
LEACHATE COLLECTION PLAN PROFILE
STA. 0+160 TO 0+260

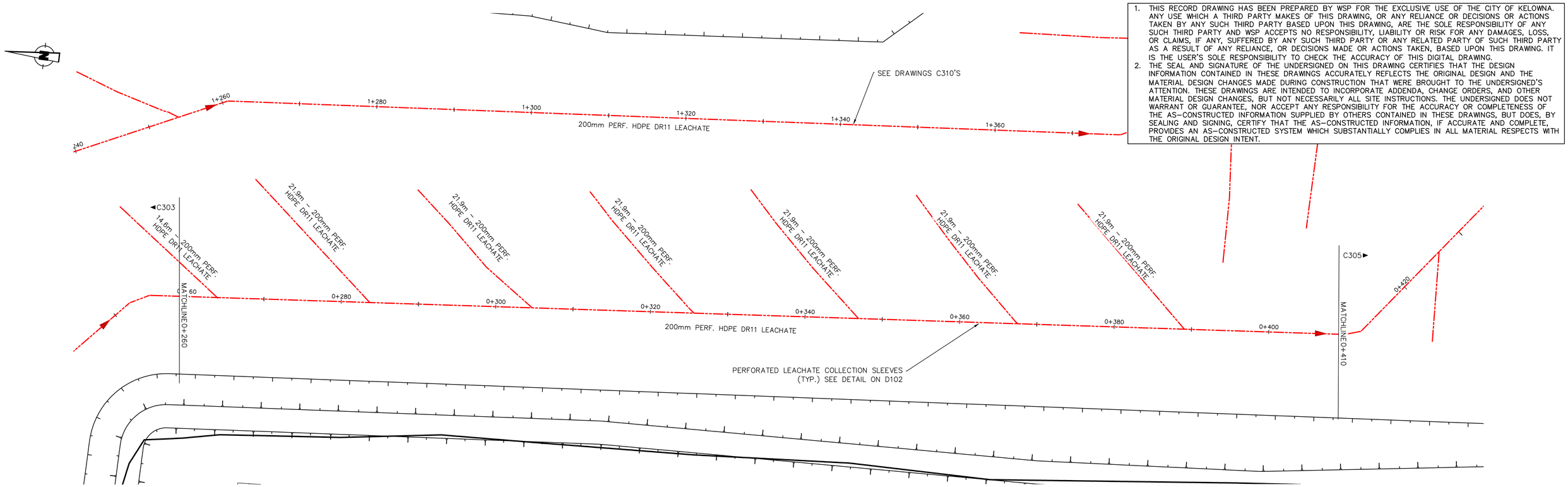
DIVISION

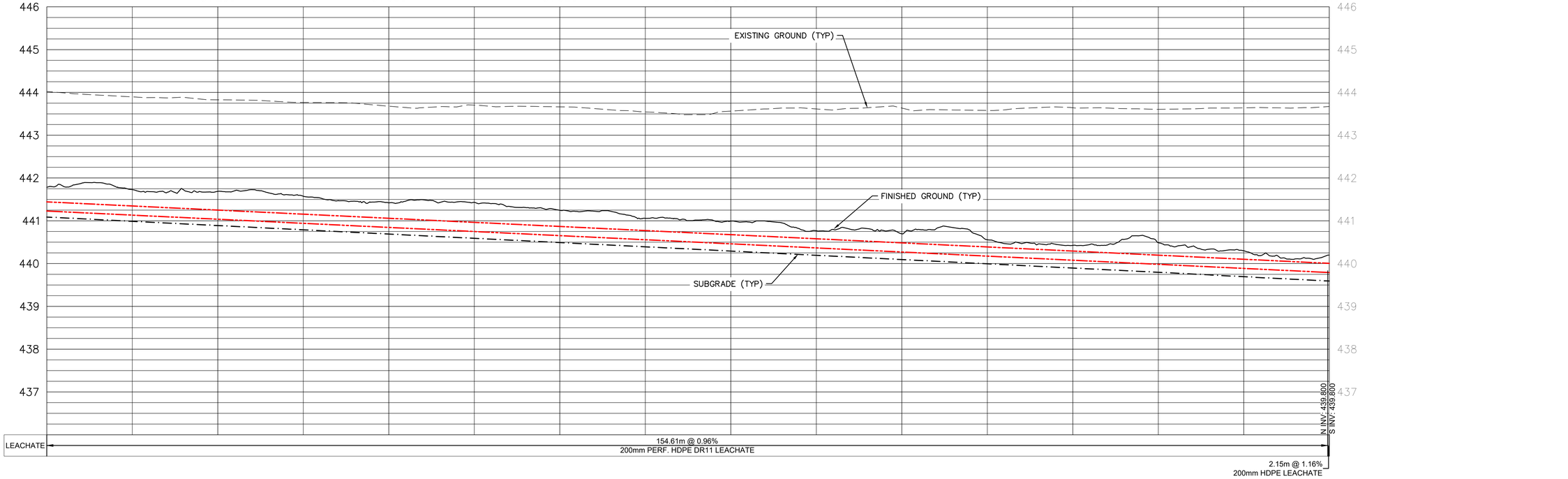
DRAWING NO. C303

REV NO. 6

FILE LOCATION: \\corp.pbwan.net\ca\data$\CAKWL500\Projects\2018\1BM-01541-00 Glenmore Landfill - Cells and Civil Works\3_TECH\3_Cadd\5_Area 3\3_Sheets\1BM-01541-00-5-C3A-PP LEACHATE.dwg PRINTED ON: 2/26/2026
BY: KWU

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0 5 10 15 20 25m

SCALE: 1:250

LEGEND

WATER	EDGE OF ASPH.	STORM MANHOLE
LEACHATE SEWER	EDGE OF GRAVEL	SAN MANHOLE
LEACHATE F.M.	TOP OF SLOPE	POWER POLE
STORM SEWER	BOT. OF SLOPE	WATER VALVE
LANDFILL GAS	FENCE	HYDRANT
ELECTRICAL	IRRIGATION	WELLHEAD
CONDUITS		
DITCH LINE		

WSP
700 - 1631 DICKSON AVENUE
KELOWNA, BC
CANADA V1Y 0B5
PHONE: 250-980-5500
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NAD 83

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PROFESSIONAL ENGINEER
PROVINCE OF BRITISH COLUMBIA
C. EVANCIO # 53165
ENGINEER
2026-02-27

BASE CE	DESIGN CE
APPROVED DG	
DECEMBER 2020	
SCALE	HORIZ. 1:250 VERT. 1:50

SCALE NOT ACCURATE OVER LONG DISTANCES

THE CITY OF KELOWNA

DESIGN AND CONSTRUCTION

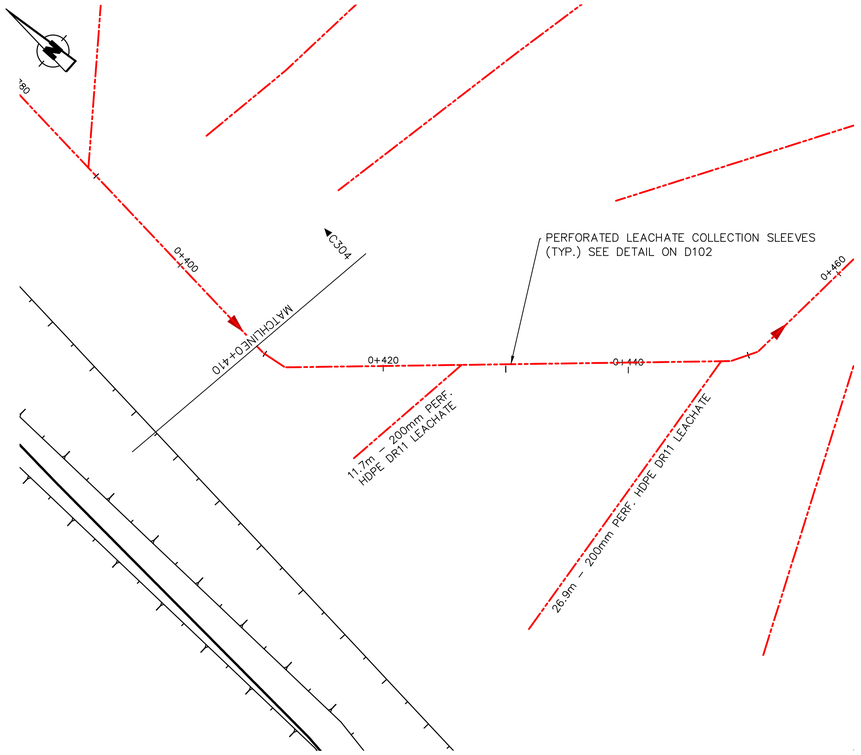
GLENMORE LANDFILL – AREA 3 LEACHATE COLLECTION PLAN PROFILE STA. 0+260 TO 0+410

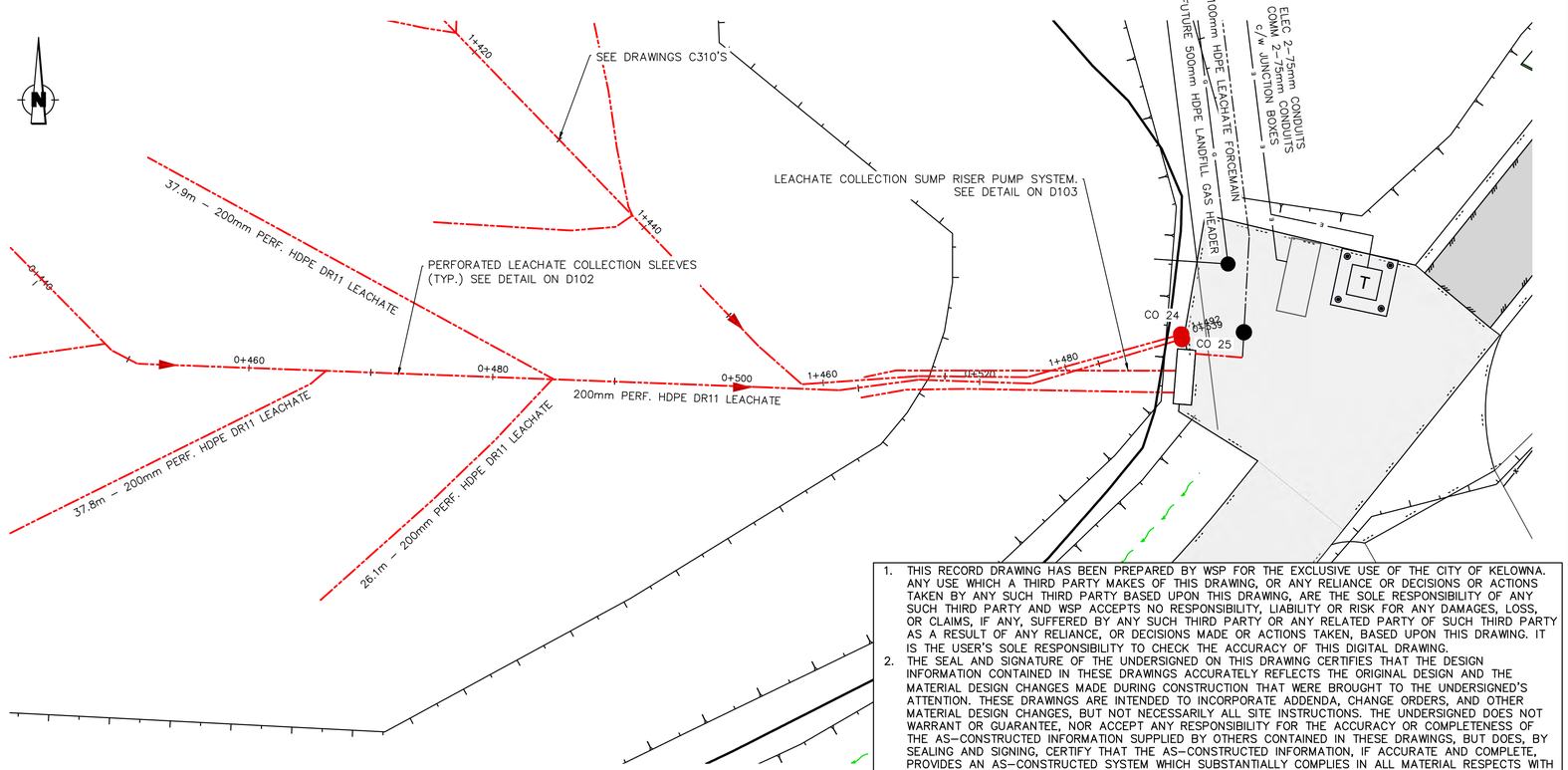
DIVISION

DRAWING NO. C304

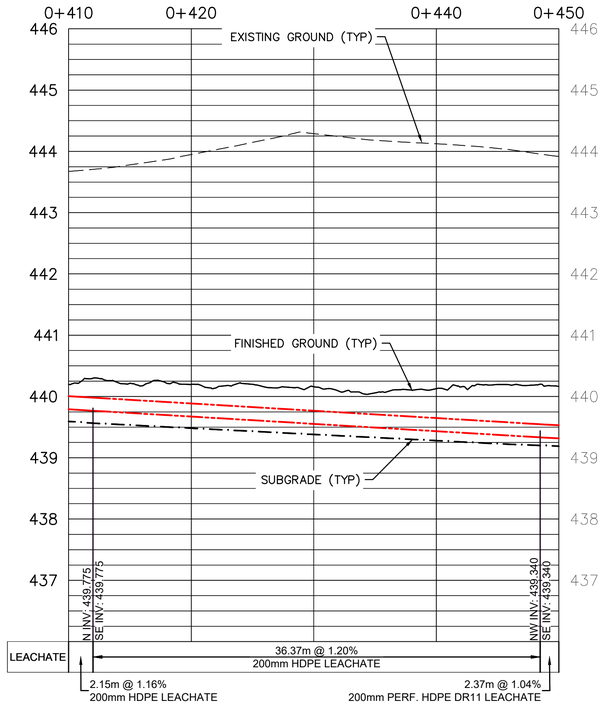
REV NO 6

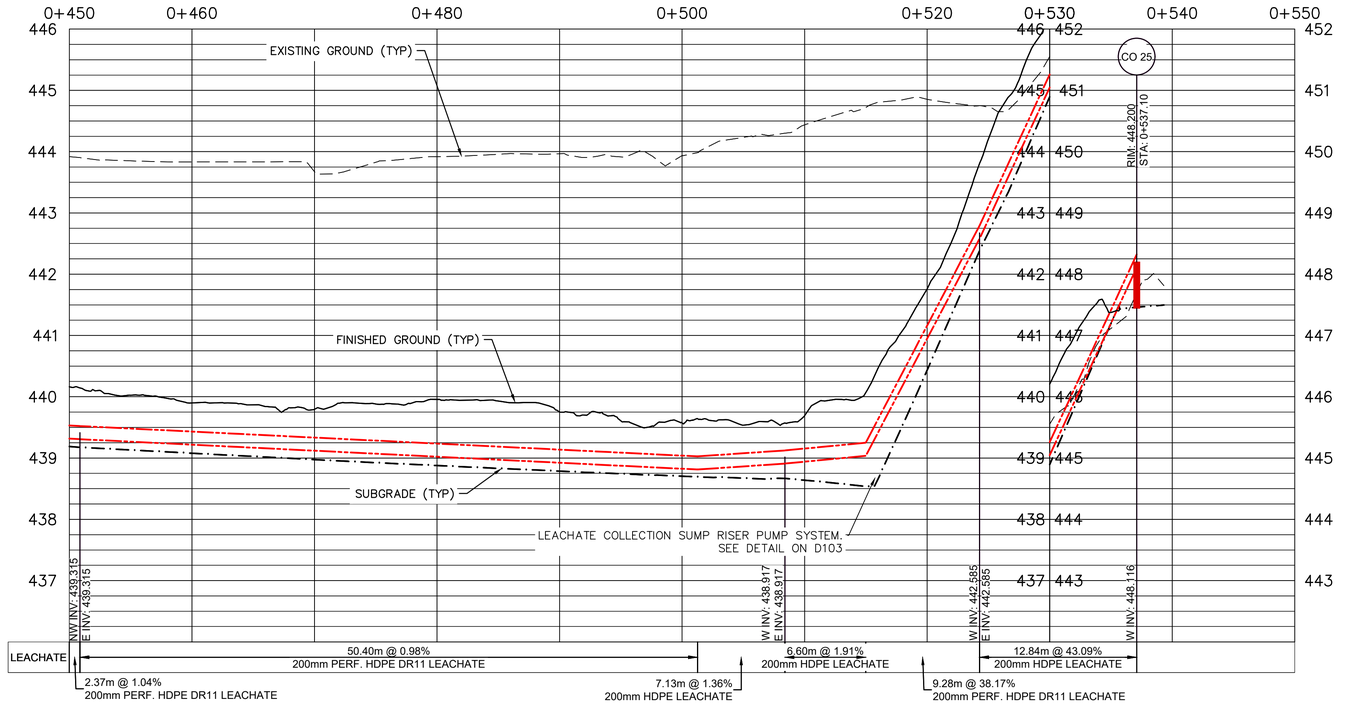
FILE LOCATION: \\corp.pbwan.net\ca\data$\CAKWL500\Projects\2018\1BM-01541-00 Glenmore Landfill - Cells and Civil Works\3_TECH\3_Cadd\5_Area 3\3_Sheets\1BM-01541-00-5-C3A-PP LEACHATE.dwg PRINTED ON: 2/26/2026 9:15 AM





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0 5 10 15 20 25m

SCALE: 1:250

LEGEND

WATER
LEACHATE SEWER
LEACHATE F.M.
STORM SEWER
LANDFILL GAS
ELECTRICAL
CONDUITS
DITCH LINE
EDGE OF ASPH.
EDGE OF GRAVEL
TOP OF SLOPE
BOT. OF SLOPE
FENCE
IRRIGATION
STORM MANHOLE
SAN MANHOLE
POWER POLE
WATER VALVE
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wsp
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CANADA V1Y 0B5
PHONE: 250-980-5500
WWW.WSP.COM

NAD 83

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C. EVANCIO
53165
ENGINEER
2026-02-27

BASE CE | DESIGN CE
APPROVED DG
DECEMBER 2020
SCALE HORIZ. 1:250 VERT. 1:50
SCALE NOT ACCURATE OVER LONG DISTANCES

THE CITY OF KELOWNA
DESIGN AND CONSTRUCTION

GLENMORE LANDFILL – AREA 3
LEACHATE COLLECTION PLAN PROFILE
STA. 0+410 TO 0+550

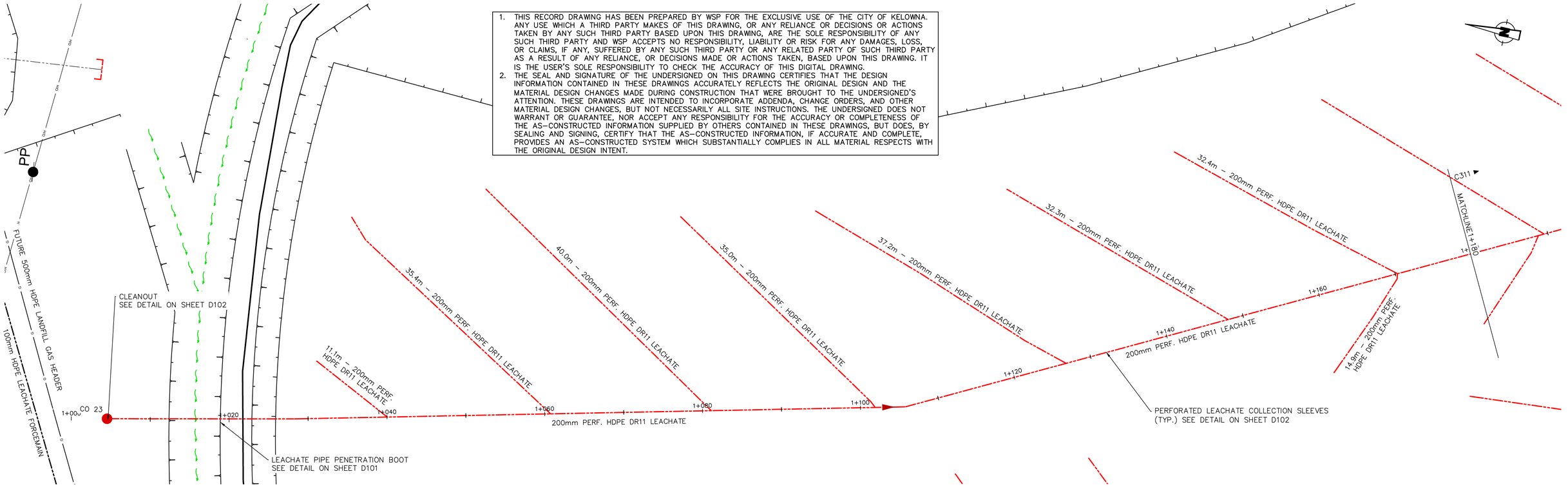
DIVISION

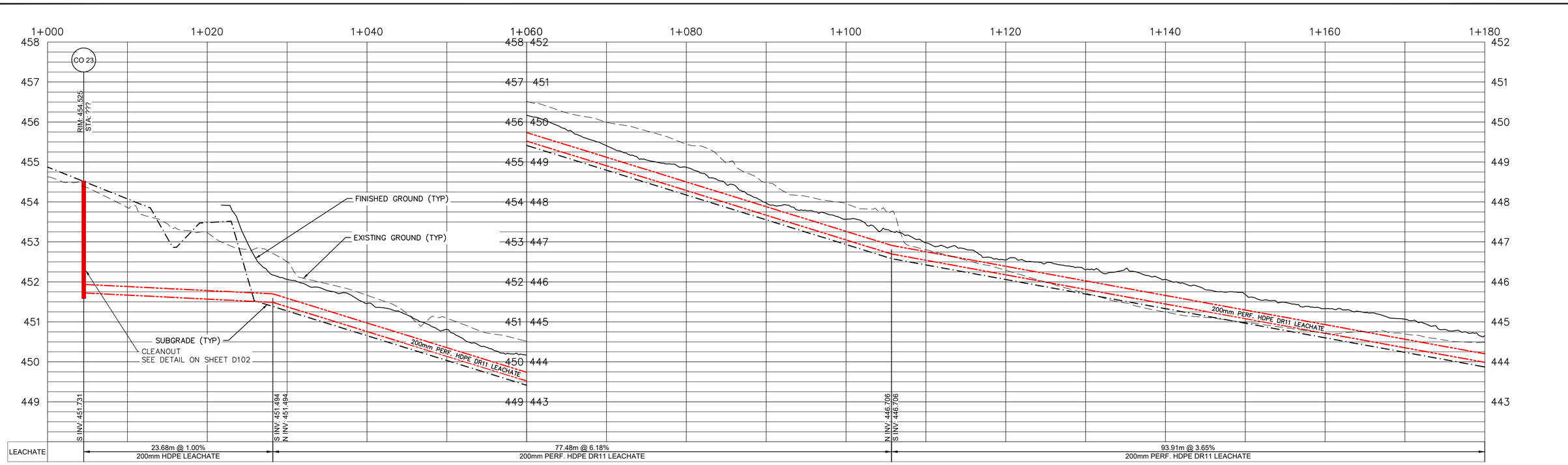
DRAWING NO. C305

REV NO 6

FILE LOCATION: \\corp.pbwan.net\ca\data$\CAKWL500\Projects\2018\18M-01541-00 Glenmore Landfill – Cells and Civil Works\3_TECH\3_Cad\5_Area 3\3_Sheets\18M-01541-00-5-C3A-PP LEACHATE.dwg PRINTED ON: 2/26/2026

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0 5 10 15 20 25m

SCALE: 1:250

LEGEND

WATER	EDGE OF ASPH.	STORM MANHOLE
LEACHATE SEWER	EDGE OF GRAVEL	SAN MANHOLE
LEACHATE F.M.	TOP OF SLOPE	POWER POLE
STORM SEWER	BOT. OF SLOPE	WATER VALVE
LANDFILL GAS	FENCE	HYDRANT
ELECTRICAL	IRRIGATION	WELLHEAD
CONDUITS		
DITCH LINE		

700 - 1631 DICKSON AVENUE
KELOWNA, BC
CANADA V1Y 0B5
PHONE: 250-980-5500
WWW.WSP.COM

NAD 83

INSERTION BASE POINT= 300,000 , 5,500,000

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4	24/02/14	KG	ISSUED FOR REQUEST FOR PROPOSAL	CE
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2	23/09/07	KU	ISSUED FOR 75% DESIGN	CE
1	21/03/09	CE	RE-ISSUED FOR REVIEW	DG

WSP Canada Inc.
Engineers & Geoscientists BC
Permit #1000200

C. EVANCIO
53165
PROFESSIONAL ENGINEER
PROVINCE OF BRITISH COLUMBIA
2026-02-27

BASE CE	DESIGN CE
APPROVED DG	
DECEMBER 2020	
SCALE	HORIZ. 1:250 VERT. 1:50

SCALE NOT ACCURATE OVER LONG DISTANCES

THE CITY OF KELOWNA

DESIGN AND CONSTRUCTION

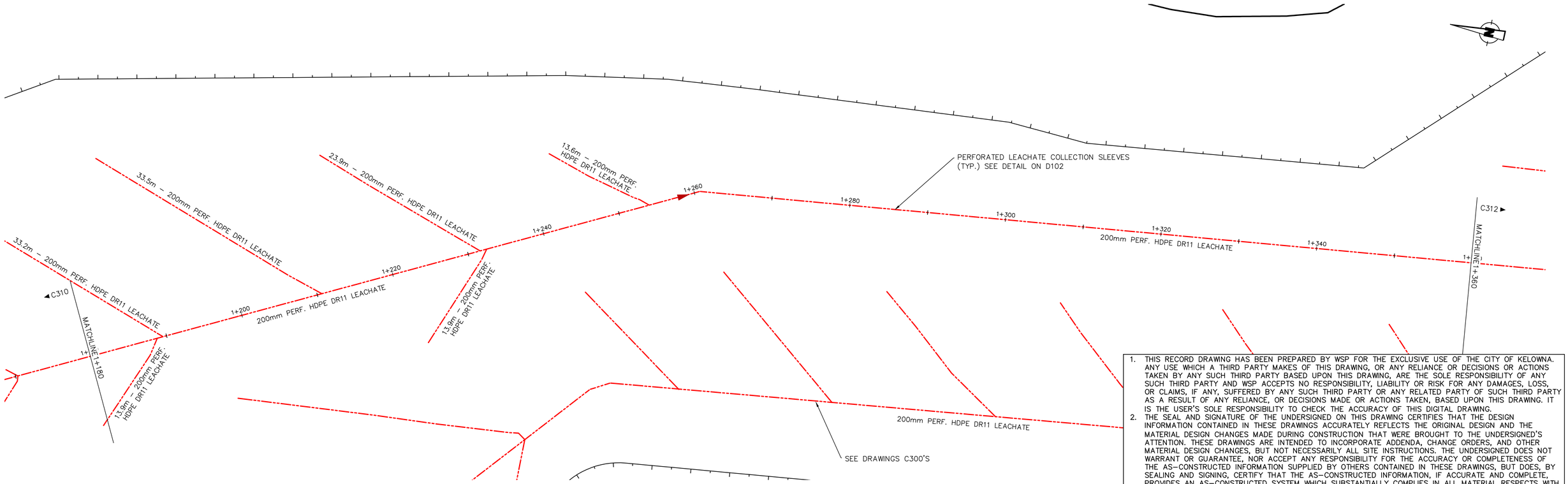
GLENMORE LANDFILL – AREA 3
LEACHATE COLLECTION PLAN PROFILE
STA. 1+000 TO 1+180

DIVISION

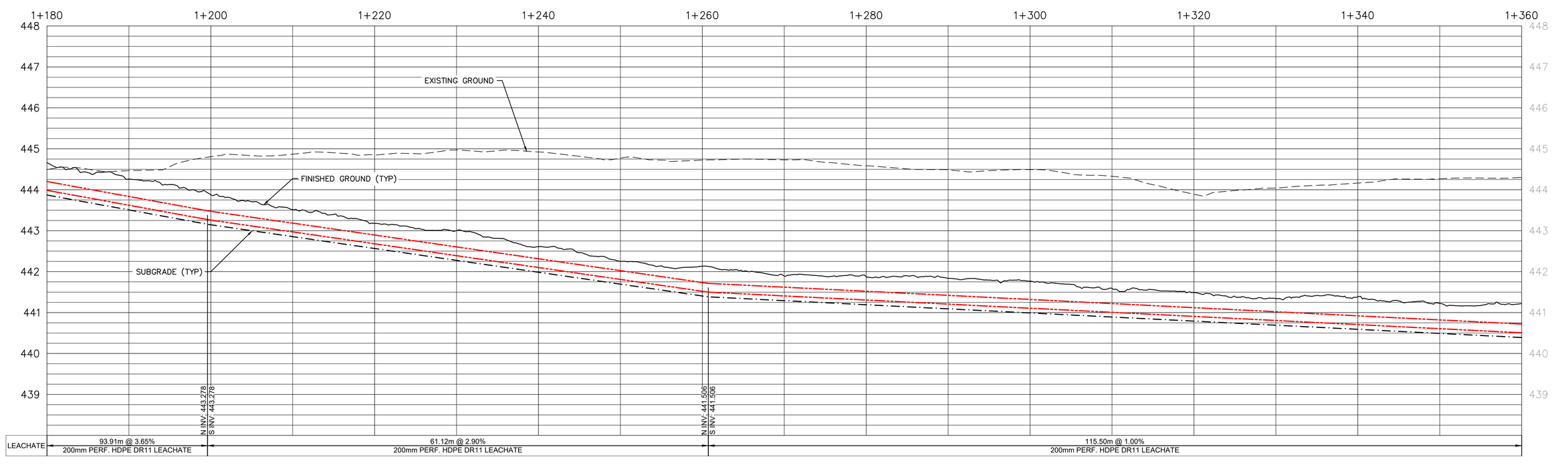
DRAWING NO. C310

REV NO 6

FILE LOCATION: P:\2018\18M-01541-00 Glenmore Landfill – Cells and Civil Works\3_TECH\3_Cad\5_Area 3\3_Sheets\18M-01541-00-5-C3B-PP LEACHATE 2.dwg PRINTED ON: 2/27/2026 2:28 PM



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0 5 10 15 20 25m

SCALE: 1:250

LEGEND

WATER
LEACHATE SEWER
LEACHATE F.M.
STORM SEWER
LANDFILL GAS
ELECTRICAL
CONDUITS
DITCH LINE
EDGE OF ASPH.
EDGE OF GRAVEL
TOP OF SLOPE
BOT. OF SLOPE
FENCE
IRRIGATION
STORM MANHOLE
SAN MANHOLE
POWER POLE
WATER VALVE
HYDRANT
WELLHEAD

wsp
700 - 1631 DICKSON AVENUE
KELOWNA, BC
CANADA V1Y 0B5
PHONE: 250-980-5500
WWW.WSP.COM

NAD 83

INSERTION BASE POINT= 300,000 , 5,500,000

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1	21/03/09	CE	RE-ISSUED FOR REVIEW	DG

WSP Canada Inc.
Engineers & Geoscientists BC
Permit #1000200

PROFESSIONAL ENGINEER
PROVINCE OF BRITISH COLUMBIA
C. EVANCIO
53165
BRITISH COLUMBIA
ENGINEER
2026-02-27

BASE	DESIGN
CE	CE
APPROVED	
DG	
DECEMBER 2020	
SCALE	HORIZ. 1:250
	VERT. 1:50

SCALE NOT ACCURATE OVER LONG DISTANCES

THE CITY OF KELOWNA

DESIGN AND CONSTRUCTION

GLENMORE LANDFILL – AREA 3 LEACHATE COLLECTION PLAN PROFILE STA. 1+180 TO 1+360

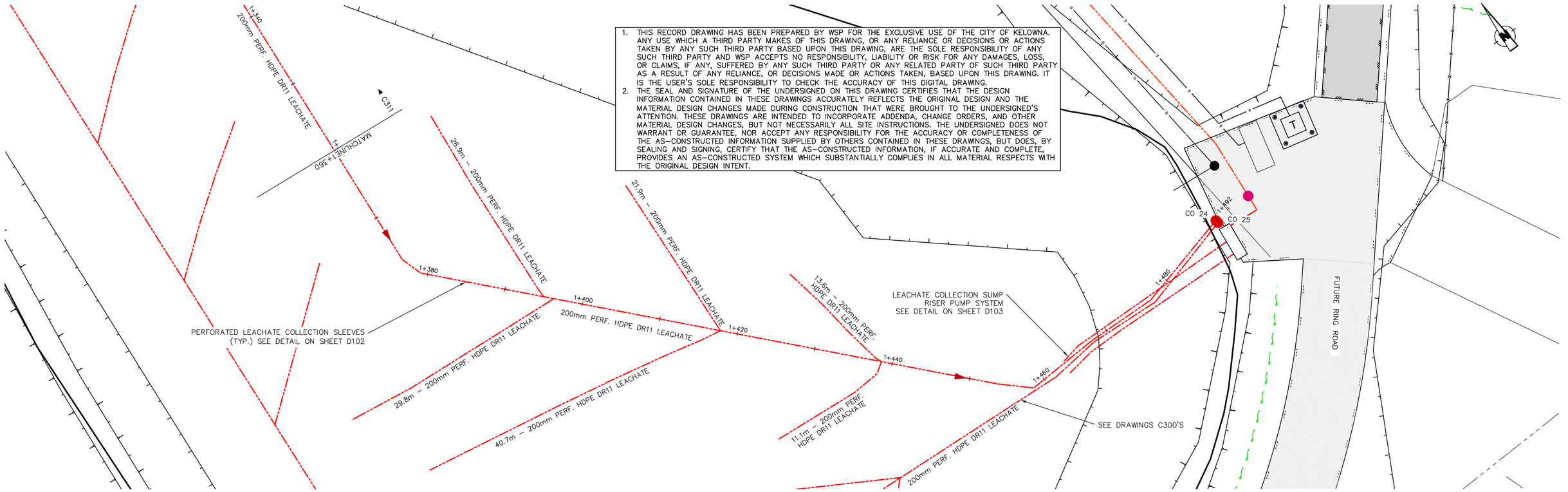
DIVISION

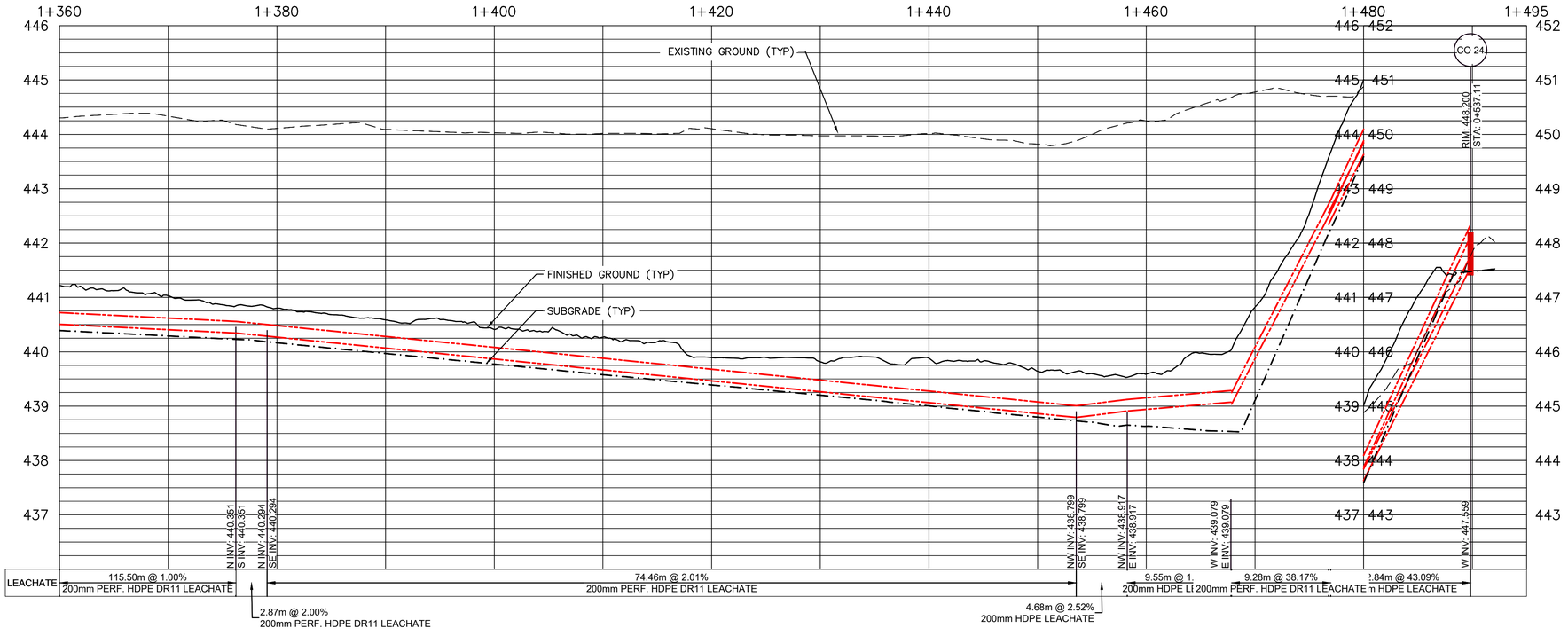
DRAWING NO. C311

REV NO 6

FILE LOCATION: \\corp.pbwan.net\ca\data$\CAKWL500\Projects\2018\18M-01541-00 Glenmore Landfill - Cells and Civil Works\3_TECH\3_Cadd\5_Area 3\3_Sheets\18M-01541-00-5-C3B-PP LEACHATE 2.dwg PRINTED ON: 2/26/2026 8:15 AM

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0 5 10 15 20 25m

SCALE: 1:250

LEGEND

WATER, LEACHATE SEWER, LEACHATE F.M., STORM SEWER, LANDFILL GAS, ELECTRICAL, CONDUITS, DITCH LINE
EDGE OF ASPH., EDGE OF GRAVEL, TOP OF SLOPE, BOT. OF SLOPE, FENCE, IRRIGATION
STORM MANHOLE, SAN MANHOLE, P.P., POWER POLE, WATER VALVE, HYDRANT, WELLHEAD

700 - 1631 DICKSON AVENUE
KELOWNA, BC
CANADA V1Y 0B5
PHONE: 250-980-5500
WWW.WSP.COM

NAD 83

INSERTION BASE POINT= 300,000 , 5,500,000

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WSP Canada Inc. Engineers & Geoscientists BC Permit #1000200
PROFESSIONAL ENGINEER PROVINCE OF BRITISH COLUMBIA C. EVANCIO # 53165 ENGINEER
2026-02-27

BASE	CE	DESIGN	CE
APPROVED	DG		
DECEMBER 2020			
SCALE	HORIZ. 1:250 VERT. 1:50		

SCALE NOT ACCURATE OVER LONG DISTANCES

THE CITY OF KELOWNA

DESIGN AND CONSTRUCTION

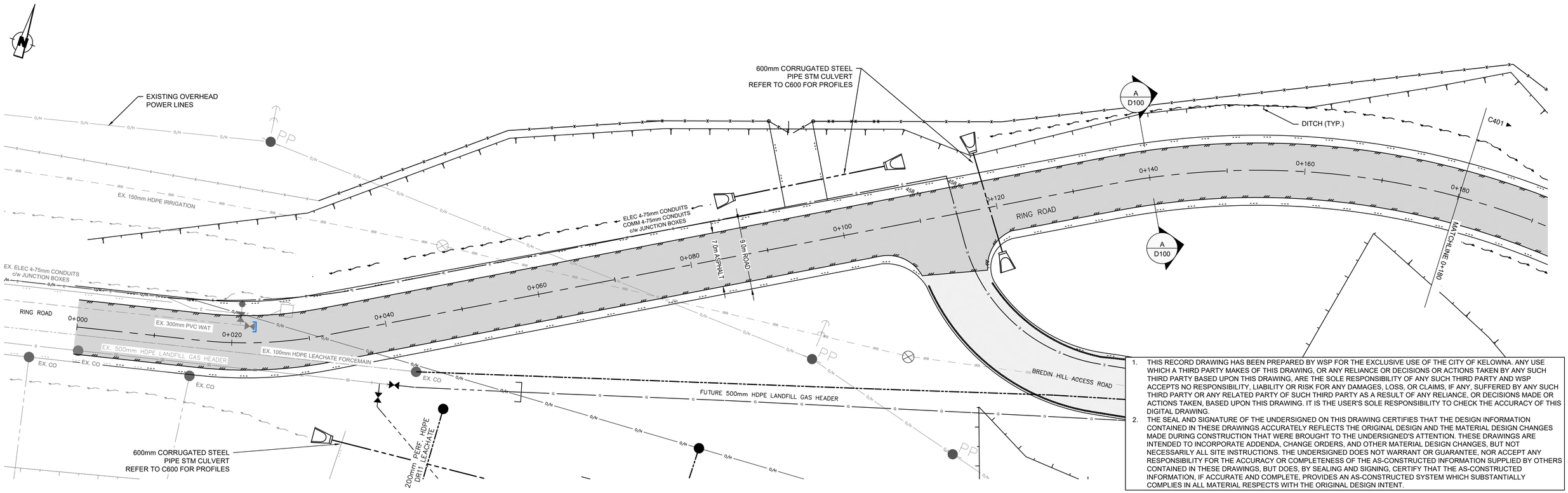
GLENMORE LANDFILL – AREA 3
LEACHATE COLLECTION PLAN PROFILE
STA 1+360 TO 1+495

DIVISION

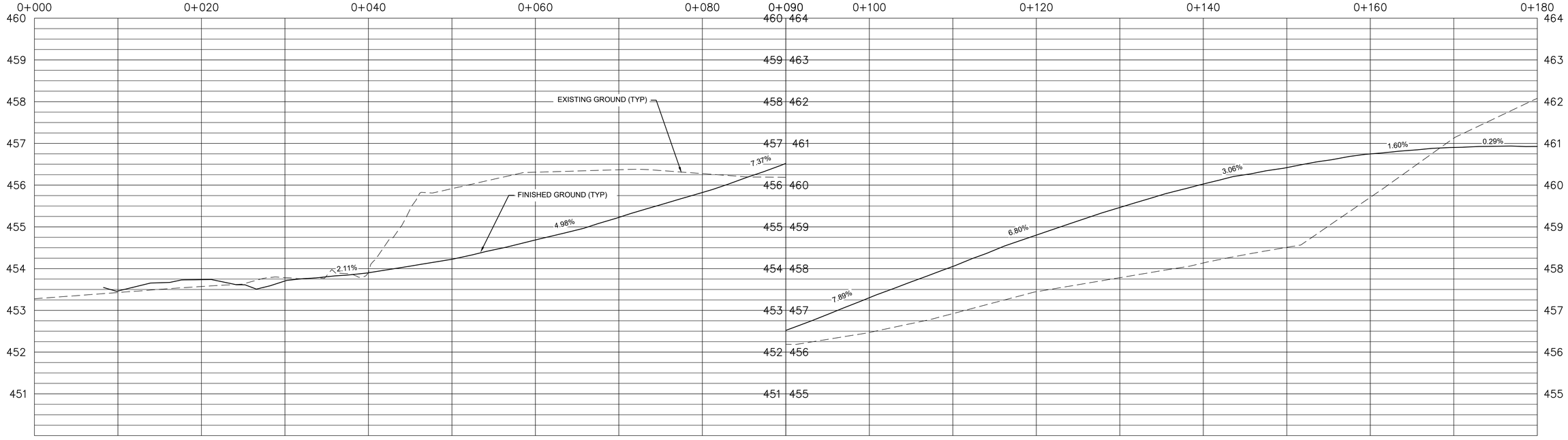
DRAWING NO. C312

REV NO 6

FILE LOCATION: \\corp.pbwan.net\ca\data$\CAKW\500\Projects\2018\YBM-01541-00 Glenmore Landfill - Cells and Civil Works\3_TECH\3_Cadd\5_Area 3\3_Sheets\YBM-01541-00-5-C3B-PP LEACHATE 2.dwg PRINTED ON: 2/26/2026
PLOTTED BY: LW



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0 5 10 15 20 25m

SCALE: 1:250

LEGEND

WATER	EDGE OF ASPH.	STORM MANHOLE	
LEACHATE SEWER	EDGE OF GRAVEL	SAN MANHOLE	
LEACHATE F.M.	TOP OF SLOPE	POWER POLE	P.P.
STORM SEWER	BOT. OF SLOPE	WATER VALVE	
LANDFILL GAS	FENCE	HYDRANT	
ELECTRICAL	IRRIGATION	WELLHEAD	
CONDUITS			
DITCH LINE			

WSP
700 - 1631 DICKSON AVENUE
KELOWNA, BC
CANADA V1Y 0B5
PHONE: 250-980-5500
WWW.WSP.COM

NAD 83

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WSP Canada Inc. Engineers & Geoscientists BC Permit #1000200
PROFESSIONAL ENGINEER C. EVANCIO # 53165 BRITISH COLUMBIA ENGINEER
2026-02-27

BASE	DESIGN
CE	CE
APPROVED	
DG	
DECEMBER 2020	
SCALE HORIZ. 1:250 VERT. 1:50	

SCALE NOT ACCURATE OVER LONG DISTANCES

THE CITY OF KELOWNA
DESIGN AND CONSTRUCTION

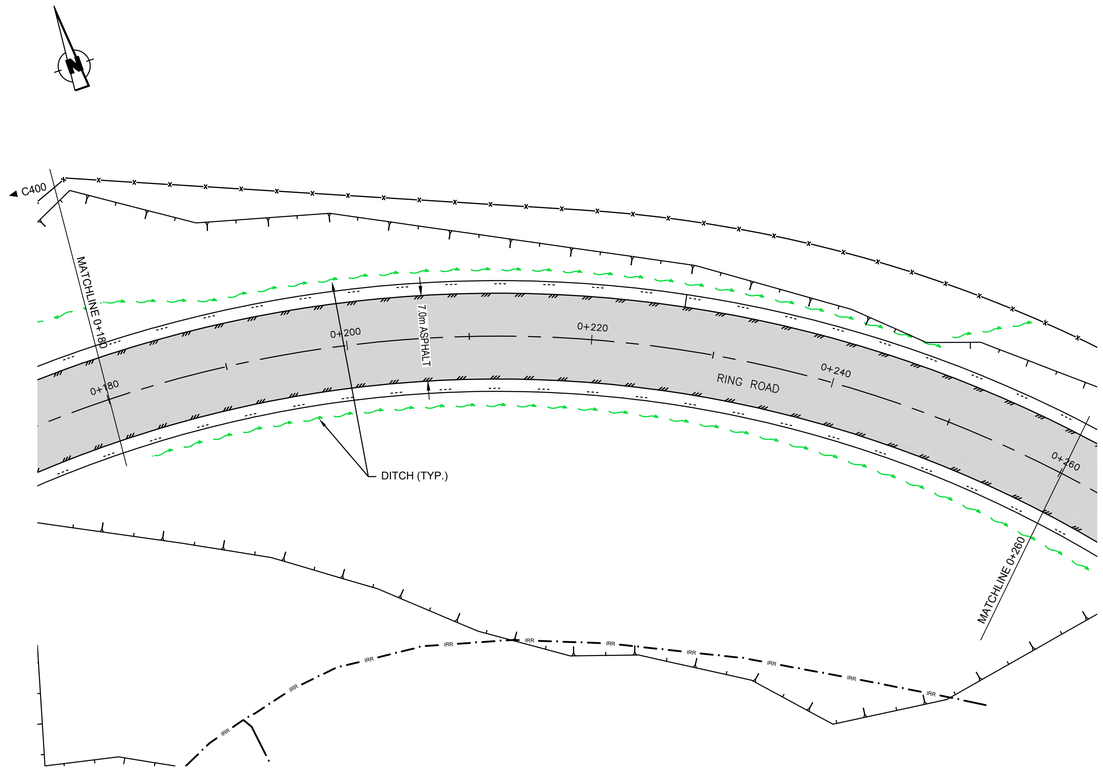
GLENMORE LANDFILL – AREA 3
RING ROAD PLAN PROFILE
STA. 0+000 TO 0+180

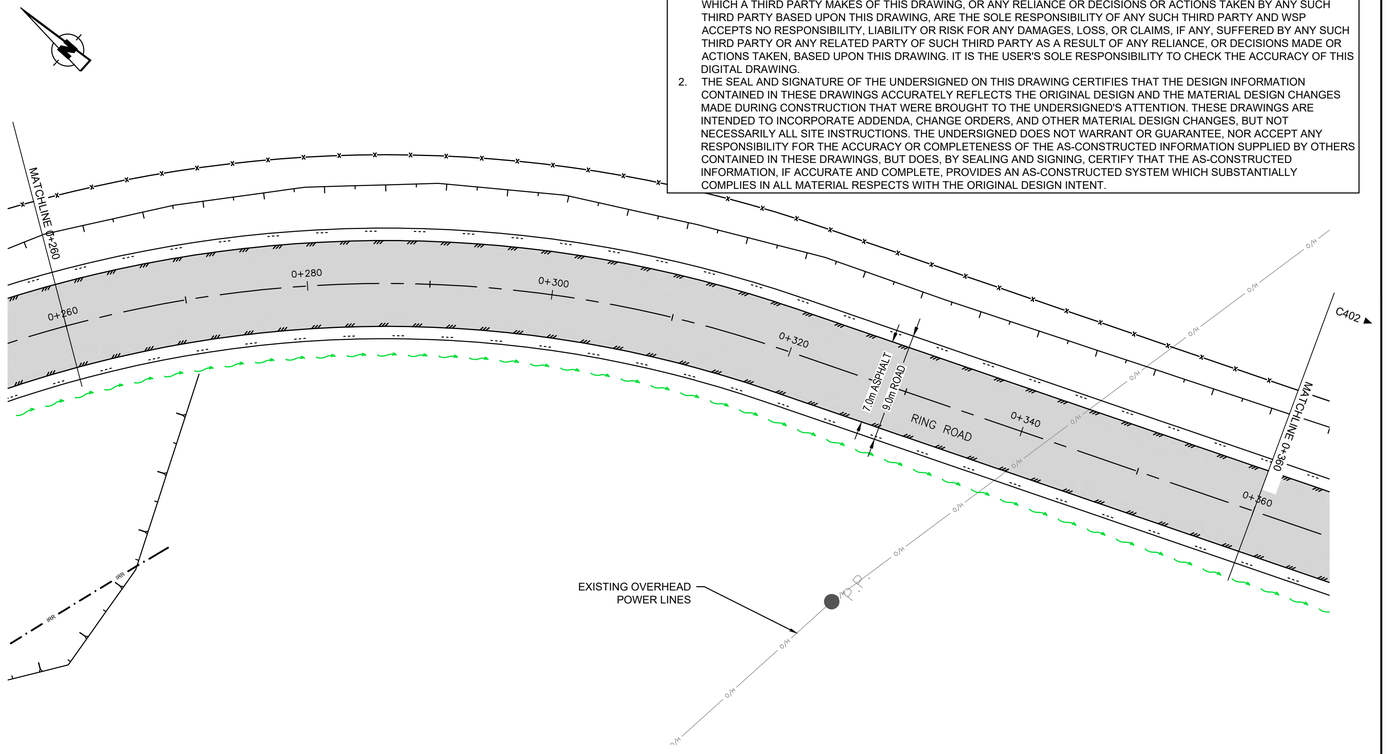
DIVISION

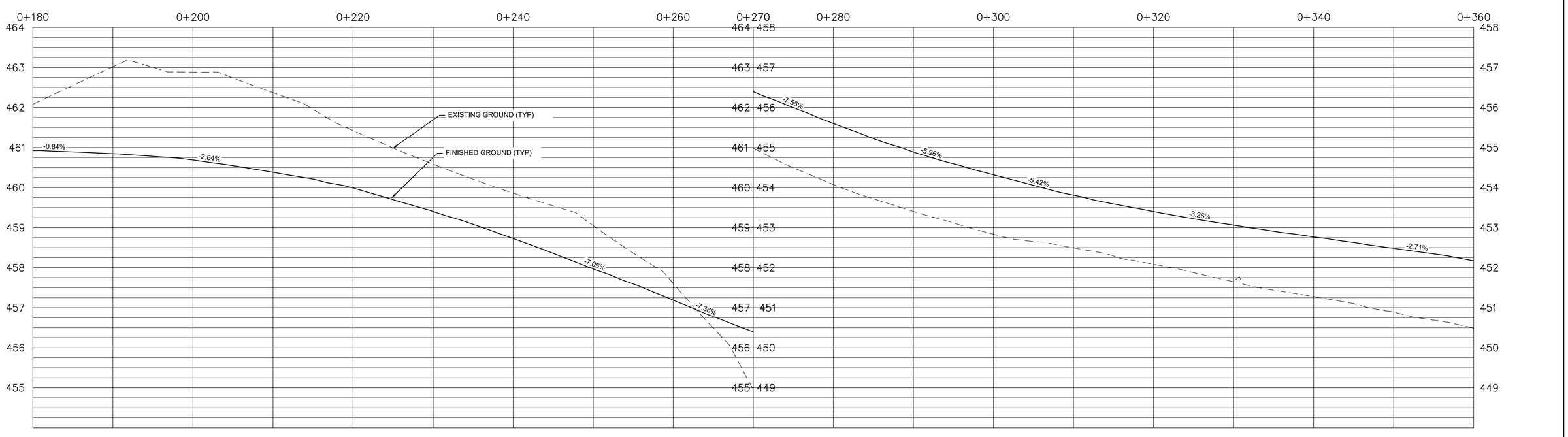
DRAWING NO. C400

REV NO 6

FILE LOCATION: P:\2018\18M-01541-00 Glenmore Landfill - Cells and Civil Works\3_TECH\3_Cad\5_Area 3\3_Sheets\18M-01541-00-5-C4-PP ROAD-WAT-FM.dwg PRINTED ON: 2/27/2026 2:30 PM







0 5 10 15 20 25m

SCALE: 1:250

LEGEND

WATER	EDGE OF ASPH.	STORM MANHOLE
LEACHATE SEWER	EDGE OF GRAVEL	SAN MANHOLE
LEACHATE F.M.	TOP OF SLOPE	POWER POLE
STORM SEWER	BOT. OF SLOPE	WATER VALVE
LANDFILL GAS	FENCE	HYDRANT
ELECTRICAL	IRRIGATION	WELLHEAD
CONDUITS		
DITCH LINE		

WSP
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Engineers & Geoscientists BC
Permit #1000200

PROFESSIONAL ENGINEER
PROVINCE OF BRITISH COLUMBIA
C. EVANCIO
53165
ENGINEER
2026-02-27

BASE CE	DESIGN CE
APPROVED DG	
DECEMBER 2020	
SCALE	HORIZ. 1:250 VERT. 1:50

SCALE NOT ACCURATE OVER LONG DISTANCES

THE CITY OF KELOWNA

DESIGN AND CONSTRUCTION

GLENMORE LANDFILL – AREA 3
RING ROAD PLAN PROFILE
STA. 0+180 TO 0+360

DIVISION

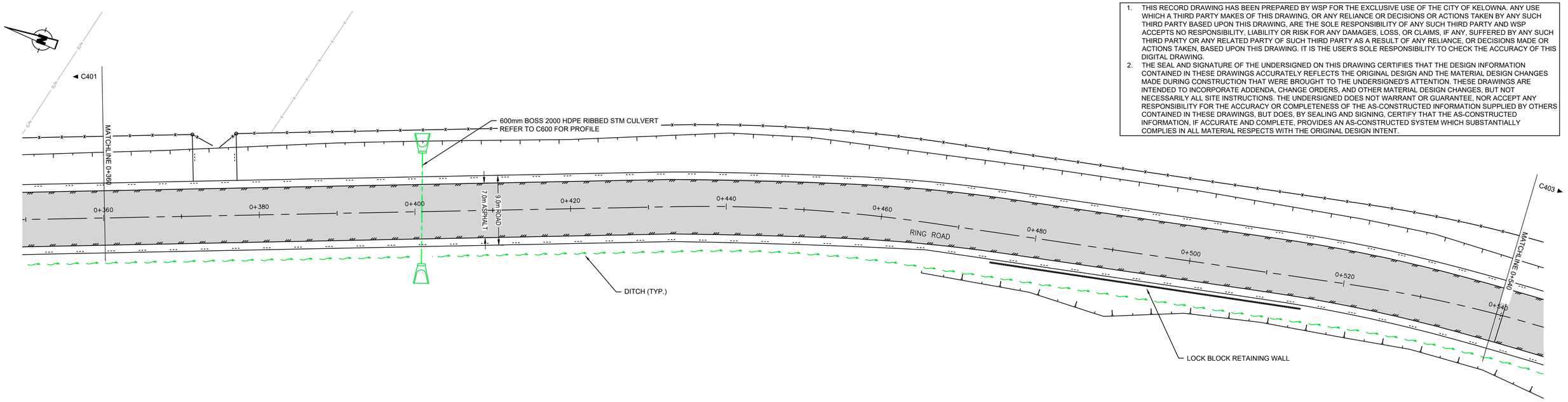
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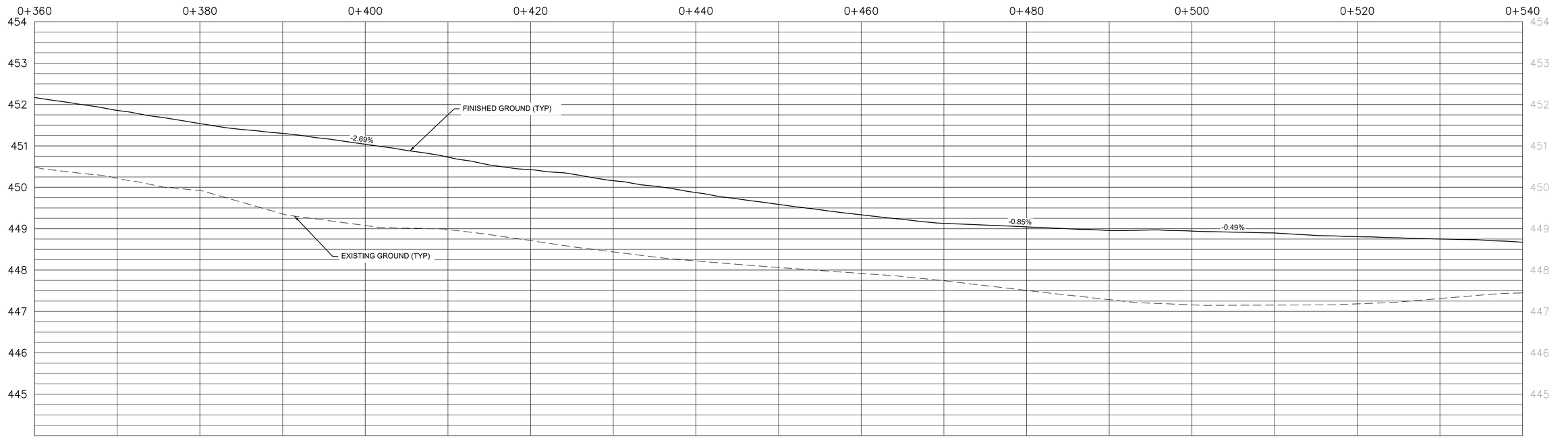
REV NO. 6

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FILE LOCATION: \\corp.pbwan.net\ca\data$\CAKWL500\Projects\2018\1BM-01541-00 Glenmore Landfill - Cells and Civil Works\3_TECH\3_Cadd\5_Area 3\3_Sheets\1BM-01541-00-5-C4-PP ROAD-WAT-PW.dwg PRINTED ON: 2/26/2026 10:11 AM by: corp.pbwan.net\ca\data$\CAKWL500\Projects\2018\1BM-01541-00 Glenmore Landfill - Cells and Civil Works\3_TECH\3_Cadd\5_Area 3\3_Sheets\1BM-01541-00-5-C4-PP ROAD-WAT-PW.dwg

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0 5 10 15 20 25m

SCALE: 1:250

LEGEND

WATER	EDGE OF ASPH.	STORM MANHOLE	
LEACHATE SEWER	EDGE OF GRAVEL	SAN MANHOLE	
LEACHATE F.M.	TOP OF SLOPE	POWER POLE	P.P.
STORM SEWER	BOT. OF SLOPE	WATER VALVE	
LANDFILL GAS	FENCE	HYDRANT	
ELECTRICAL	IRRIGATION	WELLHEAD	
CONDUITS			
DITCH LINE			

WSP
700 - 1631 DICKSON AVENUE
KELOWNA, BC
CANADA V1Y 0B5
PHONE: 250-980-5500
WWW.WSP.COM

NAD 83

INSERTION BASE POINT= 300,000 , 5,500,000

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6	26/02/27	LW	ISSUED FOR RECORD	CE
5	24/04/30	KG	ISSUED FOR CONSTRUCTION	CE
4	24/02/14	KG	ISSUED FOR REQUEST FOR PROPOSAL	CE
3	24/01/22	KU	ISSUED FOR 100% DESIGN	CE
2	23/09/07	KU	ISSUED FOR 75% DESIGN	CE
1	21/03/09	CE	RE-ISSUED FOR REVIEW	DG

WSP Canada Inc. Engineers & Geoscientists BC Permit #1000200
PROFESSIONAL ENGINEER
C. EVANCIO # 53165
BRITISH COLUMBIA
ENGINEER
2026-02-27

BASE	CE
DESIGN	CE
APPROVED	DG
	DECEMBER 2020
SCALE	HORIZ. 1:250 VERT. 1:50

SCALE NOT ACCURATE OVER LONG DISTANCES

THE CITY OF KELOWNA
DESIGN AND CONSTRUCTION

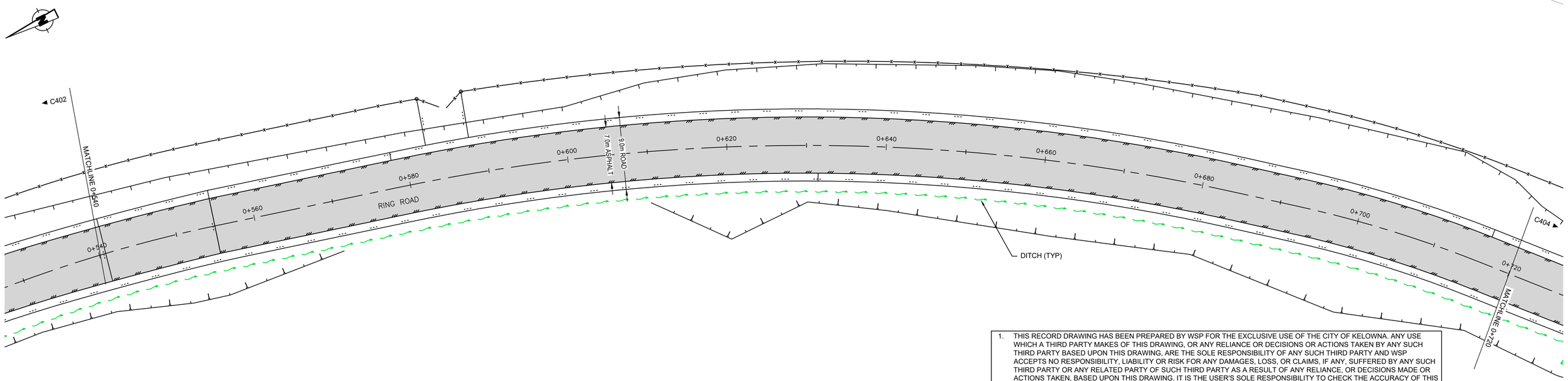
GLENMORE LANDFILL – AREA 3
RING ROAD PLAN PROFILE
STA. 0+360 TO 0+540

DIVISION

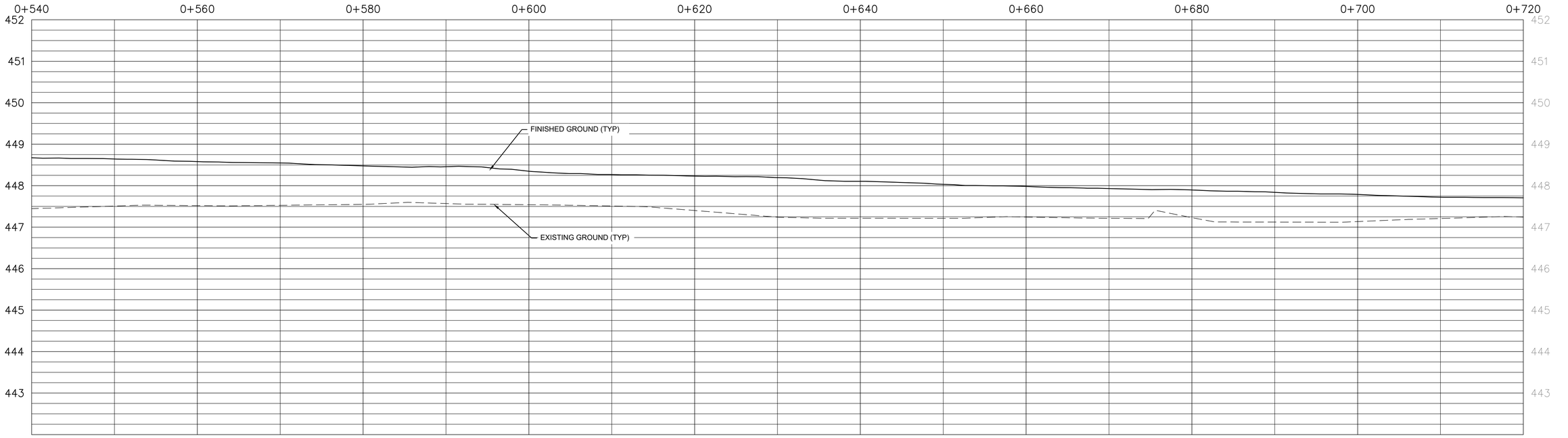
DRAWING NO. C402

REV NO 6

FILE LOCATION: \\corp.pbwan.net\ca\data$\CAKW.500\Projects\2018\18M-01541-00 Glenmore Landfill – Cells and Civil Works\3_TECH\3_Cadd\5_Area 3\3_Sheets\18M-01541-00-5-C4-PP ROAD-WAT-PW.dwg PRINTED ON: 2/26/2026 10:31:34 AM



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0 5 10 15 20 25m

SCALE: 1:250

LEGEND

WATER	EDGE OF ASPH.	STORM MANHOLE	
LEACHATE SEWER	EDGE OF GRAVEL	SAN MANHOLE	
LEACHATE F.M.	TOP OF SLOPE	POWER POLE	P.P.
STORM SEWER	BOT. OF SLOPE	WATER VALVE	
LANDFILL GAS	FENCE	HYDRANT	
ELECTRICAL	IRRIGATION	WELLHEAD	
CONDUITS			
DITCH LINE			

700 - 1631 DICKSON AVENUE
KELOWNA, BC
CANADA V1Y 0B5
PHONE: 250-980-5500
WWW.WSP.COM

NAD 83

INSERTION BASE POINT= 300,000 , 5,500,000

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1	21/03/09	CE	RE-ISSUED FOR REVIEW	DG

WSP Canada Inc.
Engineers & Geoscientists BC
Permit #1000200
PROFESSIONAL ENGINEER
C. EVANCIO
53165
BRITISH COLUMBIA
ENGINEER
2026-02-27

BASE CE	DESIGN CE
APPROVED DG	
DECEMBER 2020	
SCALE HORIZ. 1:250 VERT. 1:50	

SCALE NOT ACCURATE OVER LONG DISTANCES

THE CITY OF KELOWNA

DESIGN AND CONSTRUCTION

GLENMORE LANDFILL – AREA 3 RING ROAD PLAN PROFILE STA. 0+540 TO 0+720

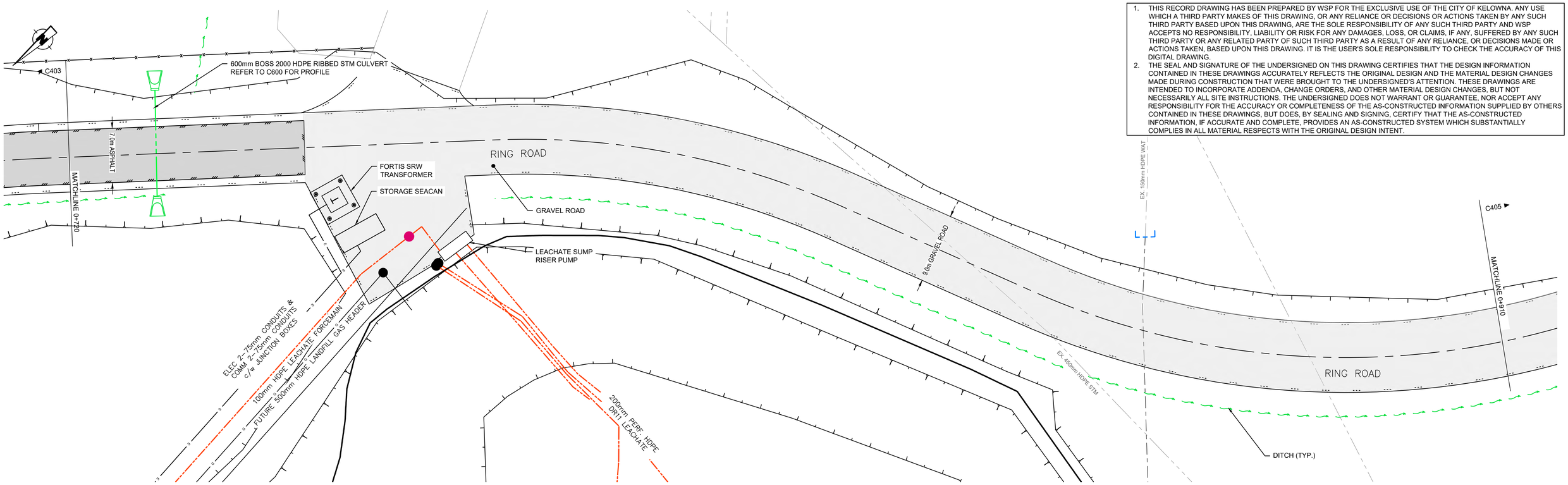
DIVISION

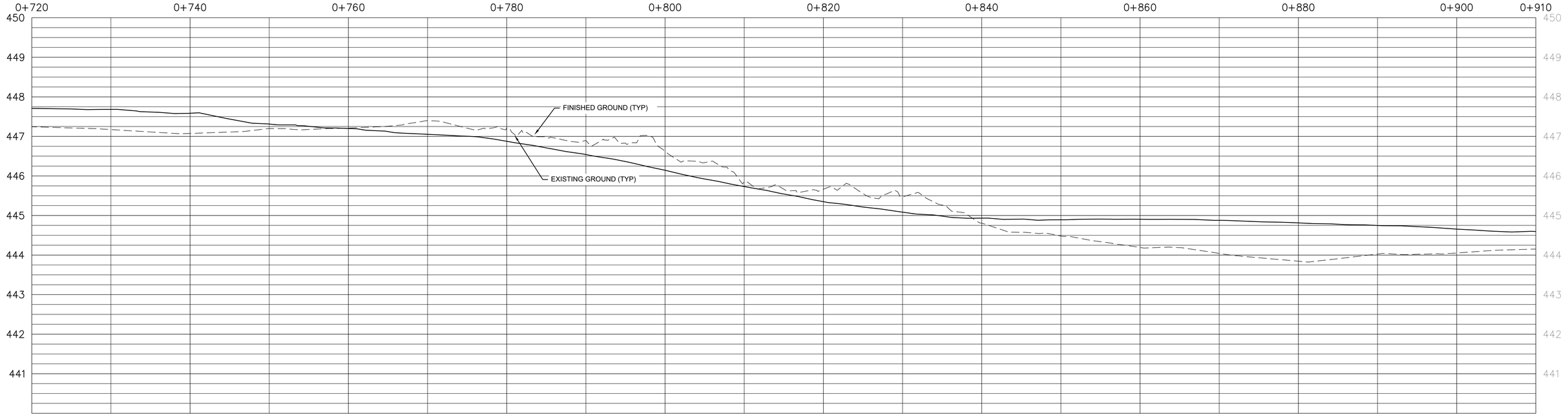
DRAWING NO. C403

REV NO 6

FILE LOCATION: \\corp.pbwan.net\ca\data$\CAKW.500\Projects\2018\18M-01541-00 Glenmore Landfill - Cells and Civil Works\3_TECH\3_Cadd\5_Area 3\3_Sheets\18M-01541-00-5-C4-PP ROAD-WAT-PW.dwg PRINTED ON: 2/27/2026 10:14 AM

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0 5 10 15 20 25m

SCALE: 1:250

LEGEND

WATER	EDGE OF ASPH.	STORM MANHOLE
LEACHATE SEWER	EDGE OF GRAVEL	SAN MANHOLE
LEACHATE F.M.	TOP OF SLOPE	POWER POLE
STORM SEWER	BOT. OF SLOPE	WATER VALVE
LANDFILL GAS	FENCE	HYDRANT
ELECTRICAL	IRRIGATION	WELLHEAD
CONDUITS		
DITCH LINE		

700 - 1631 DICKSON AVENUE
KELOWNA, BC
CANADA V1Y 0B5
PHONE: 250-980-5500
WWW.WSP.COM

NAD 83

INSERTION BASE POINT= 300,000 , 5,500,000

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WSP Canada Inc.
Engineers & Geoscientists BC
Permit #1000200
PROFESSIONAL ENGINEER
PROVINCE OF BRITISH COLUMBIA
C. EVANCIO
53165
ENGINEER
2026-02-27

BASE CE	DESIGN CE
APPROVED DG	
DECEMBER 2020	
SCALE HORIZ. 1:250 VERT. 1:50	

SCALE NOT ACCURATE OVER LONG DISTANCES

THE CITY OF KELOWNA
DESIGN AND CONSTRUCTION

GLENMORE LANDFILL – AREA 3
RING ROAD PLAN PROFILE
STA. 0+720 TO 0+910

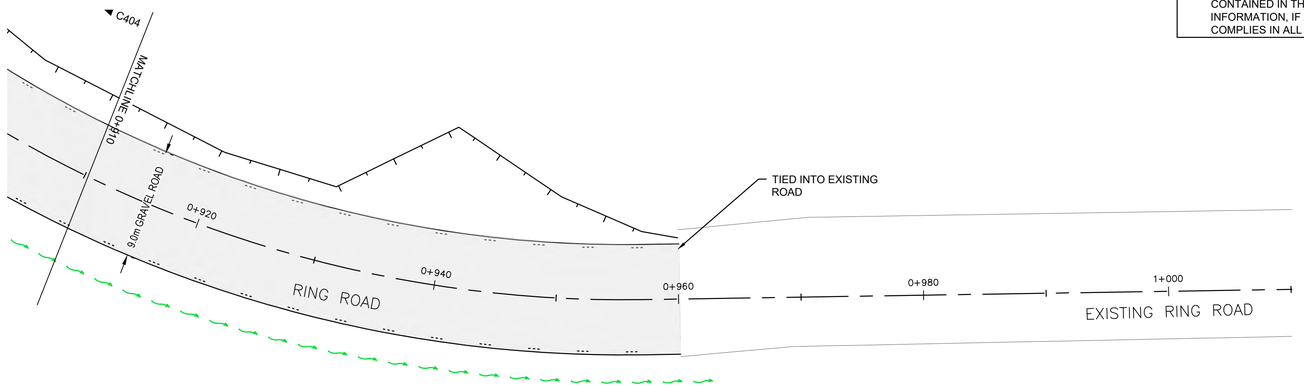
DIVISION

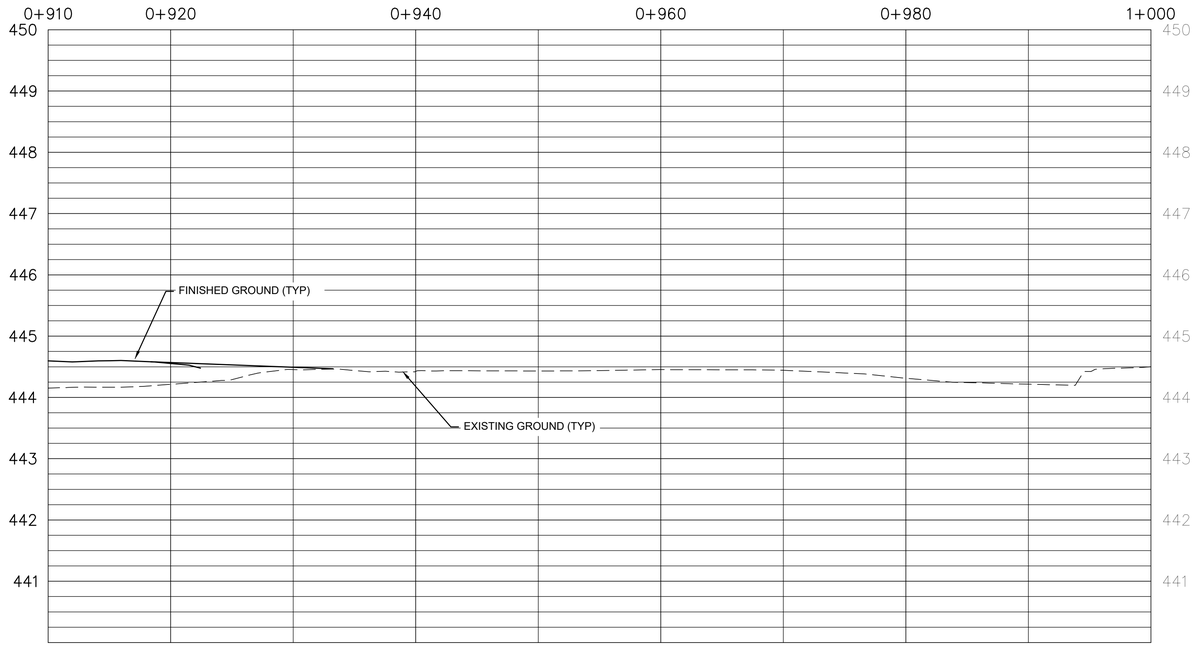
DRAWING NO. C404

REV NO. 6

FILE LOCATION: \\corp.pbwan.net\ca\data$\CAKWL500\Projects\2018\1BM-01541-00 Glenmore Landfill - Cells and Civil Works\3_TECH\3_Cad\5_Area 3\3_Sheets\1BM-01541-00-5-C4-PP ROAD-WAT-FM.dwg PRINTED ON: 2026/02/26 (LW)

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0 5 10 15 20 25m

SCALE: 1:250

LEGEND

WATER	EDGE OF ASPH.	STORM MANHOLE	
LEACHATE SEWER	EDGE OF GRAVEL	SAN MANHOLE	
LEACHATE F.M.	TOP OF SLOPE	POWER POLE	P.P.
STORM SEWER	BOT. OF SLOPE	WATER VALVE	
LANDFILL GAS	FENCE	HYDRANT	
ELECTRICAL	IRRIGATION	WELLHEAD	
CONDUITS			
DITCH LINE			

WSP
700 - 1631 DICKSON AVENUE
KELOWNA, BC
CANADA V1Y 0B5
PHONE: 250-980-5500
WWW.WSP.COM

NAD 83

INSERTION BASE POINT= 300,000 , 5,500,000

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WSP Canada Inc.
Engineers & Geoscientists BC
Permit #1000200

PROFESSIONAL ENGINEER
PROVINCE OF BRITISH COLUMBIA
C. EVANCIO
53165
ENGINEER
2026-02-27

BASE CE	DESIGN CE
APPROVED DG	
DECEMBER 2020	
SCALE	HORIZ. 1:250 VERT. 1:50

SCALE NOT ACCURATE OVER LONG DISTANCES

THE CITY OF KELOWNA
DESIGN AND CONSTRUCTION

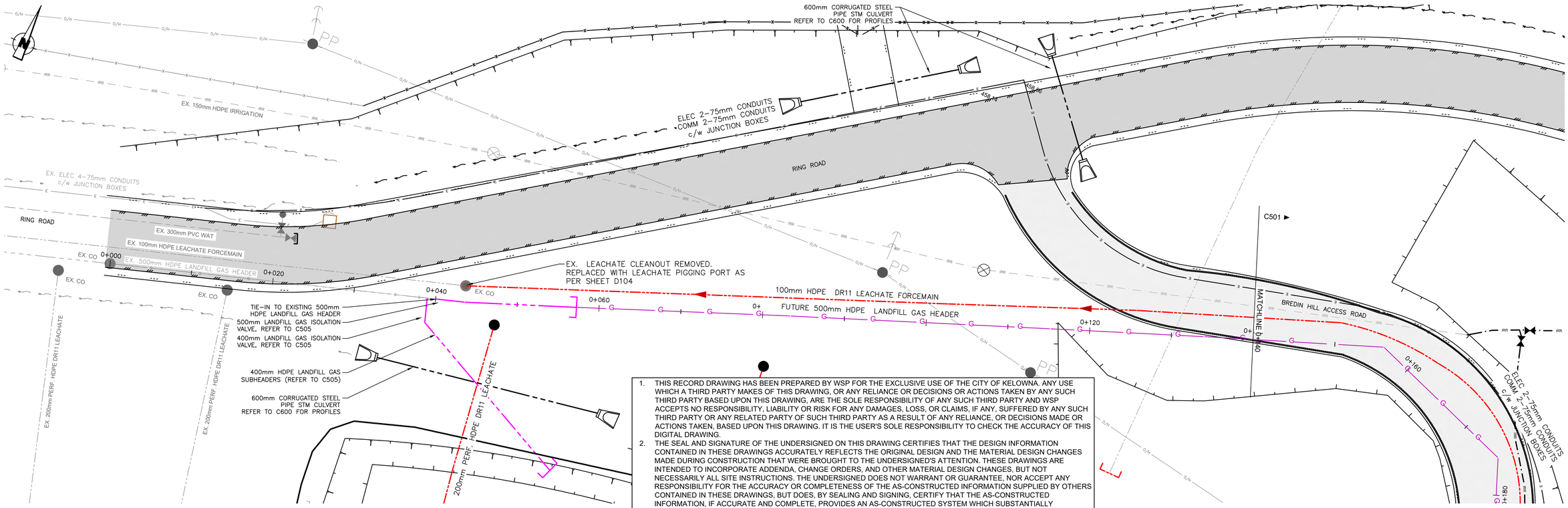
GLENMORE LANDFILL – AREA 3
RING ROAD PLAN PROFILE
STA. 0+910 TO 1+000

DIVISION

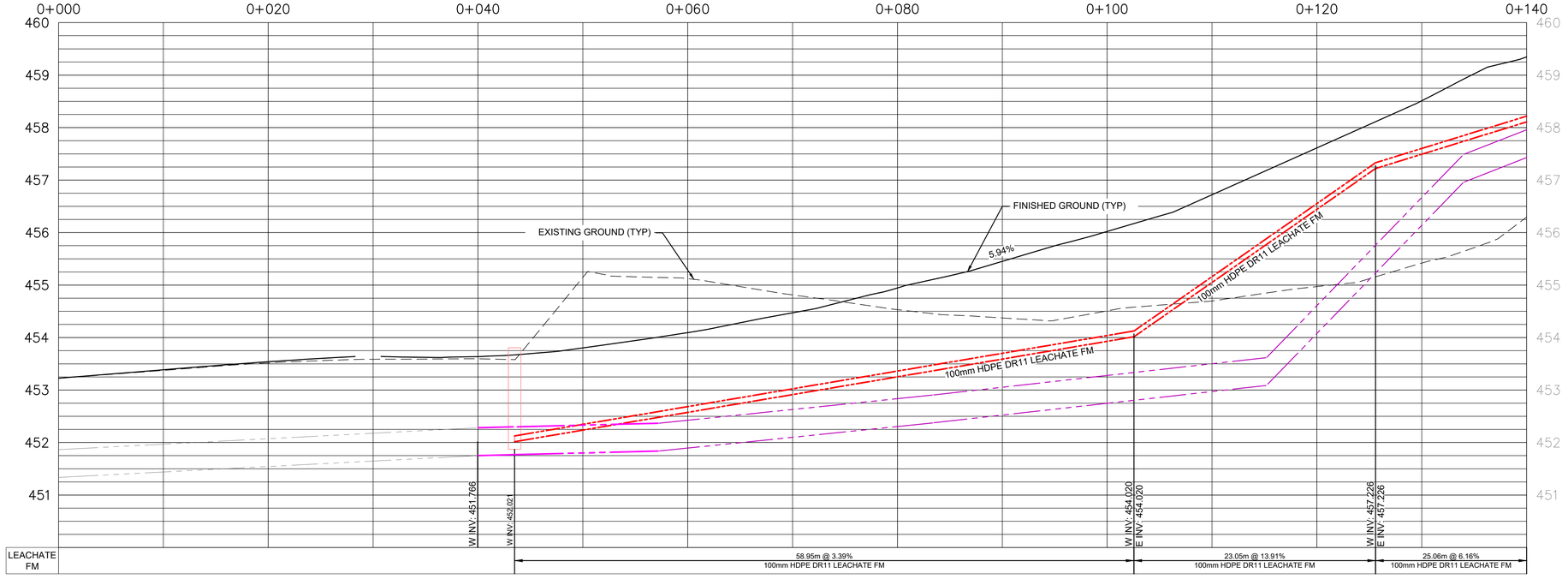
DRAWING NO. C405

REV NO 6

FILE LOCATION: \\prp.pbwan.net\ca\data$\CAKWL500\Projects\2018\1BM-01541-00 Glenmore Landfill - Cells and Civil Works\3_TECH\3_Cadd\5_Area 3\3_Sheets\1BM-01541-00-5-C4-PP ROAD-WAT-FM.dwg PRINTED ON: 2026/03/05 12:45 PM



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0 5 10 15 20 25m

SCALE: 1:250

LEGEND

WATER	EDGE OF ASPH.	STORM MANHOLE	
LEACHATE SEWER	EDGE OF GRAVEL	SAN MANHOLE	
LEACHATE F.M.	TOP OF SLOPE	POWER POLE	P.P.
STORM SEWER	BOT. OF SLOPE	WATER VALVE	
LANDFILL GAS	FENCE	HYDRANT	
ELECTRICAL	IRRIGATION	WELLHEAD	
CONDUITS			
DITCH LINE			

WSP
700 - 1631 DICKSON AVENUE
KELOWNA, BC
CANADA V1Y 0B5
PHONE: 250-980-5500
WWW.WSP.COM

NAD 83

INSERTION BASE POINT= 300,000 , 5,500,000

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WSP Canada Inc. Engineers & Geoscientists BC Permit #1000200
PROFESSIONAL ENGINEER C. EVANCIO # 53165 BRITISH COLUMBIA ENGINEER
2026-02-27

BASE	DESIGN
CE	CE
APPROVED	
DG	
DECEMBER 2020	
SCALE HORIZ. 1:250 VERT. 1:50	

SCALE NOT ACCURATE OVER LONG DISTANCES

THE CITY OF KELOWNA

DESIGN AND CONSTRUCTION

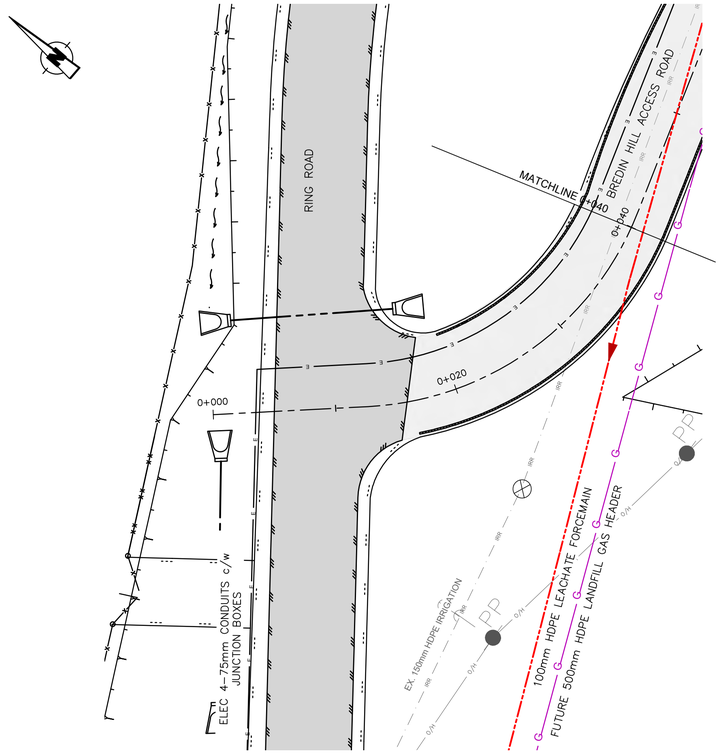
GLENMORE LANDFILL – AREA 3
ACCESS ROAD & LFG & LEACHATE
FORCEMAIN PLAN PROFILE
STA. 0+000 TO 0+140

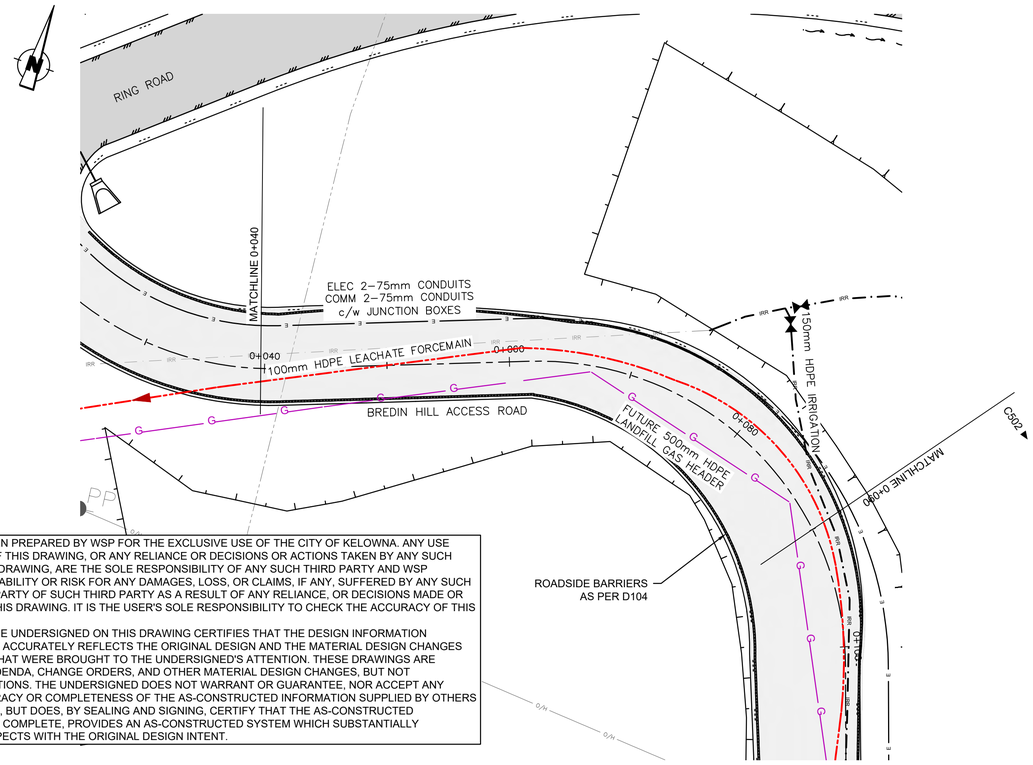
DIVISION

DRAWING NO. C500

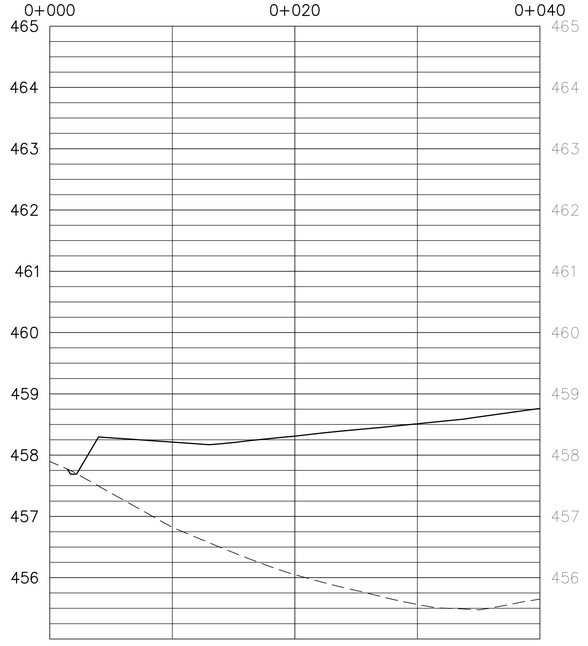
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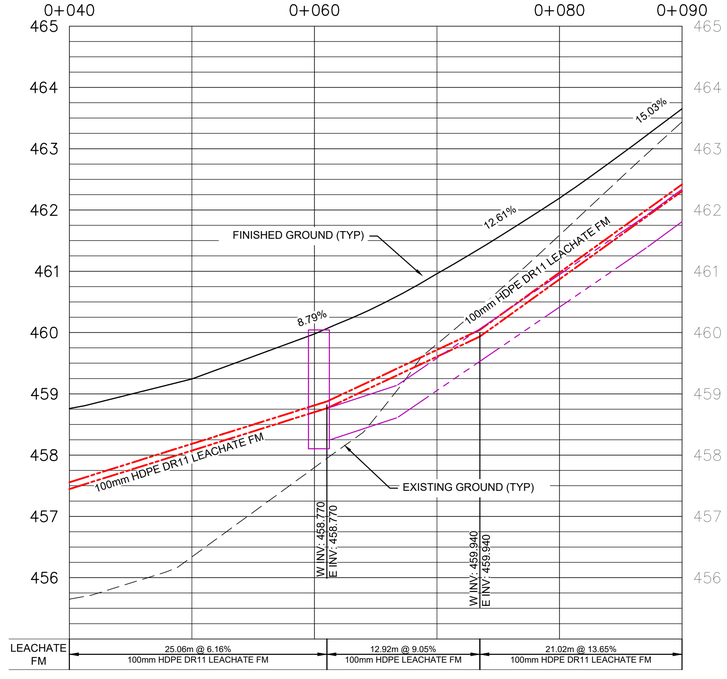
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0 5 10 15 20 25m

SCALE: 1:250

LEGEND

WATER	EDGE OF ASPH.	STORM MANHOLE	
LEACHATE SEWER	EDGE OF GRAVEL	SAN MANHOLE	
LEACHATE F.M.	TOP OF SLOPE	P.P.	POWER POLE
STORM SEWER	BOT. OF SLOPE	WATER VALVE	
LANDFILL GAS	FENCE	HYDRANT	
ELECTRICAL	IRRIGATION	WELLHEAD	
CONDUITS			
DITCH LINE			

700 - 1631 DICKSON AVENUE
KELOWNA, BC
CANADA V1Y 0B5
PHONE: 250-980-5500
WWW.WSP.COM

NAD 83

INSERTION BASE POINT= 300,000 , 5,500,000

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4	24/02/14	KG	ISSUED FOR REQUEST FOR PROPOSAL	CE
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2	23/09/07	KU	ISSUED FOR 75% DESIGN	CE
1	21/03/09	CE	RE–ISSUED FOR REVIEW	DG

WSP Canada Inc.
Engineers & Geoscientists BC
Permit #1000200

PROFESSIONAL ENGINEER
PROVINCE OF BRITISH COLUMBIA
C. EVANCIO
53165
ENGINEER
2026-02-27

BASE	CE	DESIGN	CE
APPROVED	DG		
DECEMBER 2020			
SCALE	HORIZ. 1:250 VERT. 1:50		

SCALE NOT ACCURATE OVER LONG DISTANCES

THE CITY OF KELOWNA

DESIGN AND CONSTRUCTION

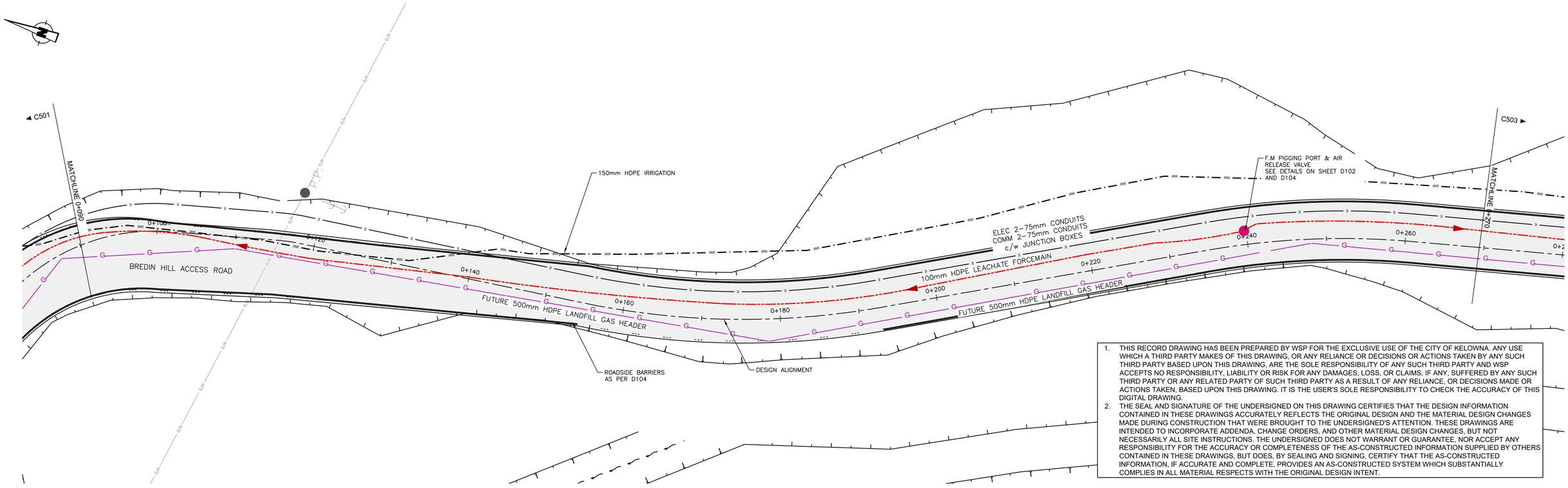
GLENMORE LANDFILL – AREA 3
ACCESS ROAD & LFG & LEACHATE
FORCEMAIN PLAN PROFILE
STA. 0+000 TO 0+090

DIVISION

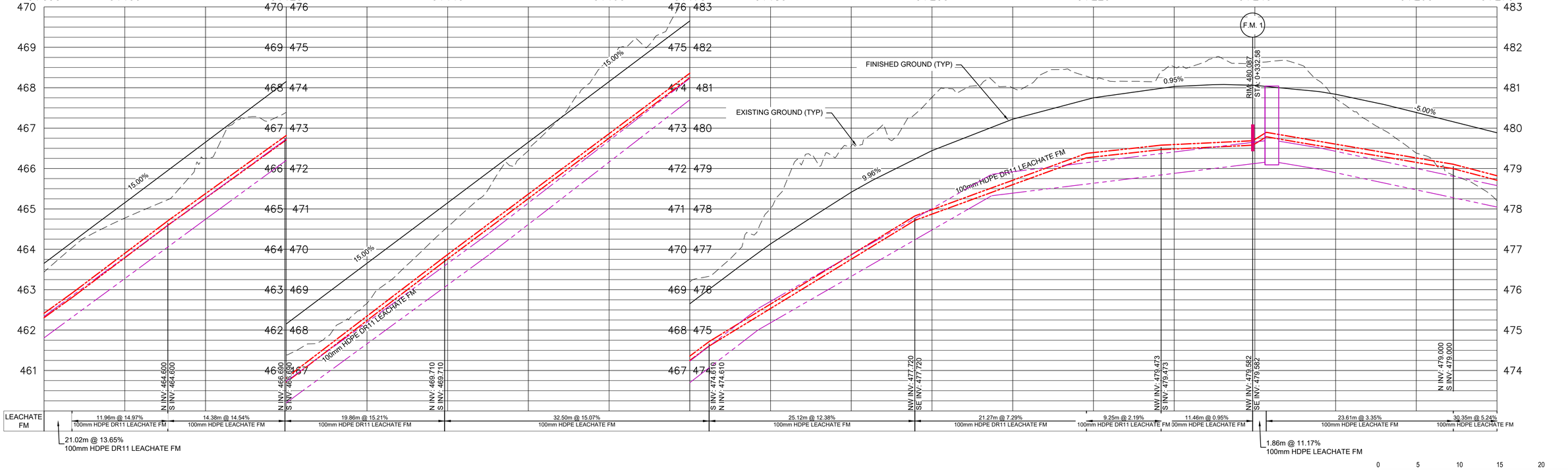
DRAWING NO. C501

REV NO. 6

FILE LOCATION: P:\2019\19M-01541-00 Glenmore Landfill – Cells and Civil Works\3_TECH\3_Cadd\5_Area 3\3_Sheets\19M-01541-00-5-05-PP ACCESS ROAD-LFG.dwg PRINTED ON: 2/27/2026 2:37 PM



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0 5 10 15 20 25m

SCALE: 1:250

LEGEND

WATER, LEACHATE SEWER, LEACHATE F.M., STORM SEWER, LANDFILL GAS, ELECTRICAL, CONDUITS, DITCH LINE
EDGE OF ASPH., EDGE OF GRAVEL, TOP OF SLOPE, BOT. OF SLOPE, FENCE, IRRIGATION
STORM MANHOLE, SAN MANHOLE, P.P., POWER POLE, WATER VALVE, HYDRANT, WELLHEAD

WSP
700 - 1631 DICKSON AVENUE
KELOWNA, BC
CANADA V1Y 0B5
PHONE: 250-980-5500
WWW.WSP.COM

NAD 83

INSERTION BASE POINT= 300,000 , 5,500,000

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1	21/03/09	CE	RE-ISSUED FOR REVIEW	DG

WSP Canada Inc. Engineers & Geoscientists BC Permit #1000200
PROFESSIONAL ENGINEER C. EVANCIO # 53165 BRITISH COLUMBIA
2026-02-27

BASE CE | DESIGN CE
APPROVED DG
DECEMBER 2020
SCALE HORIZ. 1:250 VERT. 1:50

SCALE NOT ACCURATE OVER LONG DISTANCES

THE CITY OF KELOWNA

DESIGN AND CONSTRUCTION

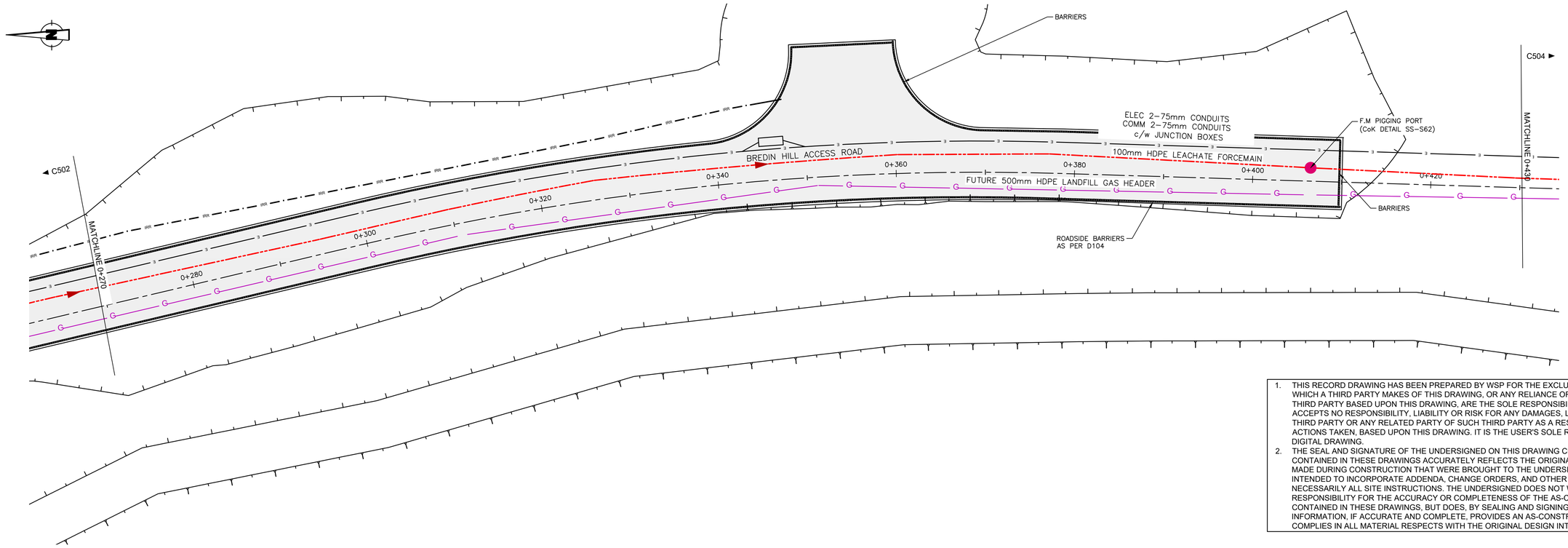
GLENMORE LANDFILL – AREA 3
ACCESS ROAD & LFG & LEACHATE
FORCEMAIN PLAN PROFILE
STA. 0+090 TO 0+270

DIVISION

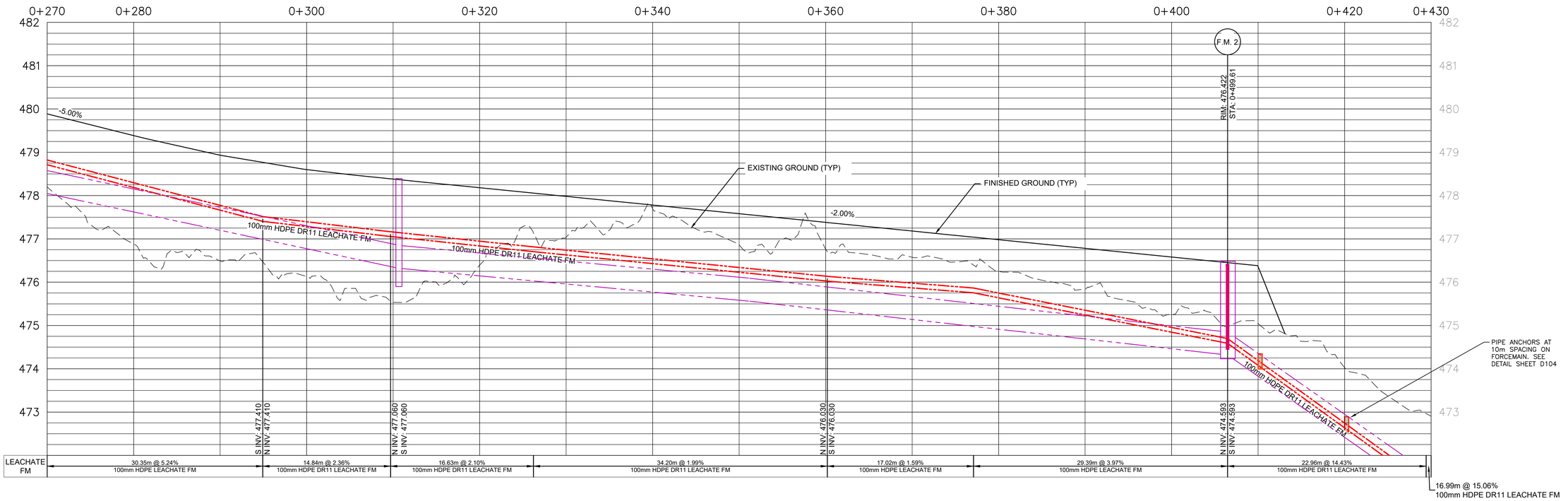
DRAWING NO. C502

REV NO 6

FILE LOCATION: P:\2018\18M-01541-00 Glenmore Landfill - Cells and Civil Work\3_TECH\3_Cad\5_Area 3\3_Sheets\18M-01541-00-5-C5-PP ACCESS ROAD-LFG.dwg PRINTED ON: 2/27/2026 2:38 PM



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0 5 10 15 20 25m

SCALE: 1:250

LEGEND

- WATER
- LEACHATE SEWER
- LEACHATE F.M.
- STORM SEWER
- LANDFILL GAS
- ELECTRICAL
- CONDUITS
- DITCH LINE
- EDGE OF ASPH.
- EDGE OF GRAVEL
- TOP OF SLOPE
- BOT. OF SLOPE
- FENCE
- IRRIGATION
- STORM MANHOLE
- SAN MANHOLE
- POWER POLE
- WATER VALVE
- HYDRANT
- WELLHEAD

700 - 1631 DICKSON AVENUE
KELOWNA, BC
CANADA V1Y 0B5
PHONE: 250-980-5500
WWW.WSP.COM

NAD 83

INSERTION BASE POINT= 300,000 , 5,500,000

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WSP Canada Inc.
Engineers & Geoscientists BC
Permit #1000200

PROFESSIONAL ENGINEER
PROVINCE OF BRITISH COLUMBIA
C. EVANCIO
53165
2026-02-27

BASE	CE	DESIGN	CE
APPROVED	DG		
DECEMBER 2020			
SCALE	HORIZ. 1:250 VERT. 1:50		

SCALE NOT ACCURATE OVER LONG DISTANCES

THE CITY OF KELOWNA

DESIGN AND CONSTRUCTION

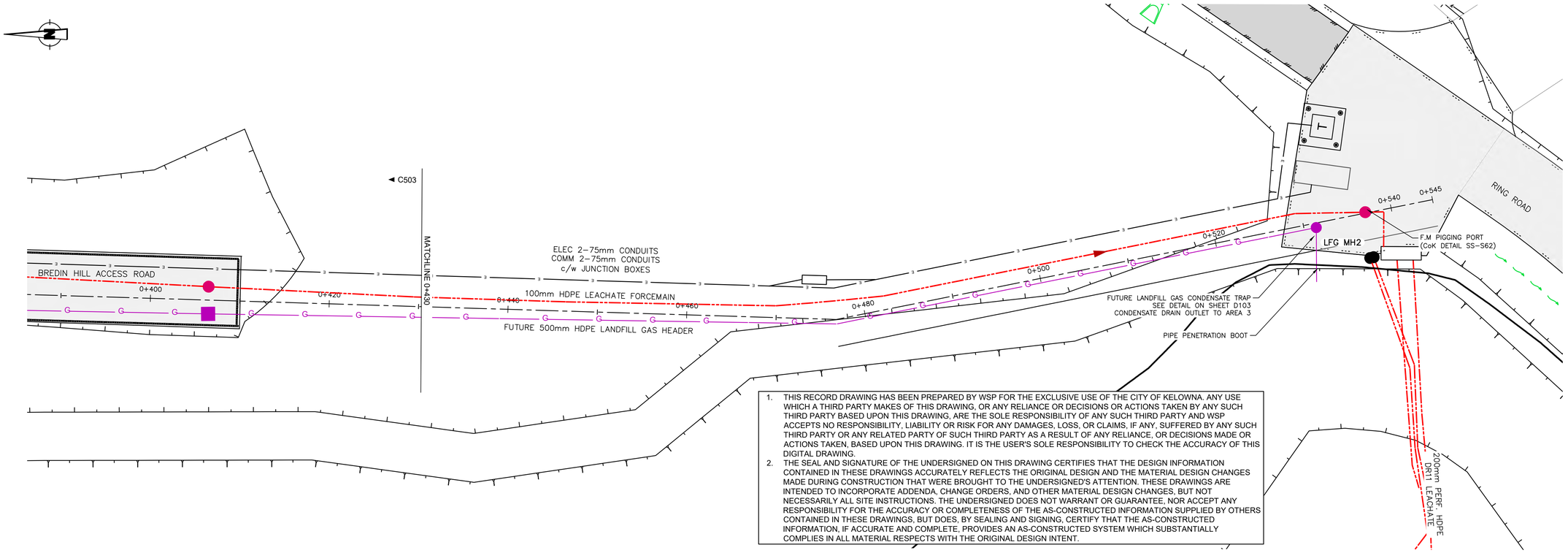
GLENMORE LANDFILL – AREA 3 ACCESS ROAD & LFG & LEACHATE FORCEMAIN PLAN PROFILE STA. 0+270 TO 0+430

DIVISION

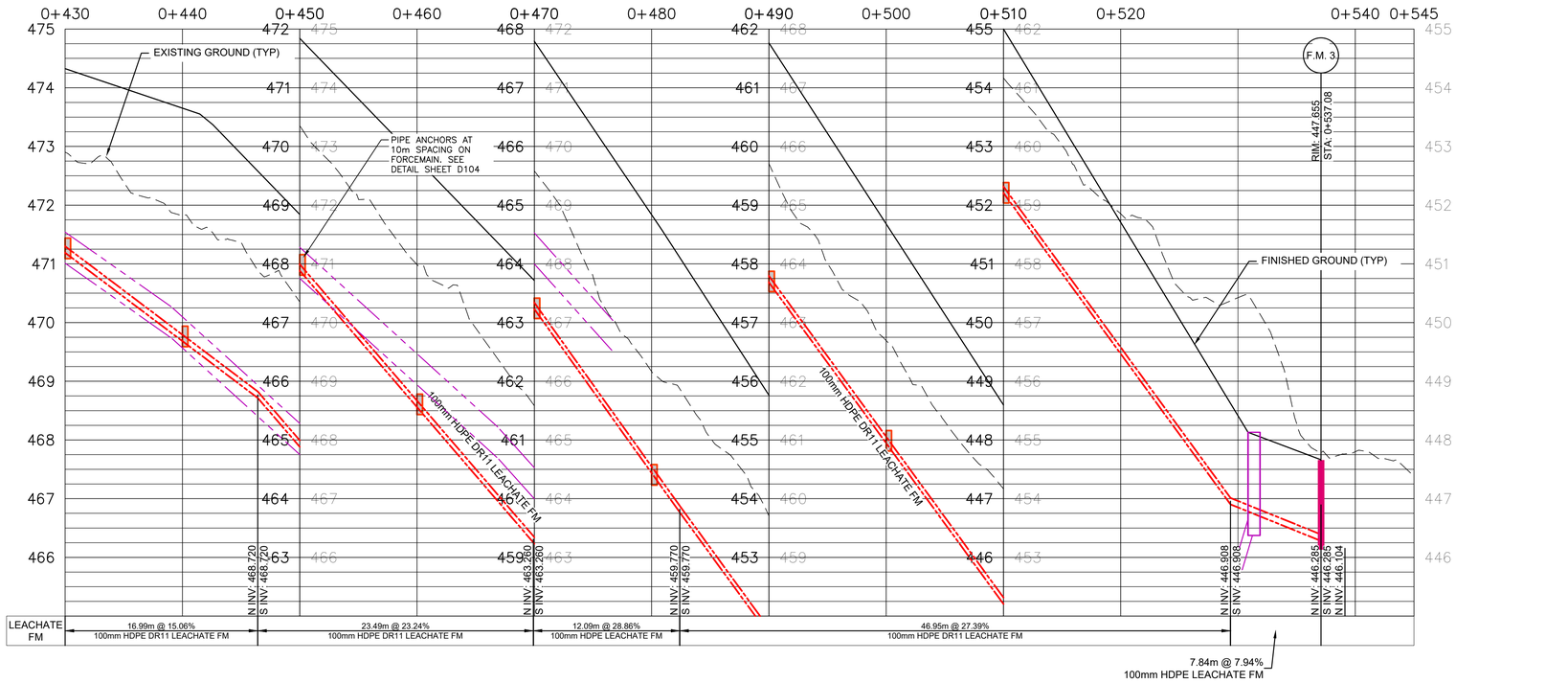
DRAWING NO. C503

REV NO 6

FILE LOCATION: \\corp.pbwan.net\ca\data$\CAKW\500\Projects\2018\18M-01541-00 Glenmore Landfill — Cells and Civil Works\3_TECH\3_Cad\5_Area 3\3_Sheets\18M-01541-00-5-C5-PP ACCESS ROAD-LFG.dwg PRINTED ON: 2/26/2026 8:34 PM



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0 5 10 15 20 25m

SCALE: 1:250

LEGEND

WATER, LEACHATE SEWER, LEACHATE F.M., STORM SEWER, LANDFILL GAS, ELECTRICAL, CONDUITS, DITCH LINE
EDGE OF ASPH., EDGE OF GRAVEL, TOP OF SLOPE, BOT. OF SLOPE, FENCE, IRRIGATION
STORM MANHOLE, SAN MANHOLE, POWER POLE, WATER VALVE, HYDRANT, WELLHEAD

700 - 1631 DICKSON AVENUE
KELOWNA, BC
CANADA V1Y 0B5
PHONE: 250-980-5500
WWW.WSP.COM

NAD 83

INSERTION BASE POINT= 300,000 , 5,500,000

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WSP Canada Inc.
Engineers & Geoscientists BC
Permit #1000200
PROFESSIONAL ENGINEER
C. EVANCIO
53165
BRITISH COLUMBIA
2026-02-27

BASE CE | DESIGN CE
APPROVED DG
DECEMBER 2020
SCALE HORIZ. 1:250 VERT. 1:50
SCALE NOT ACCURATE OVER LONG DISTANCES

THE CITY OF KELOWNA

DESIGN AND CONSTRUCTION

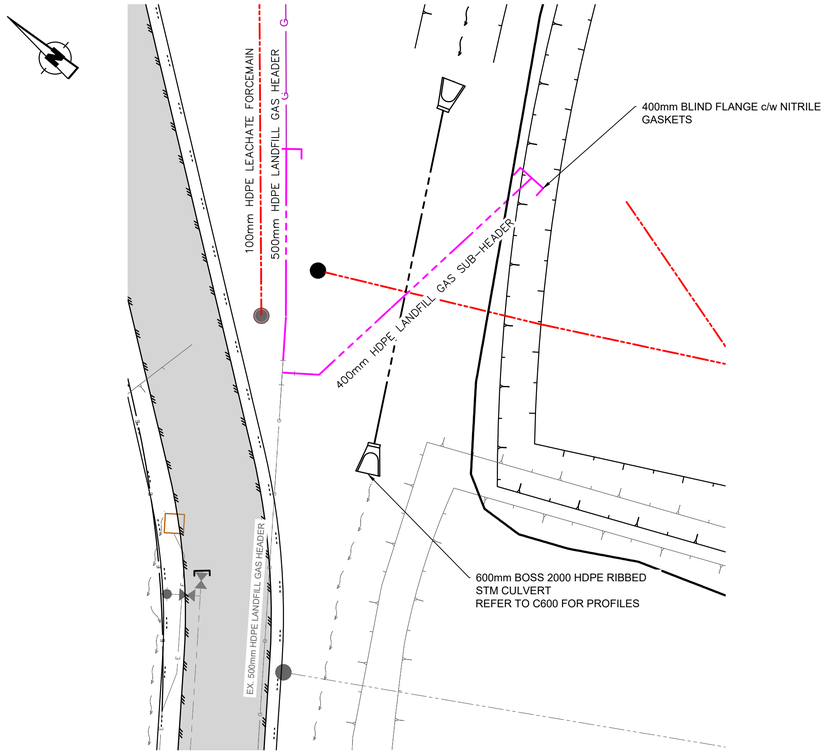
GLENMORE LANDFILL – AREA 3 ACCESS ROAD & LFG & LEACHATE FORCEMAIN PLAN PROFILE STA. 0+430 TO 0+545

DIVISION

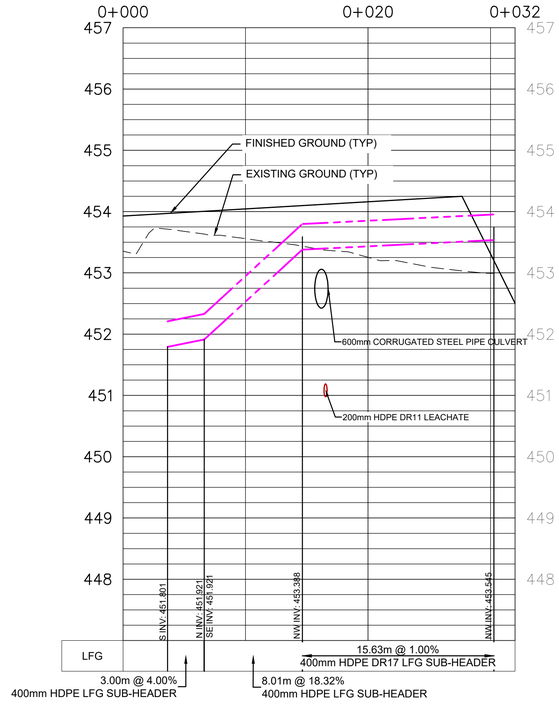
DRAWING NO. C504

REV NO 6

FILE LOCATION: \\corp.pbwan.net\co\data$\CAKW.500\Projects\2018\18M-01541-00 Glenmore Landfill — Cells and Civil Works\3_TECH\3_Cadd\5_Area 3\3_Sheets\18M-01541-00-5-C5-PP ACCESS ROAD-LFG.dwg PRINTED ON: 2/26/2026 8:34 PM



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0 5 10 15 20 25m

SCALE: 1:250

LEGEND

WATER	EDGE OF ASPH.	STORM MANHOLE	
LEACHATE SEWER	EDGE OF GRAVEL	SAN MANHOLE	
LEACHATE F.M.	TOP OF SLOPE	POWER POLE	P.P.
STORM SEWER	BOT. OF SLOPE	WATER VALVE	
LANDFILL GAS	FENCE	HYDRANT	
ELECTRICAL	IRRIGATION	WELLHEAD	
CONDUITS			
DITCH LINE			

wsp
700 - 1631 DICKSON AVENUE
KELOWNA, BC
CANADA V1Y 0B5
PHONE: 250-980-5500
WWW.WSP.COM

NAD 83

INSERTION BASE POINT= 300,000 , 5,500,000

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PROFESSIONAL ENGINEER
C. EVANCIO
53165
PROVINCE OF BRITISH COLUMBIA
2026-02-27

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DECEMBER 2020	
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SCALE NOT ACCURATE OVER LONG DISTANCES

THE CITY OF KELOWNA
DESIGN AND CONSTRUCTION

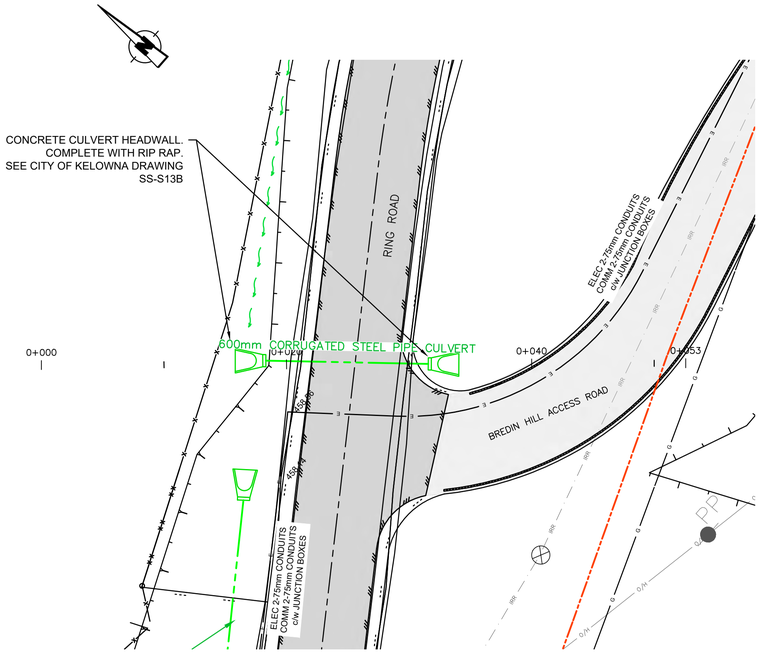
GLENMORE LANDFILL – AREA 3
LFG SUB-HEADER PROFILES

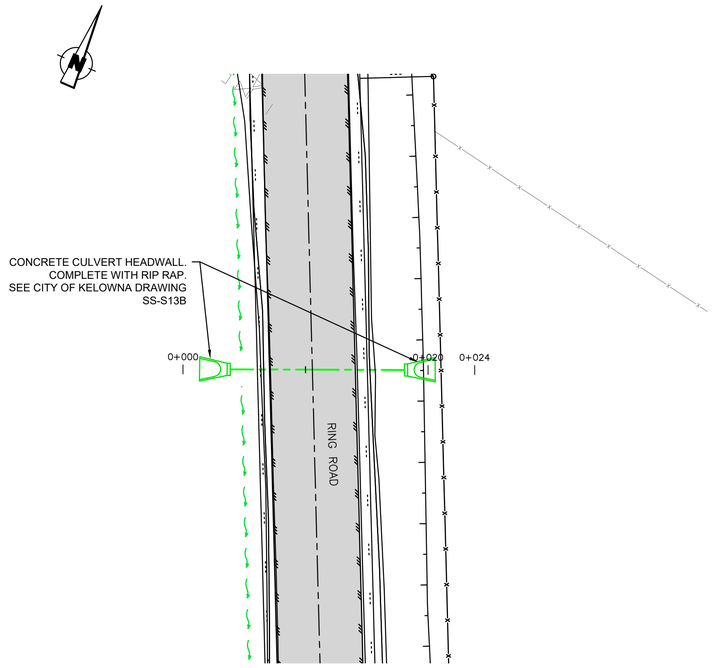
DIVISION

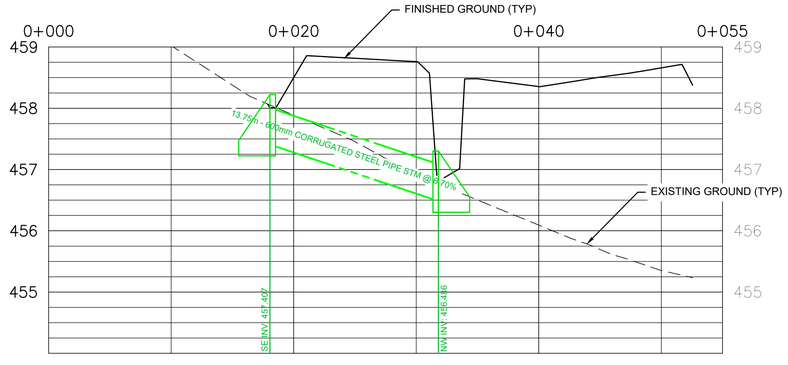
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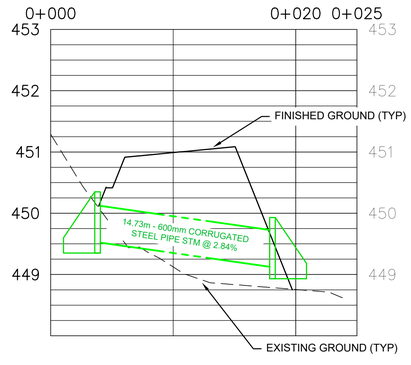
REV NO 6

FILE LOCATION: P:\2018\VBM-01541-00 Glenmore Landfill - Cells and Civil Works\3_TECH\3_Cad\5_Area 3\3_Sheets\VBM-01541-00-5-C5-PP ACCESS ROAD-LFG.dwg PRINTED ON: 2/27/2026 2:45 PM









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0 5 10 15 20 25m

SCALE: 1:250

LEGEND

WATER	EDGE OF ASPH.	STORM MANHOLE
LEACHATE SEWER	EDGE OF GRAVEL	SAN MANHOLE
LEACHATE F.M.	TOP OF SLOPE	POWER POLE P.P.
STORM SEWER	BOT. OF SLOPE	WATER VALVE
LANDFILL GAS	FENCE	HYDRANT
ELECTRICAL	IRRIGATION	WELLHEAD
CONDUITS		
DITCH LINE		

WSP
700 - 1631 DICKSON AVENUE
KELOWNA, BC
CANADA V1Y 0B5
PHONE: 250-980-5500
WWW.WSP.COM

NAD 83

INSERTION BASE POINT= 300,000 , 5,500,000

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3	24/01/22	KU	ISSUED FOR 100% DESIGN	CE
2	23/09/07	KU	ISSUED FOR 75% DESIGN	CE
1	21/03/09	CE	RE-ISSUED FOR REVIEW	DG

WSP Canada Inc.
Engineers & Geoscientists BC
Permit #1000200

PROFESSIONAL ENGINEER
C. EVANCIO
53165
PROVINCE OF BRITISH COLUMBIA
2026-02-27

BASE CE	DESIGN CE
APPROVED DG	
DECEMBER 2020	
SCALE	HORIZ. 1:250 VERT. 1:50

SCALE NOT ACCURATE OVER LONG DISTANCES

THE CITY OF KELOWNA
DESIGN AND CONSTRUCTION

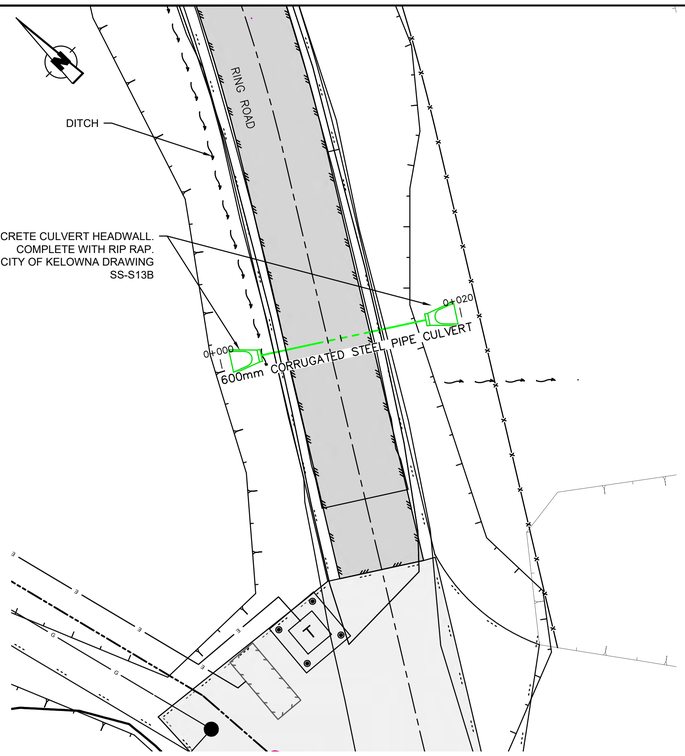
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CULVERT PLAN PROFILE
RING ROAD

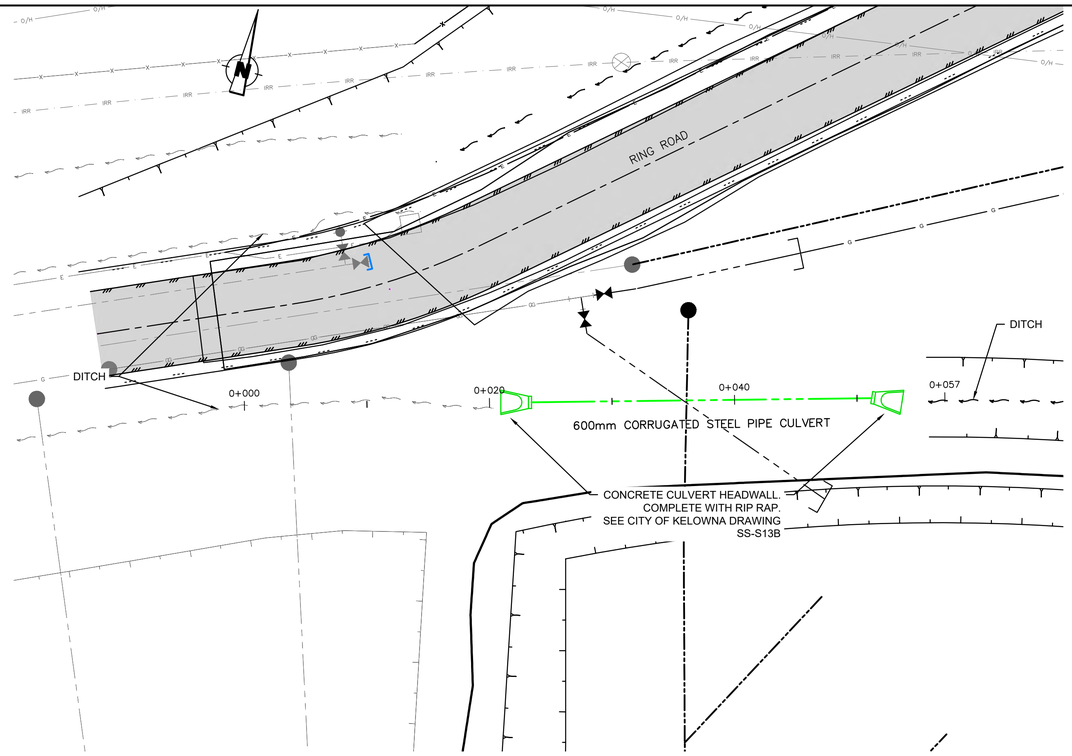
DIVISION

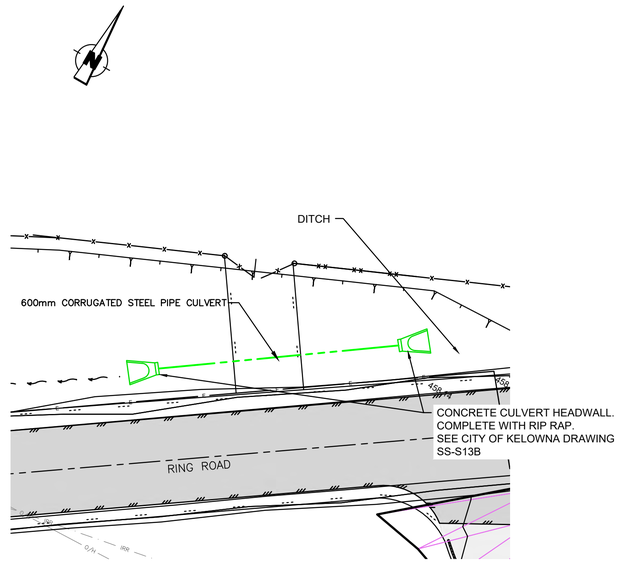
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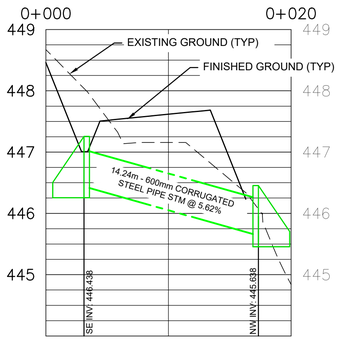
REV NO 6

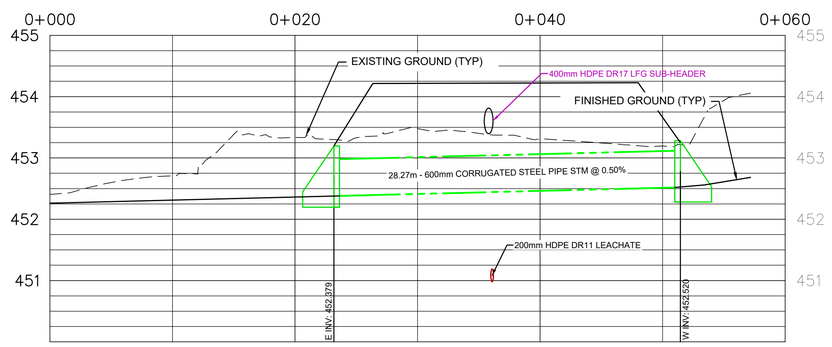
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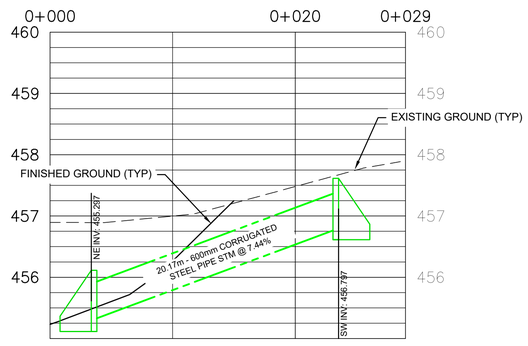












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0 5 10 15 20 25m

SCALE: 1:250

LEGEND

WATER
LEACHATE SEWER
LEACHATE F.M.
STORM SEWER
LANDFILL GAS
ELECTRICAL
CONDUITS
DITCH LINE
EDGE OF ASPH.
EDGE OF GRAVEL
TOP OF SLOPE
BOT. OF SLOPE
FENCE
IRRIGATION
STORM MANHOLE
SAN MANHOLE
POWER POLE
WATER VALVE
HYDRANT
WELLHEAD

wsp
700 - 1631 DICKSON AVENUE
KELOWNA, BC
CANADA V1Y 0B5
PHONE: 250-980-5500
WWW.WSP.COM

NAD 83

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2	23/09/07	KU	ISSUED FOR 75% DESIGN	CE
1	21/03/09	CE	RE-ISSUED FOR REVIEW	DG

WSP Canada Inc.
Engineers & Geoscientists BC
Permit #1000200
PROFESSIONAL ENGINEER
C. EVANCIO
53165
BRITISH COLUMBIA
ENGINEER
2026-02-27

BASE	CE	DESIGN	CE
APPROVED	DG		
DECEMBER 2020			
SCALE	HORIZ. 1:250 VERT. 1:50		

SCALE NOT ACCURATE OVER LONG DISTANCES

THE CITY OF KELOWNA
DESIGN AND CONSTRUCTION

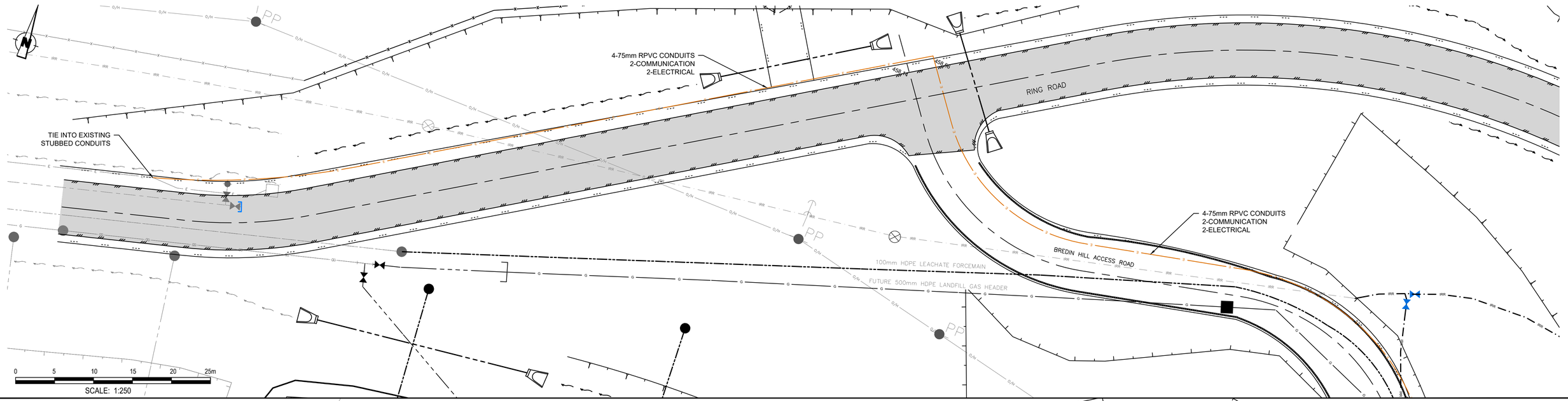
GLENMORE LANDFILL – AREA 3
CULVERT PLAN PROFILE 2
RING ROAD

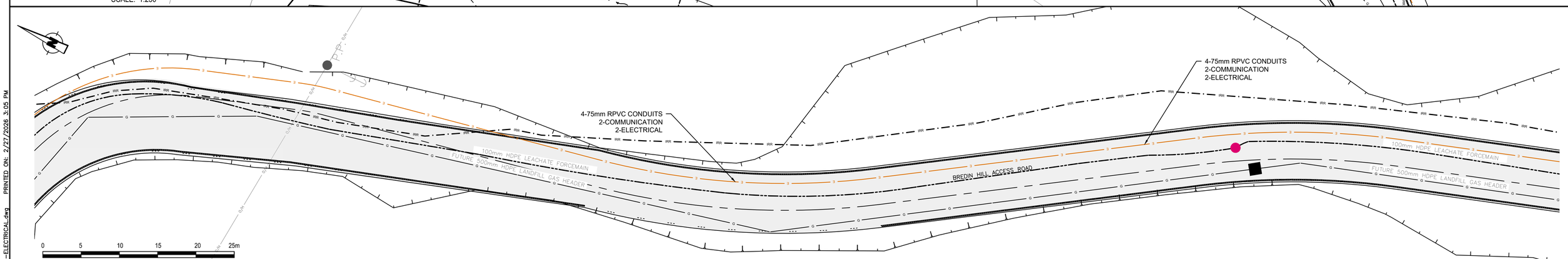
DIVISION

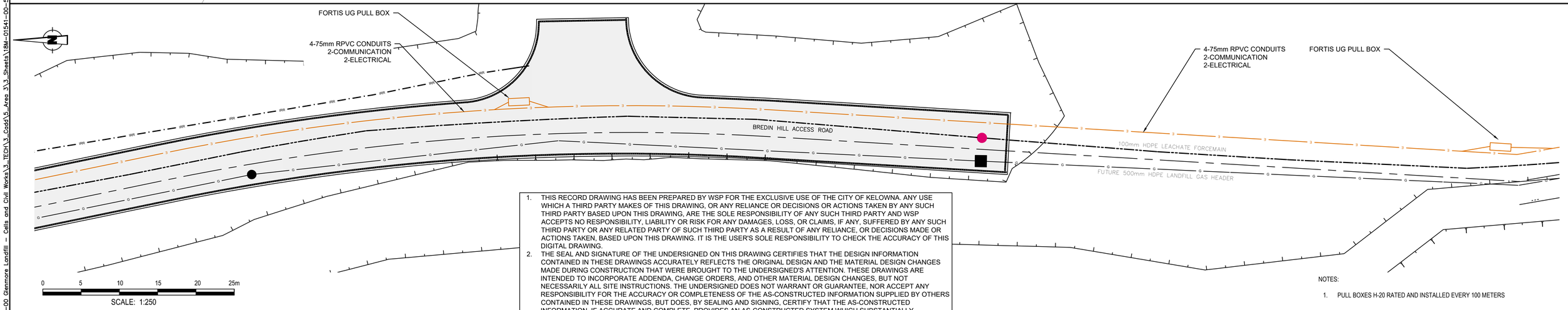
DRAWING NO. C601

REV NO 6

FILE LOCATION: P:\2018\18M-01541-00 Glenmore Landfill - Cells and Civil Works\3_TECH\3_Cad\5_Area 3\3_Sheets\18M-01541-00-5-06-PP STORM.dwg PRINTED ON: 2/27/2026 2:56 PM







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NOTES:

1. PULL BOXES H-20 RATED AND INSTALLED EVERY 100 METERS

LEGEND

WATER	EDGE OF ASPH.	STORM MANHOLE	
LEACHATE SEWER	EDGE OF GRAVEL	SAN MANHOLE	
LEACHATE F.M.	TOP OF SLOPE	POWER POLE	P.P.
STORM SEWER	BOT. OF SLOPE	WATER VALVE	
LANDFILL GAS	FENCE	HYDRANT	
ELECTRICAL	IRRIGATION	WELLHEAD	
CONDUITS			
DITCH LINE			

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KELOWNA, BC
CANADA V1Y 0B5
PHONE: 250-980-5500
WWW.WSP.COM

NAD 83

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1	21/03/09	CE	RE-ISSUED FOR REVIEW	DG

WSP Canada Inc.
Engineers & Geoscientists BC
Permit #1000200

PROFESSIONAL ENGINEER
PROVINCE OF BRITISH COLUMBIA
C. EVANCIO
53165
ENGINEER
2026-02-27

BASE CE	DESIGN CE
APPROVED DG	
DECEMBER 2020	
SCALE HORIZ. 1:250 VERT. 1:50	

SCALE NOT ACCURATE OVER LONG DISTANCES

THE CITY OF KELOWNA
DESIGN AND CONSTRUCTION

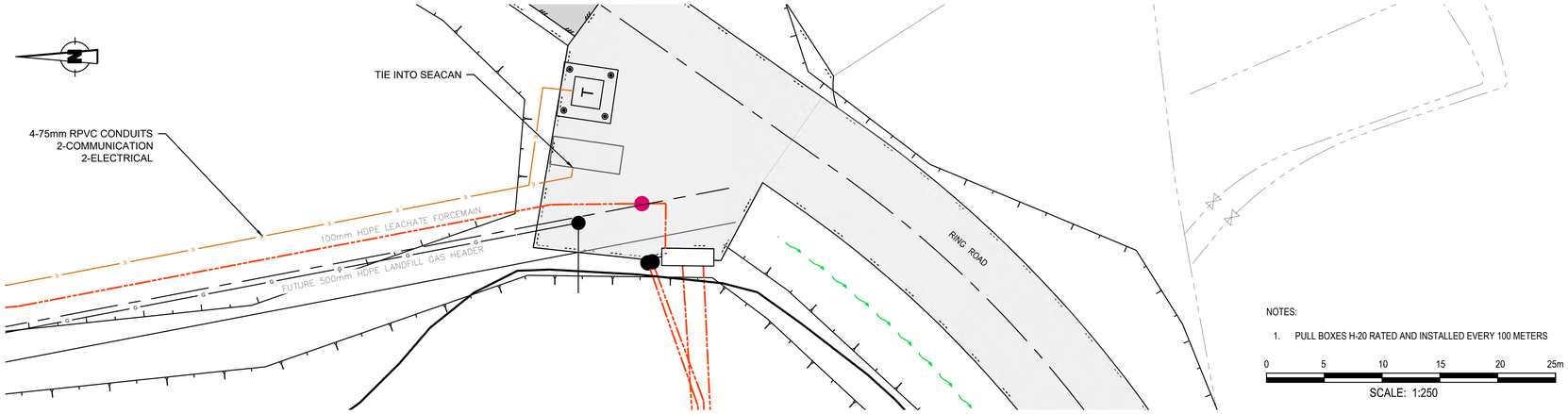
GLENMORE LANDFILL – AREA 3
ELECTRICAL
SITE PLAN

DIVISION

DRAWING NO. C700

REV NO 6

FILE LOCATION: P:\2018\18M-01541-00 Glenmore Landfill - Cells and Civil Works\3_TECH\3_Cad\5_Area 3\3_Sheets\18M-01541-00-5-C7-ELECTRICAL.dwg PRINTED ON: 2/27/2026 3:05 PM



NOTES:

1. PULL BOXES H-20 RATED AND INSTALLED EVERY 100 METERS

0 5 10 15 20 25m

SCALE: 1:250

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LEGEND

WATER	EDGE OF ASPH.	STORM MANHOLE	
LEACHATE SEWER	EDGE OF GRAVEL	SAN MANHOLE	
LEACHATE F.M.	TOP OF SLOPE	POWER POLE	P.P.
STORM SEWER	BOT. OF SLOPE	WATER VALVE	
LANDFILL GAS	FENCE	HYDRANT	
ELECTRICAL	IRRIGATION	WELLHEAD	
CONDUITS			
DITCH LINE			

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700 - 1631 DICKSON AVENUE
KELOWNA, BC
CANADA V1Y 0B5
PHONE: 250-980-5500
WWW.WSP.COM

NAD 83

INSERTION BASE POINT= 300,000 , 5,500,000

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WSP Canada Inc.
Engineers & Geoscientists BC
Permit #1000200

PROFESSIONAL ENGINEER
PROVINCE OF BRITISH COLUMBIA
C. EVANCIO
53165
ENGINEER
2026-02-27

BASE CE	DESIGN CE
APPROVED DG	
DECEMBER 2020	
SCALE HORIZ. 1:250 VERT. 1:50	

SCALE NOT ACCURATE OVER LONG DISTANCES

THE CITY OF KELOWNA

DESIGN AND CONSTRUCTION

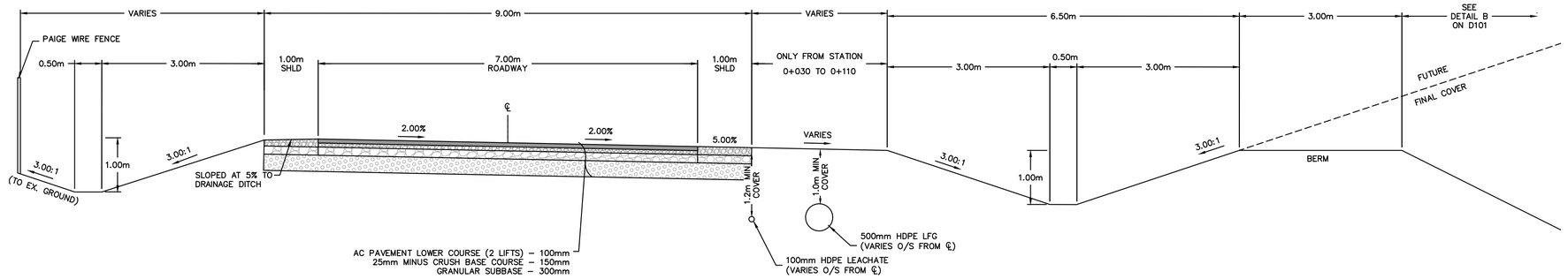
GLENMORE LANDFILL – AREA 3 ELECTRICAL SITE PLAN

DIVISION

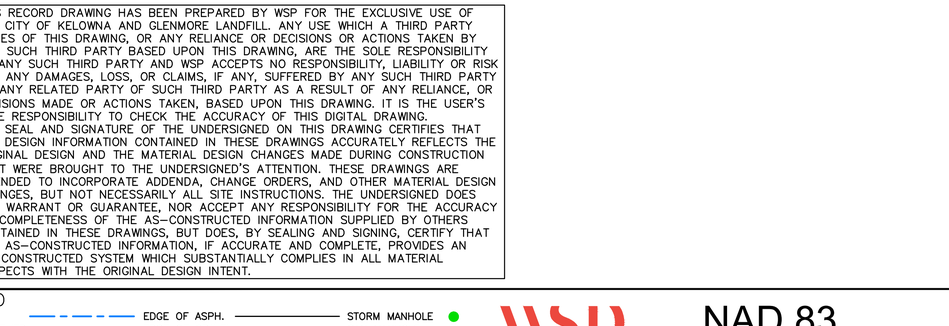
DRAWING NO. C701

REV NO. 6

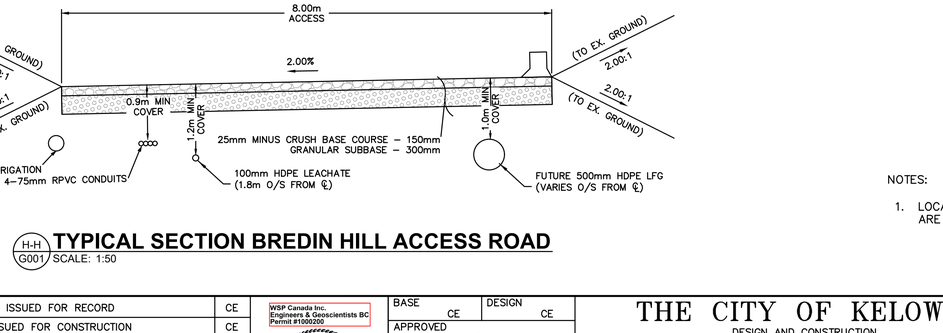
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A-A TYPICAL SECTION STA: 0+000 TO 0+110 RING ROAD
G001 SCALE: 1:50



B-B TYPICAL SECTION STA: 0+110 TO 0+180 RING ROAD
G001 SCALE: 1:50



C-C TYPICAL SECTION STA: 0+180 TO 0+280 RING ROAD
G001 SCALE: 1:50

D-D TYPICAL SECTION STA: 0+280 TO 0+760 RING ROAD
G001 SCALE: 1:50

E-E TYPICAL SECTION STA: 0+760 TO 0+910 RING ROAD
G001 SCALE: 1:50

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H-H TYPICAL SECTION BREDIN HILL ACCESS ROAD
G001 SCALE: 1:50

NOTES:

1. LOCATION/ELEVATION OF UTILITIES SHOWN ARE APPROXIMATE.

LEGEND

WATER	EDGE OF ASPH.	STORM MANHOLE	
LEACHATE SEWER	EDGE OF GRAVEL	SAN MANHOLE	
LEACHATE F.M.	TOP OF SLOPE	POWER POLE	P.P.
STORM SEWER	BOT. OF SLOPE	WATER VALVE	
LANDFILL GAS	FENCE	HYDRANT	
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NAD 83

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PROFESSIONAL ENGINEER C. EVANCIO # 53165 BRITISH COLUMBIA
2026-02-27

BASE	DESIGN
CE	CE
APPROVED	
DG	
DECEMBER 2020	

SCALE NOT ACCURATE OVER LONG DISTANCES

THE CITY OF KELOWNA
DESIGN AND CONSTRUCTION

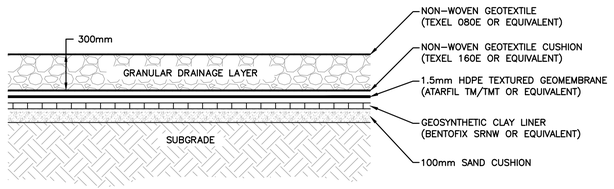
GLENMORE LANDFILL – AREA 3
DETAILS
TYPICAL SECTIONS

DIVISION

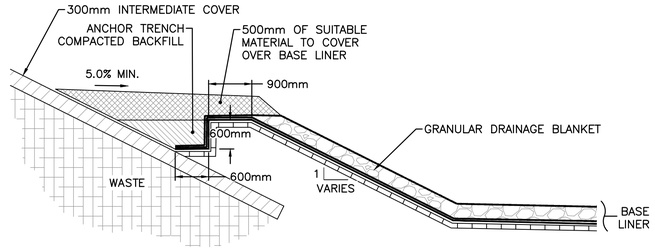
DRAWING NO. D100

REV NO 6

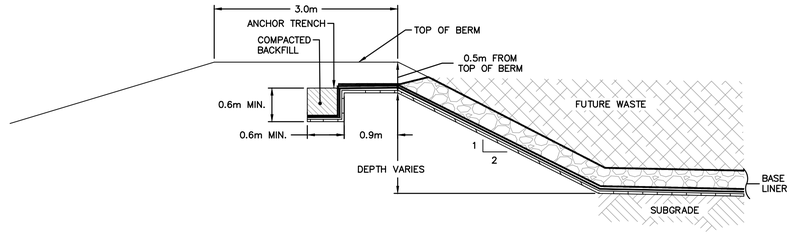
FILE LOCATION: P:\2018\09M-01541-00 Glenmore Landfill - Cells and Civil Works\3_TECH\3_Cadd\5_Area 3\3_Sheets\09M-01541-00-5-DETAILS.dwg PRINTED ON: 1/6/2026 1:09 PM



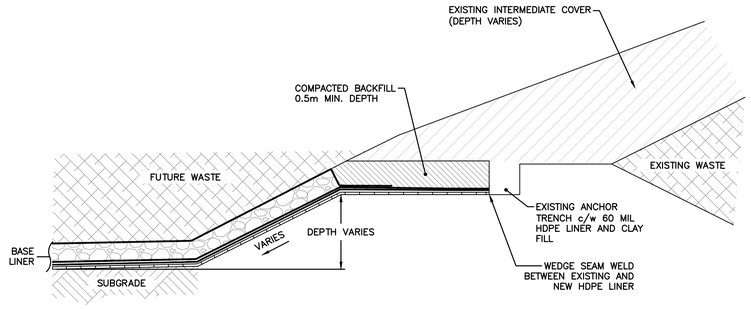
A C200 BASE LINER (TYP.)
SCALE: NTS



B-1 C200 PERIMETER TIE-IN TO EXISTING LANDFILL SLOPE (TYP.)
SCALE: 1:50



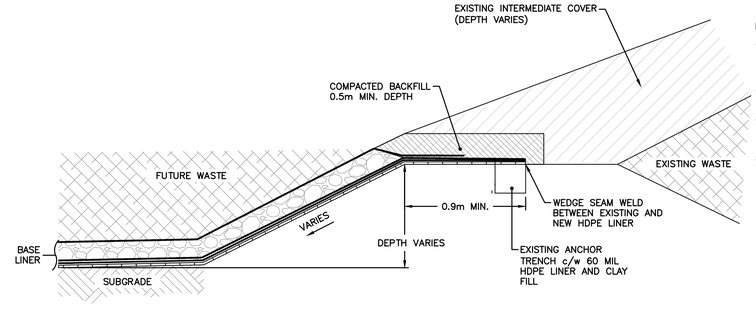
B-2 C200 PERIMETER TIE-IN TO BERM (TYP.)
SCALE: 1:50



NOTES:

1. EXISTING HDPE LINER TO BE CUT AND CLEANED PRIOR TO TIE–IN. THE ENGINEER SHALL INSPECT EXISTING LINER CONDITION PRIOR TO TIE–IN.
2. COMPACTED BACKFILL TO BE COMPACTED TO AT LEAST 95% MODIFIED PROCTOR DRY DENSITY
3. EXISTING WASTE MAY BE ENCOUNTERED. STOCKPILE WASTE SEPARATELY FROM OTHER MATERIAL AND CONTACT THE ENGINEER FOR FURTHER INSTRUCTION.
4. ALL EXPOSED WASTE SHALL BE COVERED WITH 0.5m MINIMUM OF SUITABLE MATERIAL.

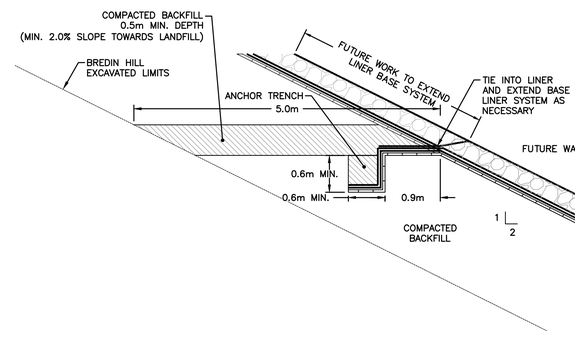
C-1 C200 PERIMETER TIE-IN TO EXISTING LANDFILL LINER (TYP.) ALTERNATIVE 1
SCALE: 1:50



NOTES:

1. EXISTING HDPE LINER TO BE CUT AND CLEANED PRIOR TO TIE–IN. THE ENGINEER SHALL INSPECT EXISTING LINER CONDITION PRIOR TO TIE–IN.
2. COMPACTED BACKFILL TO BE COMPACTED TO AT LEAST 95% MODIFIED PROCTOR DRY DENSITY
3. EXISTING WASTE MAY BE ENCOUNTERED. STOCKPILE WASTE SEPARATELY FROM OTHER MATERIAL AND CONTACT THE ENGINEER FOR FURTHER INSTRUCTION.
4. ALL EXPOSED WASTE SHALL BE COVERED WITH 0.5m MINIMUM OF SUITABLE MATERIAL.

C-2 C200 PERIMETER TIE-IN TO EXISTING LANDFILL LINER (TYP.) ALTERNATIVE 2
SCALE: 1:50



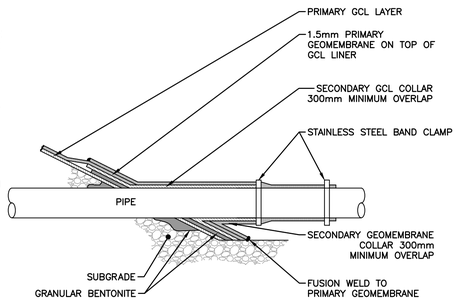
NOTES:

1. EXISTING HDPE LINER TO BE CUT AND CLEANED PRIOR TO TIE–IN. THE ENGINEER SHALL INSPECT EXISTING LINER CONDITION PRIOR TO TIE–IN.
2. COMPACTED BACKFILL TO BE COMPACTED TO AT LEAST 95% MODIFIED PROCTOR DRY DENSITY
3. HEIGHT BETWEEN EACH BENCH TO BE 9.0m

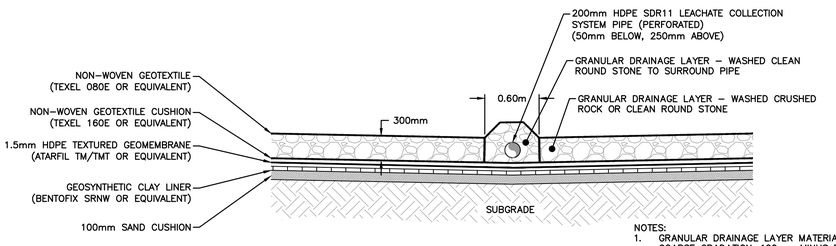
D C200 PERIMETER TIE-IN TO BREDIN HILL
SCALE: 1:50

NOTES:

1. WHEN THE GCL IS PLACED OVER A HORIZONTAL PIPE PENETRATION A NOTCH SHOULD BE EXCAVATED INTO THE SUBGRADE AROUND THE PENETRATION (SEE DETAIL). THE NOTCH SHOULD THEN BE BACKFILLED WITH GRANULAR BENTONITE. A SECONDARY COLLAR OF GCL SHOULD BE PLACED AROUND THE PENETRATION (SEE DETAIL). IT IS HELPFUL TO FIRST TRACE AN OUTLINE OF THE PENETRATION ON THE GCL AND THEN CUT A "STAR" PATTERN IN THE COLLAR TO ENHANCE THE COLLAR'S FIT TO THE PENETRATION. GRANULAR BENTONITE SHOULD BE APPLIED BETWEEN THE PRIMARY GCL LAYER AND THE SECONDARY GCL COLLAR.
2. A SLEEVE OF GEOMEMBRANE IS MADE TO MAKE THE TRANSITION BETWEEN THE SLOPE AND THE PIPE (A PIPE BOOT). THE SLEEVE IS THEN CLAMPED TO THE PIPE WITH A SUITABLE GASKET OR SEALANT UNDER THE CLAMP. THE BODY OF THE PIPE BOOT IS WELDED TO THE GEOMEMBRANE ON THE SLOPE.



E C300's HDPE HORIZONTAL PIPE PENETRATION BOOT
SCALE: NTS



NOTES:
1. GRANULAR DRAINAGE LAYER MATERIAL TO BE COARSE GRADATION, 100mm MINUS DRAIN ROCK. REFER TO CONTRACT SPECIFICATIONS.

F C300's LEACHATE COLLECTION SYSTEM (TYP.)
SCALE: NTS

1. THIS RECORD DRAWING HAS BEEN PREPARED BY WSP FOR THE EXCLUSIVE USE OF THE CITY OF KELOWNA AND GLENMORE LANDFILL. ANY USE WHICH A THIRD PARTY MAKES OF THIS DRAWING, OR ANY RELIANCE OR DECISIONS OR ACTIONS TAKEN BY ANY SUCH THIRD PARTY BASED UPON THIS DRAWING, ARE THE SOLE RESPONSIBILITY OF ANY SUCH THIRD PARTY AND WSP ACCEPTS NO RESPONSIBILITY, LIABILITY OR RISK FOR ANY DAMAGES, LOSS, OR CLAIMS, IF ANY, SUFFERED BY ANY SUCH THIRD PARTY OR ANY RELATED PARTY OF SUCH THIRD PARTY AS A RESULT OF ANY RELIANCE, OR DECISIONS MADE OR ACTIONS TAKEN, BASED UPON THIS DRAWING. IT IS THE USER'S SOLE RESPONSIBILITY TO CHECK THE ACCURACY OF THIS DIGITAL DRAWING.
2. THE SEAL AND SIGNATURE OF THE UNDERSIGNED ON THIS DRAWING CERTIFIES THAT THE DESIGN INFORMATION CONTAINED IN THESE DRAWINGS ACCURATELY REFLECTS THE ORIGINAL DESIGN AND THE MATERIAL DESIGN CHANGES MADE DURING CONSTRUCTION THAT WERE BROUGHT TO THE UNDERSIGNED'S ATTENTION. THESE DRAWINGS ARE INTENDED TO INCORPORATE ADDENDA, CHANGE ORDERS, AND OTHER MATERIAL DESIGN CHANGES, BUT NOT NECESSARILY ALL SITE INSTRUCTIONS. THE UNDERSIGNED DOES NOT WARRANT OR GUARANTEE, NOR ACCEPT ANY RESPONSIBILITY FOR THE ACCURACY OR COMPLETENESS OF THE AS–CONSTRUCTED INFORMATION SUPPLIED BY OTHERS CONTAINED IN THESE DRAWINGS, BUT DOES, BY SEALING AND SIGNING, CERTIFY THAT THE AS–CONSTRUCTED INFORMATION, IF ACCURATE AND COMPLETE, PROVIDES AN AS–CONSTRUCTED SYSTEM WHICH SUBSTANTIALLY COMPLIES IN ALL MATERIAL RESPECTS WITH THE ORIGINAL DESIGN INTENT.

LEGEND

WATER	EDGE OF ASPH.	STORM MANHOLE	
LEACHATE SEWER	EDGE OF GRAVEL	SAN MANHOLE	
LEACHATE F.M.	TOP OF SLOPE	POWER POLE	P.P.
STORM SEWER	BOT. OF SLOPE	WATER VALVE	
LANDFILL GAS	FENCE	HYDRANT	
ELECTRICAL	IRRIGATION	WELLHEAD	
CONDUITS			
DITCH LINE			

WSP
700 - 1631 DICKSON AVENUE
KELOWNA, BC
CANADA V1Y 0B5
PHONE: 250-980-5500
WWW.WSP.COM

NAD 83

INSERTION BASE POINT= 300,000 , 5,500,000

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NO.	YY/MM/DD	BY	REVISION	CH'KD
6	26/02/27	LW	ISSUED FOR RECORD	CE
5	24/04/30	KG	ISSUED FOR CONSTRUCTION	CE
4	24/02/14	KG	ISSUED FOR REQUEST FOR PROPOSAL	CE
3	24/01/22	KU	ISSUED FOR 100% DESIGN	CE
2	23/09/07	KU	ISSUED FOR 75% DESIGN	CE
1	21/03/09	CE	RE–ISSUED FOR REVIEW	DG

WSP Canada Inc.
Engineers & Geoscientists BC
Permit #1000200
C. EVANCIO # 53165
2026-02-27

BASE CE	DESIGN CE
APPROVED DG	
DECEMBER 2020	

SCALE NOT ACCURATE OVER LONG DISTANCES

THE CITY OF KELOWNA
DESIGN AND CONSTRUCTION

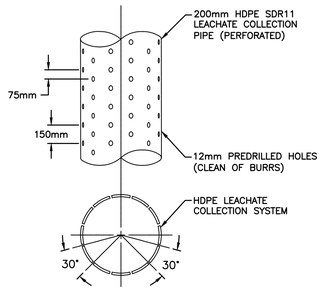
GLENMORE LANDFILL – AREA 3
DETAILS
BASE LINER

DIVISION

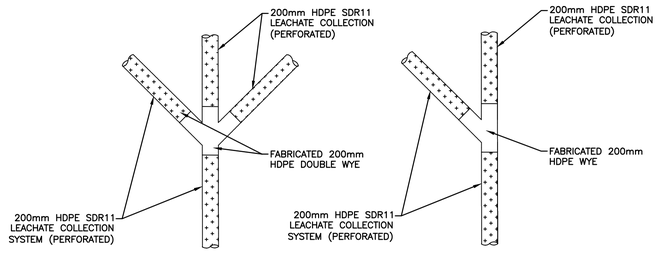
DRAWING NO. D101

REV NO 6

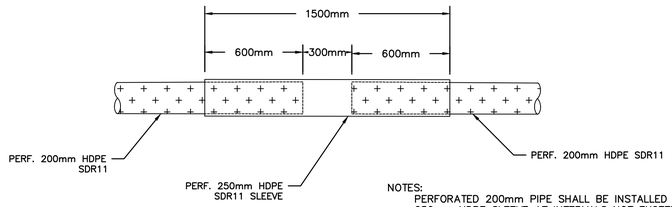
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A LEACHATE COLLECTION SYSTEM PIPE PERFORATIONS
C300's SCALE: NTS

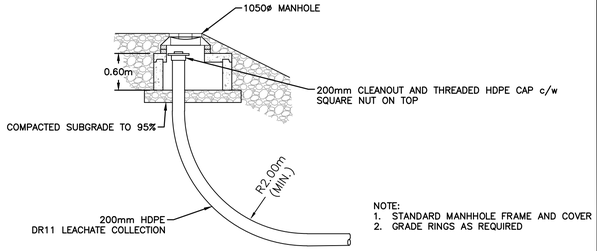


B LEACHATE COLLECTION SYSTEM PIPE CONNECTIONS
C300's SCALE: NTS



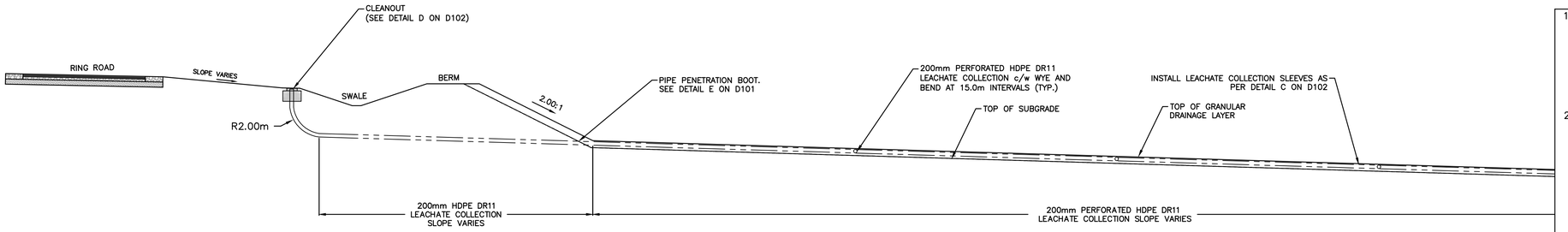
NOTES:
PERFORATED 200mm PIPE SHALL BE INSTALLED WITH A 250mm HDPE SLEEVE AT INTERVALS NOT EXCEEDING 10 METRES FOR EXPANSION/CONTRACTION.

C PERFORATED LEACHATE COLLECTION SLEEVE
C300's SCALE: NTS



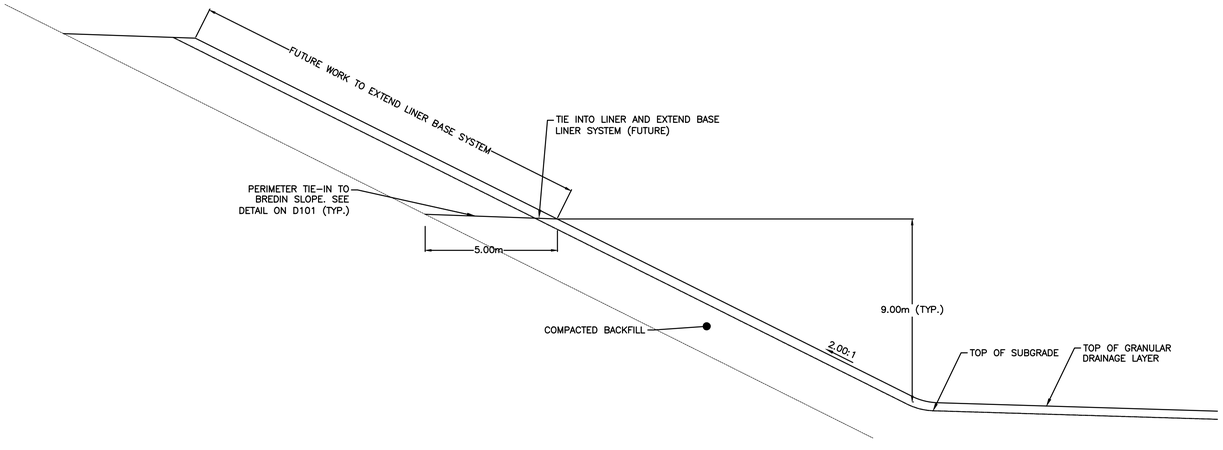
NOTE:
1. STANDARD MANHHOLE FRAME AND COVER
2. GRADE RINGS AS REQUIRED

D LEACHATE COLLECTION CLEANOUT
C300's SCALE: 1:50



E TYPICAL PROFILE - LEACHATE COLLECTION HEADER
C300's SCALE: 1:150

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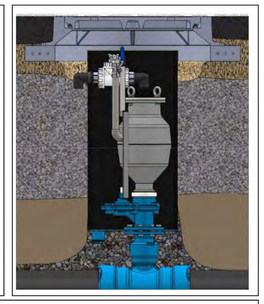


F TYPICAL PROFILE - BREDIN HILL
C300's SCALE: 1:150

Automatic Air and Vacuum Valve for Waste Water

Model 986-04
ARV set for underground installation, for operating range: 0 – 250 PSI (17.2 Bar)

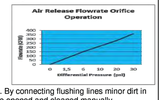




Features:

The Model 986 automatic air and vacuum valve set consists of a polyethylene (PE) shaft with shut-off and an ARV, replacing other complex and expensive manhole constructions. Eliminate confined space entry, acc. to OSHA regulations.
The set can be installed on sewage pipes by use of a double strap saddle.
All maintenance and repair work for this air valve set can be done from the surface, avoiding all the dangers related to manhole access.

Medium: Municipal Waste Water
Maximum Operating Pressure: 250 PSI (17.2 Bar)
Operating Range: 0 - 250 PSI (17.2 Bar)



Optional Features:
Special specifications for air inflow or air release, only. Stainless steel valve body on request.
Valve Maintenance:
Close shut-off valve. The valve is provided with two flushing connections reaching up to the cover. By connecting flushing lines minor dirt in the valve can be flushed out quickly and easily. Only in case of major dirt bodies the valve must be opened and cleaned manually.

Type	Size ANSI	Maximum Pressure PSI/Bar	Pipe Cover Depth ft./m	Overall Height Inch/mm	Overall Width Inch/mm	Weight lbs./Kg
Flange	3" ANSI	0-250 PSI 17.2 Bar	3.3 ft. 1.0 m	25.6" 780 mm	17.9" 455 mm	128 lbs. 58 Kg
Flange	3" ANSI	0-250 PSI 17.2 Bar	4.1 ft. 1.25 m	38.4" 975 mm	17.9" 455 mm	137 lbs. 62 Kg
Flange	3" ANSI	0-250 PSI 17.2 Bar	4.9 ft. 1.5 m	48.2" 1,225 mm	17.9" 455 mm	176 lbs. 80 Kg

1061 Triad Court, West Oak Business Park II, Suite 5 - Marietta, GA 30062 – Phone: +1 770-818-0670 – www.h-tec.us

Edition March 2019 – Subject to alteration without notice

G AIR RELEASE VALVE
C500's SCALE: NTS

LEGEND

WATER	EDGE OF ASPH.	STORM MANHOLE	
LEACHATE SEWER	EDGE OF GRAVEL	SAN MANHOLE	
LEACHATE F.M.	TOP OF SLOPE	POWER POLE	P.P.
STORM SEWER	BOT. OF SLOPE	WATER VALVE	
LANDFILL GAS	FENCE	HYDRANT	
ELECTRICAL	IRRIGATION	WELLHEAD	
CONDUITS			
DITCH LINE			

WSP
700 - 1631 DICKSON AVENUE
KELOWNA, BC
CANADA V1Y 0B5
PHONE: 250-980-5500
WWW.WSP.COM

NAD 83

INSERTION BASE POINT= 300,000 , 5,500,000

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2	23/09/07	KU	ISSUED FOR 75% DESIGN	CE
1	21/03/09	CE	RE-ISSUED FOR REVIEW	DG

WSP Canada Inc.
Engineers & Geoscientists BC
Permit #1000200
PROFESSIONAL ENGINEER
C. EVANCIO
53165
BRITISH COLUMBIA
ENGINEER
2026-02-27

BASE CE | DESIGN CE
APPROVED DG
DECEMBER 2020

SCALE NOT ACCURATE OVER LONG DISTANCES

THE CITY OF KELOWNA
DESIGN AND CONSTRUCTION

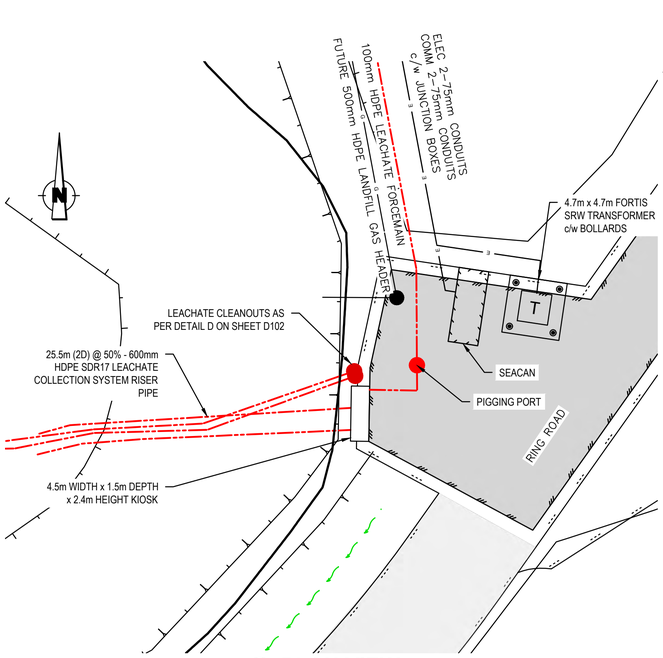
GLENMORE LANDFILL – AREA 3
DETAILS
UTILITIES

DIVISION

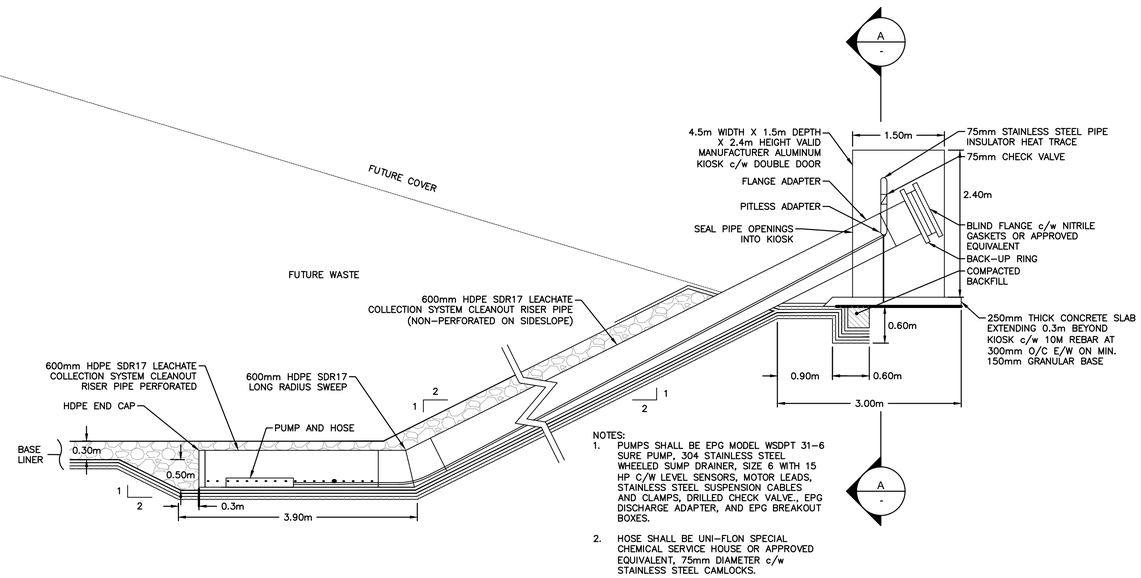
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REV NO. 6

FILE LOCATION: P:\2018\18M-01541-00 Glenmore Landfill - Cells and Civil Works\3_TECH\3_Cadd\5_Area 3\3_Sheets\18M-01541-00-5-DETAILS.dwg PRINTED ON: 1/6/2026 1:12 PM

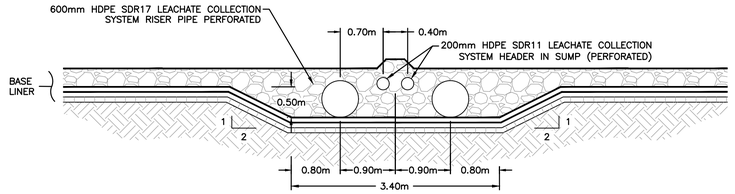


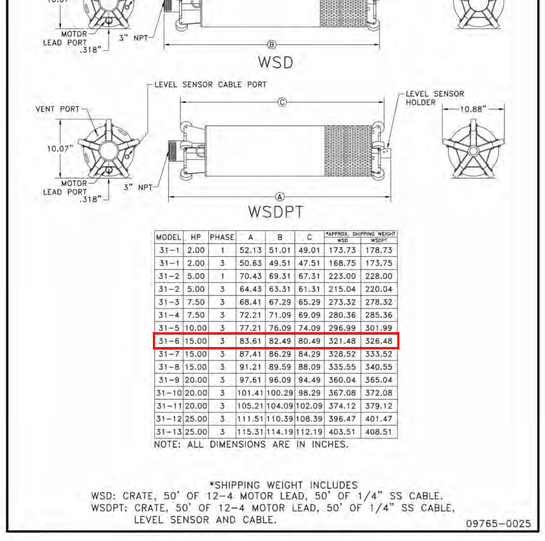
A D103 **PLAN VIEW**
SCALE: 1:250



NOTES:
1. PUMPS SHALL BE EPG MODEL WSDPT 31-6 SURE PUMP, 304 STAINLESS STEEL WHEELED SUMP DRAINER, SIZE 6 WITH 15 HP C/W LEVEL SENSORS, MOTOR LEADS, STAINLESS STEEL SUSPENSION CABLES AND CLAMPS, DRILLED CHECK VALVE., EPG DISCHARGE ADAPTER, AND EPG BREAKOUT BOXES.
2. HOSE SHALL BE UNI-FLON SPECIAL CHEMICAL SERVICE HOUSE OR APPROVED EQUIVALENT, 75mm DIAMETER c/w STAINLESS STEEL CAMLOCKS.

B C300's **LEACHATE COLLECTION SUMP, SUMP RISER PIPE**
SCALE: 1:50





MODEL	HP	PHASE	A	B	C	*APPROX. SHIPPING WEIGHT WSD	WSDPT
31-1	2.00	1	52.13	51.01	49.01	173.73	178.73
31-1	2.00	3	50.63	49.51	47.51	168.75	173.75
31-2	5.00	1	70.43	69.31	67.31	223.00	228.00
31-2	5.00	3	64.43	63.31	61.31	215.04	220.04
31-3	7.50	3	68.41	67.29	65.29	273.32	278.32
31-4	7.50	3	72.21	71.09	69.09	280.36	285.36
31-5	10.00	3	77.21	76.09	74.09	296.99	301.99
31-6	15.00	3	83.61	82.49	80.49	321.48	326.48
31-7	15.00	3	87.41	86.29	84.29	328.52	333.52
31-8	15.00	3	91.21	89.59	88.09	335.55	340.55
31-9	20.00	3	97.61	96.09	94.49	360.04	365.04
31-10	20.00	3	101.41	100.29	98.29	367.08	372.08
31-11	20.00	3	105.21	104.09	102.09	374.12	379.12
31-12	25.00	3	111.51	110.39	108.39	396.47	401.47
31-13	25.00	3	115.31	114.19	112.19	403.51	408.51

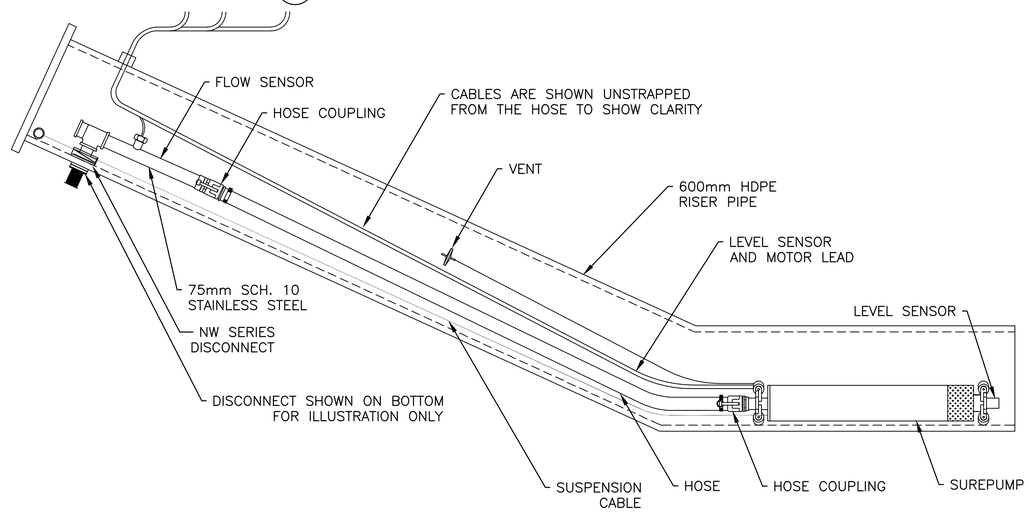
NOTE: ALL DIMENSIONS ARE IN INCHES.

*SHIPPING WEIGHT INCLUDES
WSD: CRATE, 50' OF 12-4 MOTOR LEAD, 50' OF 1/4" SS CABLE.
WSDPT: CRATE, 50' OF 12-4 MOTOR LEAD, 50' OF 1/4" SS CABLE, LEVEL SENSOR AND CABLE.

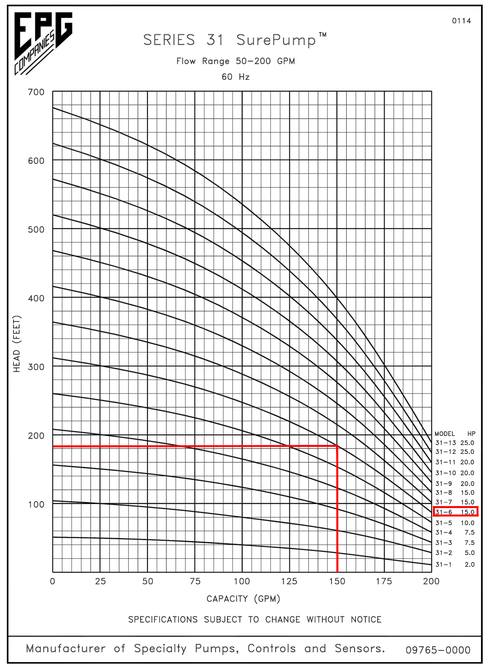
09765-0025

E D103 **SIZE 8 SUMP STRAINER**
SCALE: NTS

D C300's **LEACHATE COLLECTION SYSTEM SUMP**
SCALE: 1:50



F D103 **SIDE SLOPE RISER**
SCALE: NTS



G D103 **SUREPUMP CURVE**
SCALE: NTS

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LEGEND

WATER	EDGE OF ASPH.	STORM MANHOLE	
LEACHATE SEWER	EDGE OF GRAVEL	SAN MANHOLE	
LEACHATE F.M.	TOP OF SLOPE	POWER POLE	P.P.
STORM SEWER	BOT. OF SLOPE	WATER VALVE	
LANDFILL GAS	FENCE	HYDRANT	
ELECTRICAL	IRRIGATION	WELLHEAD	
CONDUITS			
DITCH LINE			

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5	24/04/30	KG	ISSUED FOR CONSTRUCTION	CE
4	24/02/14	KG	ISSUED FOR REQUEST FOR PROPOSAL	CE
3	24/01/22	KU	ISSUED FOR 100% DESIGN	CE
2	23/09/07	KU	ISSUED FOR 75% DESIGN	CE
1	21/03/09	CE	RE-ISSUED FOR REVIEW	DG

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2026-02-27

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THE CITY OF KELOWNA
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GLENMORE LANDFILL - AREA 3
DETAILS
UTILITIES

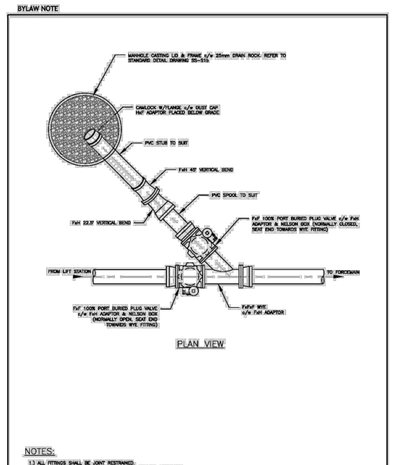
DIVISION

DRAWING NO. D103
REV NO 6

FILE LOCATION: \\corp.pbwan.net\co data$\CAKWL500\Projects\2018\BM-01541-00 Glenmore Landfill - Cells and Civil Works\3_TECH\3_Cadd\5_Area 3\3_Sheets\BM-01541-00-5-C10-DETAILS.dwg PRINTED ON: 2/26/2026 8:55
AUTHOR:

BL12066 added:
SS-S62 – Pigging Port

BYLAW NOTE



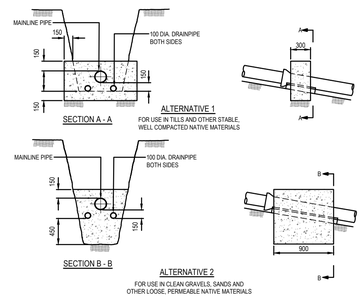
PLAN VIEW

NOTES:
1) ALL FITTINGS SHALL BE JOINT RESTRAINED.
2) SIZE OF ALL FITTINGS AND PIPE TO MATCH SIZE OF FORCEMAIN.

STANDARD DETAIL DRAWING	DATE: 05/22/20 SCALE:: NTS	PIGGING PORT	DWG. NO.: SS-S62	City of Kelowna

A D104 **PIGGING PORT**
SCALE: N.T.S

MMCD STANDARD DETAIL DRAWINGS



MAXIMUM SPACING OF ANCHOR BLOCKS (SEE NOTE 4)			
SANITARY AND STORM GRAVITY SEWERS		WATERMAINS AND FORCEMAINS	
SLOPE	MAX. SPACING	SLOPE	MAX. SPACING
15% - 20%	25m	10% OR GREATER	10m
20% - 35%	20m		
35% - 50%	15m		
50% - OVER	10m		

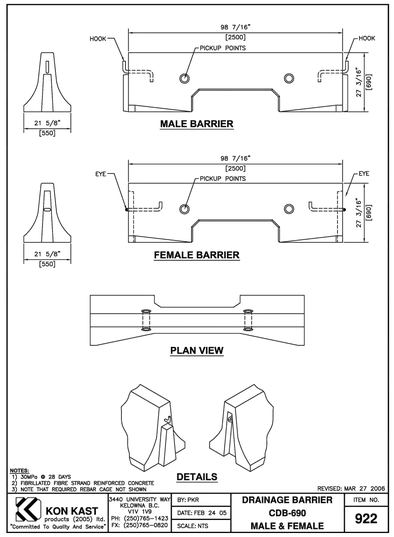
NOTE: 1. APPLICABLE TO ALL PIPE MATERIALS.
2. USE ALTERNATIVES 1 OR 2 AS SPECIFIED ON CONTRACT DRAWINGS.
3. USE 20 MPa CONCRETE UNLESS SPECIFIED OTHERWISE ON CONTRACT DRAWINGS.
4. REFER TO CONTRACT DRAWINGS FOR SPECIFIED SPACING IF OTHER THAN MAXIMUM SHOWN IN TABLE.

NOT TO SCALE

2008 PIPE ANCHOR BLOCKS — DRAWING NUMBER: G8

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B D104 **PIPE ANCHOR BLOCKS**
SCALE: N.T.S



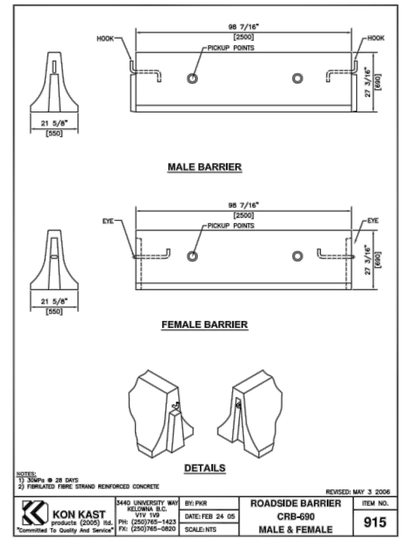
NOTES:
1) 30MPa @ 28 DAYS
2) FIBRILATED FIBRE STRAND REINFORCED CONCRETE
3) NOTE THAT REQUIRED REBAR CAGE NOT SHOWN

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FX: (250)765-0620

BY: PKR	DRAINAGE BARRIER	ITEM NO.
DATE: FEB 24 05	CDB-690	922
SCALE: NTS	MALE & FEMALE	

C D104 **ROADSIDE BARRIER DETAIL**
SCALE: N.T.S



NOTES:
1) 30MPa @ 28 DAYS
2) FIBRILATED FIBRE STRAND REINFORCED CONCRETE

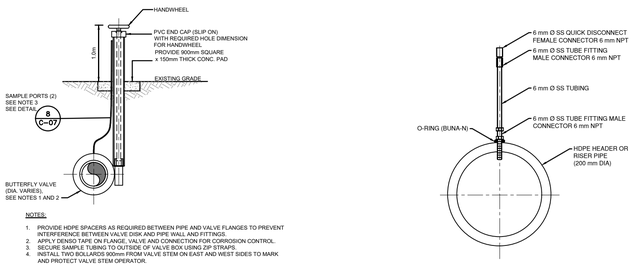
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BY: PKR	ROADSIDE BARRIER	ITEM NO.
DATE: FEB 24 05	CRB-690	915
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C-1 D104 **ROADSIDE BARRIER DETAIL**
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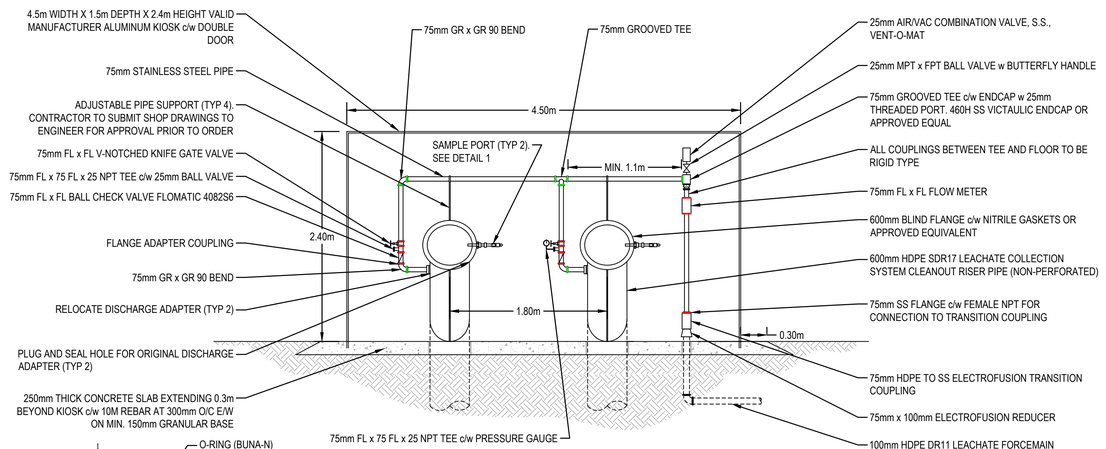


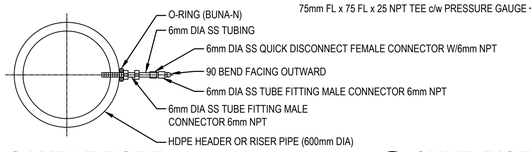
NOTES:
1. PROVIDE HDPE SPACERS AS REQUIRED BETWEEN PIPE AND VALVE FLANGES TO PREVENT INTERFERENCE BETWEEN VALVE DISK AND PIPE WALL AND FITTINGS.
2. APPLY DENSO TAPE ON FLANGE, VALVE AND CONNECTION FOR CORROSION CONTROL.
3. SECURE SAMPLE TUBING TO OUTSIDE OF VALVE BOX USING ZIP STRAPS.
4. INSTALL TWO BOLLARDS 900mm FROM VALVE STEM ON EAST AND WEST SIDES TO MARK AND PROTECT VALVE STEM OPERATOR.

D D104 LFG HEADER ISOLATION VALVE (VALVES > 200mm DIA)
NTS

8 C-04 SAMPLE PORT
NTS

D D104 **LANDFILL GAS ISOLATION VALVE**
SCALE: NTS





E-1 D104 **SAMPLE PORT**
SCALE: NTS

E D104 **SUMP RISER PIPE**
SCALE: NTS

NOTES:
1. REFER TO CENTRIX DRAWINGS FOR ELECTRICAL DETAILS
2. VICTAULIC FITTINGS, COUPLERS AND VALVES OR APPROVED EQUIVALENT SHALL BE USED

LEGEND

WATER	EDGE OF ASPH.	STORM MANHOLE	
LEACHATE SEWER	EDGE OF GRAVEL	SAN MANHOLE	
LEACHATE F.M.	TOP OF SLOPE	POWER POLE	P.P.
STORM SEWER	BOT. OF SLOPE	WATER VALVE	
LANDFILL GAS	FENCE	HYDRANT	
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CONDUITS			
DITCH LINE			

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2026-02-27

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APPROVED	DG		
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THE CITY OF KELOWNA
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GLENMORE LANDFILL – AREA 3
DETAILS
UTILITIES

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Keltech Environmental Ltd.

FINAL REPORT

2025 ANNUAL WATER MONITORING REPORT FOR GLENMORE LANDFILL

Operational Certificate 12218



Prepared for:
City of Kelowna
Glenmore Landfill
2720 John Hindle Drive
Kelowna, BC V1Y 2C5

Distribution:

1	Copy	City of Kelowna
1	E-Copy:	Keltech Environmental Ltd.

Project Number: 2024-029 (2025)
March 30, 2026

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LIST OF ACRONYMS

ASP	aerated static pile
AW	aquatic life water use (freshwater)
BOD	biochemical oxygen demand
BCWQG	BC Water Quality Guidelines
CoK	City of Kelowna
COD	chemical oxygen demand
CSR	Contaminated Sites Regulation
DOC	dissolved organic carbon
DOCP	Design, Operations and Closure Plan
DW	drinking water use
ENV	Ministry of Environment and Parks
HEPHw	heavy extractable petroleum hydrocarbons in water
IW	irrigation water use
LEPHw	light extractable petroleum hydrocarbons in water
LS	lift station
LT	long term (chronic)
MH	manhole
MOE	Ministry of Environment
OC	Operational Certificate
P9	CSR Protocol 9
QA/QC	quality assurance/quality control
RDCO	Regional District of Central Okanagan
ST	short term (acute)
TDS	total dissolved solids
TG15	CSR Technical Guidance 15
UBC	University of British Columbia
VFA	volatile fatty acids
VOC	volatile organic compounds
VPH	volatile petroleum hydrocarbons

1.0 INTRODUCTION

Keltech Environmental Ltd. (Keltech) was retained by the City of Kelowna (CoK) to complete the 2025 Annual Water Monitoring Report for Glenmore Landfill (Landfill) located at 2720 John Hindle Drive, Kelowna, BC. Refer to appended Figure 1 – Site Location Map.

As requested by the CoK, Keltech has prepared this report summarizing the results of the 2025 annual environmental water quality monitoring conducted by the CoK staff at the Site. This report is intended to satisfy the requirements of the Ministry of Environment and Climate Change Strategy (now Ministry of Environment and Parks (ENV)) Amended Operational Certificate 12218 (OC) dated December 8, 2000, amended May 30, 2023. A copy is provided in Appendix A.

For the purpose of this report, the area covered by the Landfill's footprint comprises the Site. Refer to appended Figure 2: Site Plan.

2.0 SITE DESCRIPTION

Glenmore Landfill has been in operation since 1966. It provides services to communities within the Regional District of Central Okanagan (RDCO) and Big White within the Regional District of Kootenay Boundary (RDKB) as a multi-purpose waste management facility for non-hazardous municipal, commercial, institutional, and light industrial solid waste.

The extent of the area that is monitored annually includes the following:

- Four main operational areas identified as Phase 1, Phase 2, Phase 3/Slough, and Compost Facility
- One leachate collection system (expanded in 2025 into Area 3 northeast of the Landfill) (see Leachate Management System in Appendix B) with five on-Site leachate sample points
- Four on-Site surface water bodies for sampling (Northeast (NE) Pond, Bredin Pond, Tutt Pond, and Slough)
- Four off-Site surface water bodies for sampling (Bubna Slough upgradient to the north, Slough#2 upgradient off-catchment, and Little Robert Lake and Robert Lake downgradient to the south)
- Sampling of two on-Site surface water discharge points, specifically, 1) S. Storm Headwall 186437 (SSHW) began in 2024, and 2) Culvert 1002026 (Culvert) began in 2025
- Thirty-three on-Site and off-Site groundwater monitoring wells sampled in 2025. The off-Site (outside Landfill Footprint) or near Site boundary wells were:
  - GL41 series wells (three wells (baseline)) at the north Site boundary
  - GL23-1 and GL43-1 northeast of the Landfill footprint
  - GL15 series wells (two wells (baseline)) to the west of the Site
  - GL39 and GL42 series, and GL46-1 to the south of the Landfill footprint
  - GL28 series wells (three wells) GL44 series (two wells), and GL45 series (two wells) to the south of the Site (downgradient/compliance)
  - 09BH-06D downgradient to the south, to the west of Robert Lake

2.1 Hydrogeology and Hydrology – 2023 Reported Summary

The most recent hydrogeological study was reported in the 2023 GHD *Hydrogeology and Hydrology Characterization Report*[1] (HHCR). A summary of the relevant findings of the report is as follows:

- The following major geologic and hydrogeologic units (in brackets) were identified at the Site:
  - Glaciolacustrine silt and clay deposits (Clay Unit - acts as a leaky aquitard)
  - Glaciofluvial sand and gravel (Sand and Gravel Unit - Aquifer 469)
  - Glacial till (Till Unit - acts as a leaky aquitard)
  - Bedrock - (Bedrock Unit - Aquifer 470)
- Groundwater lateral flow was determined to mimic topography and flow from the valley slopes towards the centre of the Site and then flow southward towards the south end of the valley.
- The Sand and Gravel Unit (Aquifer 469) is present as a discontinuous deposit across the Site.
- The Till Unit (2 m to 25 m thickness) underlies the Clay Unit or the Sand and Gravel Unit. GHD interprets the Till Unit as variable in composition and permeability, thereby acting like a leaky aquitard.
- The HHCR concluded that generally, the groundwater vertical gradient is upward in well nests near the ridge walls and within the Landfill vicinity, and is downward in the vicinity of the Slough.
- According to the HHCR, native clay liners, which are part of the leachate management system, were noted to have "s*everal areas where this natural or native clay liner is unlikely to be present or is thin*", which may "a*llow for downward migration of leachate into the underlying subsurface.*"

2.2 Leachate Indicator Parameters

Leachate indicator parameters identified in previous reports, including the HHCR have been consistently analyzed for during annual monitoring. In this report, Keltech considers the following leachate indicator parameters appropriate at this time: alkalinity, ammonia, arsenic, boron, chloride, chromium, cobalt, fluoride, iron, lithium, manganese, molybdenum, nickel, nitrate, selenium, sodium, strontium, sulphate, total dissolved solids (TDS), and uranium.

3.0 ANNUAL WATER AND LEACHATE MONITORING PROGRAM

The 2025 annual water and leachate monitoring followed the recommendations of the *2024 Annual Water Monitoring Report for Glenmore Landfill*[2]*,* dated March 27, 2025, and for consistency continues to include information related to the 2023 HHCR, and the OC and DOCP documents.

The annual water monitoring consisted of manual monitoring of the following:

- fifty-five wells for water levels
- thirty-three wells for water quality

[1] Hydrogeology and Hydrology Characterization Report, Glenmore Landfill, City of Kelowna. Prepared by GHD Limited. Dated 19 December 2023.

[2] 2024 Annual Water Monitoring Report for Glenmore Landfill, prepared by Keltech Environmental Ltd.

Surface water sampling consisted of the following:

- five surface water bodies for water level elevations
- eight surface water bodies for water quality
- two surface water discharge points for water quality

Leachate monitoring consisted of sample collection and analysis.

Tables A through C below summarize the 2025 program by general location, ID, and parameter. Water was monitored, sampled, and analyzed for parameters as described in the methodology section and as shown on Figure 2, Site Plan.

3.1 Groundwater Sampling

A list of the groundwater monitoring wells that were sampled in 2025 is presented in Table A below. The wells are grouped based on their location relative to the Landfill:

- **Upgradient Wells** – located hydraulically upgradient of the Landfill; may provide indications of baseline or background water quality and conditions
- **Landfill Wells** – located within or near the footprint of the Landfill; may indicate possible influences of Landfill activities on water quality
- **Downgradient Wells** – located to the south of the Site; may indicate possible influences of Landfill activities on downgradient water quality

Table A below lists the thirty-five wells sampled in 2025. Well GL46-1 was installed in 2024 and sampling was initiated in 2025. During Q1 sampling on April 3, 2025 the CoK reported issues with bladder pump installation; therefore, the groundwater sampling occurred slightly later than planned for that quarter.

- Field parameters measured and recorded at all wells were: temperature, pH, conductivity, redox, dissolved oxygen, and water level.
- Analyzed parameters at all wells were: alkalinity, chemical oxygen demand (COD), chloride, dissolved organic carbon (DOC), fluoride, hardness, metals dissolved, pH, nutrients, sulphate, TDS.

Table A: List of Monitoring Wells Sampled in 2025

Area	Well Location	Well ID and Month Sampled		Lithology
		May/June	Aug/ Sep	
Up-gradient	North border	GL41-1	GL41-1	Volcanic bedrock, brown, hard
	North border	GL41-2	GL41-2	Gravel and silt, trace clay (till)
	North border	GL41-3	GL41-3	Silt, some clay, followed by sand, trace silt
	NE of Phase 1	GL23-1		Sand, compact
	NE of Phase 1	GL43-1	GL43-1	Clay, silty sand seams
	West of Phase 3/Slough		GL15-1	Bedrock
	West of Phase 3/Slough		GL15-2	Sandy silt and gravel (till)
Footprint	NE of Phase 2	GL4-1	GL4-1	Silty gravel and sand
	NE of Phase 2	GL4-2	GL4-2	Silty clay
	West of Phase 2	GL2-1	GL2-1	Silty clay followed by silty sand

Area	Well Location	Well ID and Month Sampled		Lithology
		May/June	Aug/ Sep	
Footprint	West of Phase 2	GL2-2	GL2-2	Clay unit. Silty clay.
	West of Phase 2	GL5-2		Sand followed by gravelly silt (till)
	West of Phase 3/Slough	GL35-3		Silty sand with gravel (till)
	West of Phase 3/Slough	GL16-1		No information available
	West of Phase 3/Slough	GL20-1	GL20-1	Silty sand, some gravel, and trace clay and cobbles (till)
	West of Compost	GL27-1	GL27-1	Bedrock, some fractures
	West of Compost	GL27-3	GL27-3	Layered clay followed by silty clay, some sand and gravel (till)
Down-gradient	Off-Site south of compost	GL39-1	GL39-1	Silt, some sand, clay and gravel (till)
	Off-Site south of compost	GL39-2	GL39-2	Silty sand, trace gravel and clay
	Off-Site south of compost	GL42-1		Sand and gravel, trace silt (till)
	Off-Site south of compost	GL42-2		Clayey silt
	Off-Site south of compost	GL46-1	GL46-1	Volcanic rock
	Off-Site south of OC limit	GL28-1	GL28-1	Sand, some silt followed by gravel, some sand, trace silt
	Off-Site south of OC limit	GL28-2	GL28-2	Silty sand
	Off-Site south of OC limit	GL28-3	GL28-3	Layered silty clay, some sand
	Off-Site south of OC limit	GL44-1	GL44-1	Silty sand, fine gravel, trace to some silt (till)
	Off-Site south of OC limit	GL44-2	GL44-2	Sand, fine-grained, some silt
	Off-Site south of OC limit	GL45-1	GL45-1	Sand, fine to coarse grained, followed by sandy silt and gravel (till)
	Off-Site south of OC limit	GL45-2	GL45-2	Silty sand, fine grained, followed by clay, trace silt
	Off-Site southwest of Robert Lake	09BH06-D		Silty sand
	Centre compost area	GL29-1	GL29-1	Sand and silt followed by bedrock
	Centre compost area	GL29-2	GL29-2	Sand and silt (till)

Appended Table 1 provides construction specifications for the monitoring wells and the current status of each as of December 2025.

3.2 Surface Water Sampling

In 2025 surface water samples were collected on a quarterly basis from the eight surface water bodies both on-Site: NE Pond, Bredin Pond, Tutt Pond, Slough, and off-Site: Bubna Slough, Slough #2, Little Robert Lake, Robert Lake.

Bubna Slough and Slough #2 are located upgradient of the Site and are the background surface water sample points for monitoring baseline conditions.

The SSHW surface water runoff catchment includes an area to the south and east of the Compost area. The Culvert surface water runoff catchment includes the ditch area along the north side of John Hindle Drive to the west of the Landfill entrance. The catchment areas for each are shown on appended Figure 5.

Little Robert Lake and Robert Lake are located downstream of the Site and are considered part of the downgradient/compliance surface water monitoring network. They are used to identify potential flow-

through surface water contamination, if any. Robert Lake North is a new sampling point on the lake, and the previous Robert Lake sampling point at the south end of the lake (now referred to as Robert Lake South) is no longer being sampled. Note that monitoring at Little Robert Lake and Robert Lake are not required as part of the OC; however, CoK has voluntarily been monitoring both to assess potential impacts from the landfill. GHD recommended both lakes be formally added to the environmental management plan (EMP). The CoK has also added monitoring of the Culvert and SSHW to the surface water EMP.

Following GHD recommendations, quarterly updated 95th percentile site-specific background concentrations were used for comparison to the 2025 spring surface water data. As reported by the COK, in 2025 no surface water was used for irrigation of hay, forage crops, pasture, cereal crops, vegetables, or fruit. Surface water was used for the watering of newly planted trees on Bredin Hill with water from Bredin Pond, therefore, subsequent quarterly updates to the 95th percentile site-specific background concentrations were not needed. The 2025 95th percentile site-specific background concentrations were developed using data from 2021 through 2025 for use in the annual report.

The following Table B provides the location and ID number of the 2025 surface water sample points.

Field parameters collected were conductivity, dissolved oxygen, pH, redox potential, TDS, and temperature.

Laboratory analytical parameters were alkalinity, bromide, chloride, COD, coliforms fecal, coliforms total, conductivity, fluoride, hardness, metals, nitrogen total, nutrients (ammonia, nitrate, nitrite, phosphate), pH, phosphorus total, sulphate, TDS, TKN, and TOC.

Table B: Summary of 2025 Surface Water Sampling – QUARTERLY

Location	Sample Location	Comment	Months Sampled
Upgradient / Background Off-Site	Bubna Slough; Slough #2	Natural	March, May, September, November
East of Phases 1 & 2	NE Pond	Constructed; may be used for irrigation indirectly such that at times that the COK needs to lower the NE Pond water level it will send water over to Bredin Pond which may directly be used for irrigation	March, May, September, November
West of Phase 1	Bredin Pond	Constructed; may be used for irrigation	March, May, September, November
West of Phase 3	Tutt Pond	Constructed; may be used for irrigation	March, May, September, November
Phase 3	Slough	Natural slough remnant	March, May, September, November
South end of Site	S. Storm Headwall 186437; Culvert 1002026	Surface water runoff.	March, May, September, November
Downgradient	Little Robert Lake; Robert Lake North	Natural alkaline lakes	March, May, September, November

3.3 Leachate Sampling

Leachate at the Site is treated with Bioxide® at Leachate 2 (S Leachate Wet Well) and Leachate 3 (where it mixes with McKinley waste) to address potentially elevated sulfide levels. The sewage/leachate mixture is also aerated, and odours are treated by a Biorem Multi-Stage Biofilter. The treated sewage/leachate is

discharged into the municipal sanitary sewer system on Glenmore Road and is ultimately treated at the CoK Wastewater Treatment Facility. No standards or guidelines are considered to apply to the treated leachate samples (CoK 2021[3]).

Leachate samples were collected on a quarterly basis from the on-Site leachate collection manholes in general accordance with the BC Field Sampling Manual Part E3: Effluent (2024). The following Table C provides the location and ID of leachate sample points and month sampled. Note that volatile fatty acids (e.g., resin and fatty acids) continue to be analyzed for in leachate samples. The purpose of theses analytes is to assist in determining leachate collection system efficiency. These compounds do not have applicable BC water quality standards or guidelines.

- Analyzed parameters: alkalinity, biochemical oxygen demand (BOD), chloride, COD, DOC, fluoride, hardness, LEPHw, metals dissolved, nutrients (ammonia, nitrate, nitrite, orthophosphate, phosphorous), pH, sulfide total, sulphate, TDS, VFA, VOC, VPH.

Table C: Summary of 2025 Leachate Sampling – QUARTERLY

Location	Sample Point	Month Sampled*
West side of Phase 1	N Pumphouse MH	March, June, September, October
	P2 A2 Leachate MH	March, June, September, October
	P1 Leachate MH-2	March, June, September, October
Southwest of Phase 2	S Leachate Wet Well	March, June, September, October
Area 3 - NE part of Landfill	LS #4	September, October

Table C Notes:

LS - lift station

LEPH - light extractable petroleum hydrocarbons; VOC - volatile organic compounds; VPH - volatile petroleum hydrocarbons; VFA - volatile fatty acid; COD - chemical oxygen demand; DOC - dissolved organic carbon; TDS - total dissolved solids.

* In the spring of 2025, the LS #4 sampling port at the lift station was not installed when samples were collected, therefore, samples were collected from the forcemain outfall manhole. The permanent sample location name is LS #4

4.0 SITE WORKS – BY CITY OF KELOWNA

Based on information provided by the CoK, the following Site works occurred in 2025.

- **Leachate Collection System Expanded to Area 3** - The CoK expanded the Landfill leachate system to the new Area 3 at the northeast part of the Landfill footprint. One new leachate sampling location was created there, identified as Lift Station 4 (LS #4).
- **LS#4 Sampling** - Sample collection and monitoring of leachate from LS#4 began in 2025.
- **Area 3 Filling** - The filling of Area 3 commenced in 2025.
- **Paving** - Paving of the ground surface was extended in the Compost aerated static pile (ASP) area.
- **Operational, Weather, or other Events** - The CoK continued to monitor and record operational changes, notable weather events, and on-Site or surrounding lands events/activities such as wildfires

[3] 2020 Glenmore Landfill Annual Water Quality Report, Operations Certificate MR12218 EMS, Reference # E104956, Prepared for City of Kelowna, March 25, 2021.

and changes in agricultural grazing, irrigation or product application to land that may have the potential to affect surface and groundwater quality at the Site. The following were reported for this year:

- Rainwater pump-out: Prior to any filling of Area 3, rainwater that had accumulated in the newly installed liner in Area 3 was pumped into a northeast agricultural field. The pump-out volumes were not recorded.
- Trees: Replacement trees that were planted on Bredin Hill were irrigated using water from Bredin Pond during summer and fall. The original trees had been removed during Area 3 construction.
- Compost Leachate: Leachate from the compost ASP was pumped/hauled into LS3 (sanitary connection for the compost ASP leachate collection system in 2026).

- **Clay Unit Upgradient/Background Sampling** - In 2024, well GL43-1 was installed in the Clay Unit in the northeast part of the Site. Its purpose is to have an upgradient/background Clay Unit well. Refer to Table D below.

Table D: 2024 Report Recommendations for Clay Unit Well Network

Item	2023 Concern / Recommended Solution	2024 Works
Upgradient Clay Well	The existing upgradient wells GL23-1 and GL24-1 in the well network are not in the identified clay layer. Install one well between these wells and screen across the clay layer.	GL43-1 was installed in a shallow clay formation and across a silty sand seam.

In 2025, sampling of well GL43-1 began. In accordance with GHD's recommendation, the data from this well is to be included in calculating the 95th percentile values for background groundwater quality. At this time, since the data points are limited to two points (April and August 2025), the 95th percentile calculation was deferred until further data is collected in future years.

The CoK reported no other Site events or operational changes in 2025.

5.0 REGULATORY CRITERIA

In consultation with the CoK and consistent with GHD documents, plus the OC and DOCP applicable criteria, Keltech applied the following regulatory criteria to the Landfill data for the purpose of this report. As directed by the CoK, Keltech has removed the Canadian Drinking Water Quality Guidelines[4] previously required in the 2011 Ministry of Environment letter[5] for data comparison purposes. The rationale for this is summarized in the 2023 GHD HHCR as follows: "*The BC Contaminated Site Regulation (CSR) standards are the applicable groundwater quality criteria for the Site (refer to OC Condition 3.7) and supersede previously used Site criteria.*"

[4] Health Canada (2025). Guidelines for Canadian Drinking Water Quality—Summary Tables. Water and Air Quality Bureau, Healthy Environments and Consumer Safety Branch, Health Canada, Ottawa, Ontario

[5] Letter from Ministry of Environment to City of Kelowna Re: Glenmore Landfill Groundwater Monitoring Report for 2004-2009 and Groundwater Monitoring Report for 2010 – MR-12218 – Ministry Comments. Dated May 25, 2011.

5.1 Groundwater

- **CSR aquatic life water use, freshwater (AWf)** standards apply to all groundwater located within 500 m of an aquatic receiving environment unless it can be demonstrated that the groundwater does not flow to that receiving environment. Little Robert Lake and Robert Lake are located within 500 m of the south Site boundary and are recharged by groundwater therefore AWf standards apply at the Site.
- **CSR drinking water use (DW)** applies where the groundwater or surface water at or near a site is used or may be used for drinking water in the future. DW is considered applicable at all Sites in BC due to potential future use unless a drinking water exemption is obtained from ENV following Protocol 21. For this Site, DW standards apply to groundwater.
- **CSR Protocol 9 (P9)** For the assessment of groundwater in BC where concentrations of specific inorganic substances exceed the Generic Numerical Water Standards, it is possible to use the values from Table 1 of the CSR Protocol 9[6] (P9) to determine if the concentrations of these substances exceed P9 concentrations at the Site. For this assessment, P9 concentrations were used to assess some inorganic substances in groundwater.

5.2 Surface Water

- **BCWQG AWf:** Long-term chronic (LT) and short-term acute (ST) guidelines apply to the freshwater aquatic ecosystems of NE Pond, Robert Lake, and Little Robert Lake. The ST BCWQGs are the primary criteria. Where short-term chronic criteria are not available LT BCWQGs are used. According to the following fact sheet, *BC Ministry of Environment Fact Sheet, Water Quality Guidelines, Long-Term Average vs Short Term Maximum Water Quality Guidelines*, June 2016., the LT BCWQG applies at this Site because water quality parameters are “influenced by ongoing anthropogenic activities".
- **BCWQG IW:** LT and ST guidelines apply to waterbodies used for irrigation; in this case, Tutt Pond and Bredin Pond, as the water from these ponds may be used to irrigate adjacent agricultural lands as noted in Table B.
- **CSR TG15[7]:**: This guidance further clarifies the application of CSR AW standards and BCWQG guidelines. It states,
  - Briefly: 1) substance concentrations below the CSR AW standards at a location ≥ 10 metres inland from the high-water mark of an aquatic receiving environment are deemed protective of the aquatic receiving environment and, 2) where substance concentrations as specified above are not met, concentrations of substances below the BCWQGs at the location of the high-water mark are also deemed protective of the aquatic receiving environment.
  - **Concentration limits for maintained watercourses**: For maintained watercourses (ex: in this case ditches, drains, or culverts for surface water collection/drainage), the CSR AW standards apply to surface water, porewater and groundwater and ENV encourages that wherever possible the BCWQG be met in all watercourses including maintained watercourses at the point where surface water enters an aquatic receiving environment.

[6] CSR Protocol 9 for Contaminated Sites, Establishing Local Background Concentrations in Groundwater (P9), Version 3, effective February 1, 2023. Table 1: Regional estimates for local background concentrations in groundwater for inorganic substances

[7] CSR Technical Guidance 15, Concentration Limits for the Protection of Aquatic Receiving Environments, Version 2.0 (TG15), dated November 1, 2017

- Surface water and porewater in aquatic receiving environments other than maintained watercourses should be evaluated against the BCWQG.
- As noted by GHD: "Per TG15, WQGs apply to water quality in aquatic receiving environments located at or beyond 10 m of the high-water mark. Little Robert Lake and Robert Lake are downstream aquatic life environments, so WQGs apply to surface water samples collected from these lakes. WQGs do not apply to groundwater at the Site compliance wells since these lakes are located greater than 10 m from the Site." Note that in footnote 2 of Table E, the BCWQGs apply to the wells in the vicinity of onsite surface water and that are not identified as compliance wells, that is: GL-4-1, GL-4-2, GL-2-1, GL-2-2, GL-20-1, GL-35-1, GL-35-2, GL-35-3, GL-16-1, GL-8-1, and GL-8-2.

- **Statistical Analysis:** For the 2025 surface water data, statistical analysis was used to develop background concentrations for surface water collected in the spring of 2025 and also at the end of 2025. The 95th percentile background concentrations were calculated for selected parameters using data from the year 2021 onwards. These 95th percentile Site-specific background concentrations were determined based on upstream surface water sources, specifically Bubna Slough and Slough #2 and were then used to evaluate surface water quality at on-Site locations at NE Pond, Tutt Pond and Slough, as well as the downgradient locations of Little Robert Lake and Robert Lake.

5.3 Leachate

No water quality standards and/or guidelines have been applied to leachate.

The reference document *Guidelines for Environmental Monitoring at Municipal Solid Waste Landfills*[8] (GEMLF) contains a table of typical concentration ranges for key leachate indicator parameters. It is listed as Table 1: Typical Leachate Characteristics (SWANA, 1991) in the document.

5.4 Summary

A summary of applicable standards and guidelines for groundwater, surface water, and leachate is shown in Table E.

Table E: Summary of Applicable Regulatory Criteria

Applicable Criteria:		CSR Standards			BCWQG (LT, ST)		Site Specific Standards [3.]	
Media	**Location**	**AW**	**DW**	**IW**	**AW**	**IW**	**95 P** [4.]	**P9** [5.]
Groundwater	Monitoring Wells	Y[DOCP 1.]	Y[DOCP 1.]	Y[DOCP 2, 6.]	Y[DOCP,TG15 2.]	N[DOCP]	N	Y
Surface Water	Bubna Slough	Y	Y	Y	N[HHCR]	N[DOCP]	N	N
	Slough #2	N	N	N	N[HHCR]	N[DOCP]	N	N

[8] Guidelines for Environmental Monitoring at Municipal Solid Waste Landfills (undated). https://www2.gov.bc.ca/assets/gov/environment/waste-management/garbage/guidelines_environmental_monitoring_municipal_solid_waste_landfills.pdf

Applicable Criteria:		CSR Standards			BCWQG (LT, ST)		Site Specific Standards [3.]	
Media	**Location**	**AW**	**DW**	**IW**	**AW**	**IW**	**95 P** [4.]	**P9** [5.]
	Northeast Pond	N	N	N	Y[DOCP]	Y[DOCP,EMP, HHCR]	N	N
	Bredin Pond	N	N	N	Y	Y[DOCP,EMP, HHCR]	Y	N
	Tutt Pond	N	N	N	Y	Y[DOCP,EMP, HHCR]	Y	N
	Slough	N	N	N	N[HHCR]	Y[DOCP,EMP, HHCR]	Y	N
	S. Storm Headwall 186437	N	N	N	N	N	Y	N
	Culvert 1002026	N	N	N	N	N	Y	N
	Little Robert Lake	N	N	N	Y[DOCP]	N[DOCP,EMP, HHCR]	Y	N
	Robert Lake	N	N	N	Y[DOCP]	N[DOCP,EMP, HHCR]	Y[EMP,OC, DOCP]	N
Leachate	Leachate manholes	N	N	N	N	N	N	N

Table E Notes:
BCWQG: BC Water Quality Guidelines, both LT and ST.
LT: long-term average(chronic) ST: short-term maximum(acute)
CSR: BC Contaminated Sites Regulation
DOCP: 2023 Design, Operations and Closure Plan for Glenmore Landfill
EMP: Environmental Management Plan
HHCR: 2023 Hydrogeology and Hydrology Characterization Report
TG15: CSR Technical Guidance 15
Y: Yes N: No
1. All compliance wells: GL28-1, GL28-2, GL28-3, GL39-1, GL39-2, GL42-1, and GL42-2 (per OC and DOCP)
2. Wells in the vicinity of onsite surface water: GL4-1, GL4-2, GL2-1, GL2-2, GL20-1, GL35-1, GL35-2, GL35-3, GL16-1, GL8-1, and GL8-2 (per OC and DOCP)
3. Site specific standard determined in accordance with BC CSR guidance
4. 95th percentile statistical analysis used to determine site specific standards for surface water
5. CSR Protocol 9 for background groundwater quality
6. IW applies to groundwater only if groundwater is currently being used for irrigation; this is not the case at the Landfill

6.0 FIELD METHODOLOGY

The CoK staff conducted the 2025 water monitoring and sampling. Each event was completed using methodologies that were consistent with the following applicable reference documents:

- *BC Field Sampling Manual, Part E Water and Wastewater Sampling, Ambient Freshwater and Effluent Sampling*, available online at: https://www2.gov.bc.ca/assets/gov/environment/research-monitoring-and-reporting/monitoring/emre/manuals/field-sampling-manual/bc_field_sampling_manual_part_e.pdf
- *BC Field Sampling Manual, Part E1 Surface Water* available online at: https://www2.gov.bc.ca/assets/gov/environment/research-monitoring-and-

reporting/monitoring/emre/manuals/field-sampling-manual/bc-field-sampling-manual-part-e1-surface-water-2024-03-08.pdf

- *BC Field Sampling Manual, Part E3 Effluent* available online at: https://www2.gov.bc.ca/assets/gov/environment/research-monitoring-and-reporting/monitoring/emre/manuals/field-sampling-manual/bc-field-sampling-manual-part-e3-effluent-2024-03-08-draft.pdf

Refer to Appendix C for a summary of the 2025 field procedures and methods.

7.0 ANNUAL WATER MONITORING RESULTS

7.1 Field Observations

Groundwater monitoring and sampling included recording field observations including odours, inclusions, and oily or metallic sheen. Table F below summarizes 2025 observations by well ID; wells without evidence are not included. A copy of the field data records is provided in Appendix D.

Table F: Field Observations by Monitoring Well ID

MW ID	Date (2025)	Odour	Sheen	Comments
09BH06-D	Jun 2	None	None	Orange coating on tubing
GL2-1	May 22	None	None	Turbid then clear
GL2-1	Aug 29	None	None	Rusty coating on tubing. Water also rusty tinged. Clearing while purging.
GL2-2	May 21	None	None	Clear
GL16-1	May 13	None	None	Clear
GL20-1	May 21	Sulfur	Oily rainbow	Yellow rusty, moderate turbidity
GL20-1	Aug 26	Sulfur	-	Dark yellow tinge. Clearing to pale yellow.
GL27-1	May 13	None	None	Black specks, then clearing, then cleared
GL27-3	May 13	None	None	Yellow tint, black specks, then clearing, then clear
GL28-1	Sep 2	None	None	Air bubbles
GL28-2	May 26	None	None	Some silt at start, then clear
GL28-2	Sep 2	None	None	Turbid then clearing
GL28-3	May 26	None	None	Turbid at start, then clear
GL29-1	May 13	None	None	Yellowish tint, clearing somewhat
GL29-1	August 27	None	None	Yellow tinge
GL35-3	May 22	None	None	Water reacts with preservative
GL39-1	May 21	None	None	Clear
GL39-1	Oct 30	-	-	Clear
GL39-2	May 21	None	None	Clear
GL39-2	Oct 30	-	-	Slightly turbid
GL41-1	Aug 20	None	None	Some silt, cleared
GL41-1	Oct 29	-	-	Clear, some air bubbles
GL41-2	Mar 21	None	None	Air bubbles
GL41-2	May 28	None	None	Air bubbles

MW ID	Date (2025)	Odour	Sheen	Comments
GL41-2	Aug 20	-	-	Some silt then clear
GL41-2	Oct 29	None	None	Clear. Air bubbles
GL42-1	May 22	None	None	Air bubbles
GL42-2	Mar 27	None	None	Turbid, Went dry
GL42-2	May 20	None	None	Turbid, clearing, then clear. Went dry
GL43-1	May 9	None	None	Some turbidity, cleared, then turbid again
GL43-1	Aug 21	None	None	Air bubbles
GL41-2	Oct 29	None	None	Clear
GL44-1	Aug 28	None	None	Salt crystals on tubing
GL45-2	Aug 28	None	None	Salt crystals on tubing
GL46-1	Apr 3	Sulfur	None	-
GL46-1	Aug 26	None	None	Air bubbles. Clear

Table F Notes: **MW**: monitoring well

7.2 Groundwater and Surface Water Elevations and Groundwater Flow

The results of 2025 groundwater and surface water elevation monitoring, along with the historical data, are summarized in attached Tables 2A and 2B, and visually presented in Graphs 1 to 6 (Appendix E).

Horizontal Groundwater Flow: Based on 2025 measured elevations as presented in Figure 3 (March 2025) and Figure 4 (September 2025), the inferred groundwater flow direction for both dates was generally from north to south, and from west to east at the west side of Phase 3. The inferred groundwater flow direction is consistent with that of previous years.

Vertical Groundwater Flow: Vertical groundwater flow direction was updated using 2025 data and the calculated gradients are presented in Table G below. The gradients were slight and the flow pattern can be described as upward flow of groundwater in the north part of the Site, and east and west of Phases 1, 2 and 3 and the Slough. Downward vertical flow was measured in the Compost area and along the east and south sides of the Slough and Compost areas, specifically at well nests GL28, GL29, and GL39. Bedrock generally had an upward hydraulic gradient, thereby recharging the overlying aquifer. The upward hydraulic gradient is important for limiting the downward migration of Landfill contaminants into the bedrock.

Table G: 2025 Groundwater Vertical Gradients

Location	Nested Wells	Hydrogeologic Units	March	May	Sept	Nov
North of Phase 1	GL-1-1 & GL-1-2	Till Unit & Till Unit	0.0037	0.0064	0.0045	0.0050
	GL-41-1 & GL-41-3	Bedrock & Till Unit	0.0002	0.0003	0.0112	0.0139
West of Phase 2	GL-2-1 & GL-2-2	Clay Unit	0.0809	0.1016	0.0489	0.0384
	GL-5-1 & GL-5-2	Till & Bedrock Unit	-0.0011	-0.0024	0.0008	0.0047
East of Phase 2	GL-4-1 & GL-4-2	Sand and Gravel Unit & Clay Unit	0.1306	0.1554	0.1406	0.1297
Phase 3 / Slough	GL-35-1 & GL-35-3	Fill and Clay Unit	0.0532	0.0729	0.0510	0.0563
West of Phase 3 Slough	GL-8-1 & GL-8-2	Clay Unit & Sand and Gravel Unit	0.0307	0.1000	0.0901	0.0970
East of Phase 3	GL-26-1 & GL-26-2	Bedrock & Till Unit	1.7243	1.9414	2.1893	1.89614

	GL-26-1 & GL-26-4	Till/Bedrock & Bedrock Unit	-0.1285	-0.1489	-0.1670	-0.1402
Compost Facility	GL-27-1 & GL-27-2	Bedrock & Clay /Till Unit	0.0938	0.0941	0.1111	0.1095
	GL-29-1 & GL-29-2	Sand and Gravel & Till Unit	0.0041	-0.0150	-0.0206	-0.0111
South Perimeter	GL-42-1 & GL-42-2	Till Unit	0.0195	0.0185	0.0115	0.0139
	GL-39-1 & GL-39-2	Till Unit	0.0040	-0.0019	0.0014	-0.0688
South of Site	GL-28-1 & GL-28-2	Sand and Gravel & Clay Unit	-0.0180	-0.0125	-0.0052	-0.0133
	09BH06-D & 09BH06-S	Sand and Gravel Unit & Clay Unit	0.0288	0.0843	0.1299	0.1133

Leachate water levels in the leachate collection system are to be maintained to prevent vertical downward flow from waste material into the subsurface.

7.3 Water Elevation Fluctuations

Summaries of the 2025 groundwater and surface water elevation fluctuations in the following areas are listed below and illustrated in Graphs 1-6 (Appendix E). Decommissioned, dry, inaccessible, damaged, and inactive wells were not included. Overall, 2025 trends were consistent with historical trends and are summarized as follows for the monitored areas.

Northeast of Phase 1 and Phase 2 - Graph 1 shows the 2025 water level fluctuations that ranged from 439.2 m asl to 444.6 m asl and were consistent with historical trends. The fluctuations in 2025 were similar to those in 2024 which were smaller than the fluctuations observed in previous years that ranged from 439 m asl to 446.5 m asl and are believed to be likely related to ongoing local drought conditions.

Northwest of Phase 1 and Phase 2 - Graph 2 shows 2025 water level fluctuations that ranged from 438.5 m asl to 448 m asl and were consistent with historical trends.

Phase 2 - Graph 3 shows 2025 water level fluctuations that ranged from 438.25 m asl to 438.7 m asl and were consistent with historical trends. The 2025 fluctuations were slightly larger than in recent years (2021 to 2024) but are still less extreme than the fluctuations observed in earlier years (pre-2021).

Phase 3/Slough - Graph 4 shows 2025 water level fluctuations that ranged from 437 m asl to 446 m asl and were consistent with historical trends. Elevation data was not collected for Tutt Pond in 2025. Groundwater elevations in monitoring wells GL15-1 and GL15-2 were generally consistent with the 2024 which showed relatively consistent lower elevations than in previous years and compared to the historical trend of higher elevations with larger fluctuations (pre-2024).

Off-Site south of Phase 3 - Graph 5 shows 2025 water level fluctuations that ranged from 435.5 m asl to 446.25 m asl and were generally consistent with historical trends except for 06BH02 (September 2025) and GL39-3 (March 2025), each which exhibited a water level just over 1 m higher than previous and subsequent measurements at these locations.

Southwest of Phase 3 - Graph 6 shows 2025 water level fluctuations that ranged from 438.6 m asl to 440 m asl and were generally consistent with historical trends.

The observed water level fluctuations in monitoring wells and surface water ponds are linked to seasonal variations and are influenced by precipitation, evaporation, temperature, and land use practices.

8.0 GROUNDWATER ANALYTICAL RESULTS

The 2025 groundwater data were tabulated, compared to applicable standards and guidelines. Concentrations of analyzed parameters were assessed for general spatial and temporal trends. Refer to appended Table 3 - Summary of Water Analytical Results - Groundwater 2025 for details. Refer to Graphs 7 to 13 in Appendix E for historical trends in concentrations of indicator parameters in groundwater. Appendix F provides historical tabulated groundwater analytical data for 2010 to 2025. CARO analytical reports are on file at Keltech and are available upon request.

Table H below presents a general summary of the analyzed parameters that exceeded applicable regulatory criteria. For CSR inorganic parameters where a P9 (regional background water quality) value exists and is greater than the CSR standard for that parameter, then the P9 value supersedes the CSR standard; otherwise, a P9 value was not applied to concentrations of analyzed parameters.

Table H: Summary of Groundwater Exceedances of Regulatory Criteria

Location:	**Upgradient**		**Footprint**		**Downgradient**	
Parameter	> Criteria	MW ID	> Criteria	MW ID	> Criteria	MW ID
Ammonia	-	-	>CSR AW >BCWQG AW-LT & ST	GLs 2-1, 4-1, 16-1, 20-1, 35-3	-	-
Arsenic	>CSR DW	GL43-1	>CSR DW >BCWQG AW-LT & ST	GL16-1	-	-
Boron	-	-	>BCWQG AW-LT	GL20-1	-	-
Chloride	-	-	>CSR DW >BCWQG AW-LT & ST	GLs 20-1, 27-3, 35-3,	-	-
Cobalt	-	-	-	-	>CSR DW >BCWQG AW-LT	GL29-1
Fluoride	>CSR DW	GLs 15-1, 15-2, 43-1	>CSR AW & DW >BCWQG AW-ST	GLs 4-1, 4-2, 27-1, 27-3	>CSR DW	GL28-1, GL44-1, 29-2
Iron	-	-	-	-	>CSR DW	GL45-1
Lithium	-	-	>CSR DW & P9	GLs 16-1, 27-1, 35-3	>CSR DW and P9	GLs 42-1, 42-2, 44-1, 45-1, 46-1
Nitrate	>CSR DW	GL43-1	-	-	>CSR DW	GL28-2, GL39-1, GL42-2
Nitrite	-	-	>CSR AW	GL27-3, GL29-1	-	-
Phosphorus	-	-	>BCWQG AW-LT & ST	GLs 2-1, 2-2, 4-1, 4-2, 16-1, 20-1, 35-3	-	-
Sulphate	>CSR DW	GLs 15-2, 43-1	>CSR AW & DW >BCWQG AW-LT	GLs 2-1, 2-2, 4-1, 4-2, 16-1, 27-3, 35-3	>BC CSR AW & DW	09BH06-D, GLs 28-1, 28-2, 28-3, 29-1, 29-2, 39-1, 42-1, 42-2, 44-1, 44-2,

Location:	Upgradient		Footprint		Downgradient	
Parameter	> Criteria	MW ID	> Criteria	MW ID	> Criteria	MW ID
						45-1, 45-2, 46-1
Uranium	>CSR AW, DW, and P9	GL15-2, GL43-1	-	-	>CSR AW & DW	GLs 28-1, 28-2, 28-3, 29-2, 39-1, 42-1, 42-2, 44-1, 44-2, 45-1, 46-1

Table H Notes:
MW: monitoring well
BCWQG: BC Water Quality Guidelines
CSR: Contaminated Sites Regulation
LT: long-term average (chronic)
ST: short-term maximum (acute)
AW: aquatic life water use
DW: drinking water use

- The concentrations of ammonia, boron, chloride, nitrite and phosphorus exceeded one or more applicable criteria at only Footprint wells. For these parameters, Landfill operations appear to impact Footprint water quality but have no apparent impact on downgradient concentrations.
- The concentration of arsenic exceeded applicable standards at one Upgradient well and one Footprint well, but no Downgradient wells. Landfill operations have no apparent impact on Downgradient concentrations of arsenic.
- The concentrations of cobalt and iron exceed applicable criteria only at downgradient locations. It is unclear if landfill operations have an impact on downgradient concentrations of cobalt and iron.
- The concentrations of fluoride exceeded applicable criteria at Upgradient, Footprint, and Downgradient wells. The concentrations of fluoride were similar across the three areas therefore it is unlikely that Landfill operations are impacting downgradient concentrations of fluoride.
- The concentration of lithium exceeded applicable standards at Footprint and Downgradient wells only. Landfill operations may have an impact on downgradient concentrations of lithium in groundwater.
- The nitrate concentration only exceeded one or more applicable standards at Upgradient and Downgradient wells. It is unclear whether Landfill operations may impact downgradient nitrate concentrations.
- The concentrations of sulphate exceeded applicable criteria at Upgradient, Footprint, and Downgradient wells. The concentrations of sulphate were greater in the Footprint than in the Upgradient wells, and were further elevated in the Downgradient wells, therefore it is likely that Landfill operations are impacting Footprint and Downgradient concentrations of sulphate.
- The concentrations of uranium exceeded applicable criteria at Upgradient and Downgradient wells. The concentrations of uranium were slightly greater in the Downgradient wells than the Upgradient. It is unclear if Landfill operations are impacting downgradient concentrations of uranium.

8.1 Groundwater Quality at Upgradient Wells

The Upgradient baseline wells exceeded applicable regulatory criteria, which are summarized as follows:

- The concentrations of arsenic, fluoride, nitrate, sulphate, and uranium at Upgradient wells exceeded one or more of the applicable standards.
- The concentrations of ammonia, boron, chloride, cobalt, iron, lithium, nitrite, and phosphorus in all Upgradient wells were below applicable CSR AW and DW standards.
- These results were somewhat consistent with historical trends for these parameters.

8.2 Groundwater Quality at Footprint Wells

Monitoring wells within the Footprint had some exceedances as follows:

- Concentrations of at least one of the following leachate indicator parameters: ammonia, arsenic, boron, chloride, fluoride, lithium, nitrite, phosphorous and sulphate in Footprint wells exceeded one or more of the applicable standards and/or guidelines.
- Well GL20-1, located at the southwest edge of the waste mass and downgradient of the leachate manholes, had ammonia, boron, and chloride exceedances which may be due to leachate impacts.
- Concentrations of ammonia, chloride, lithium and sulphate in well GL35-3 (at the west boundary of Phase 3) were consistent with results from the previous year. In this well, iron concentrations have fluctuated significantly over time; concentrations of lithium and manganese have fluctuated slightly; concentrations of strontium are generally consistent each year, and concentrations of uranium fluctuate inconsistently over time, with higher concentrations measured over the past four years. In 2025, concentrations of iron, lithium, manganese, strontium and uranium exceeded regulatory criteria.
- Key leachate indicator parameters chloride and sulphate in well GL27-3 (southwest edge/downgradient of Phase 3) had concentrations consistent with results from the previous year and the last decade.

8.3 Groundwater Quality at Downgradient Wells

Analytical results from 2025 for downgradient monitoring wells indicate that concentrations of cobalt, fluoride, iron, lithium, nitrate, sulphate, and uranium exceeded one or more applicable standard. These results are somewhat consistent with those of previous years. A summary list of these parameters and criterial exceeded is as follows:

- Cobalt in the fall sample from GL29-1 exceeded the CSR DW standard and the P9 concentration.
- Fluoride exceeded CSR DW in GL28-1, GL29-2 and GL44-1 wells.
- Lithium exceeded applicable criteria in GL42-1, GL44-1, GL45-1, and GL46-1.
- Nitrate at wells GL28-2, GL39-1, and GL42-2 exceeded applicable criteria
- Sulphate exceeded the applicable criteria in all Downgradient wells except GL39-2. This is consistent with 2024 groundwater results.
- Uranium exceeded criteria in more than half of the wells in both Spring and Fall

8.4 Groundwater Quality Across the Site

Changes in groundwater quality across the Site and in off-Site areas were evaluated using appended Plots 1 to 7 titled as follows. The plots show the concentrations of selected leachate indicator parameters by sample location, from upgradient to downgradient locations.

Plot 1 - Chloride in On-Site & Off-Site Wells

Plot 2 - Sulphate in On-Site & Off-Site Wells

Plot 3 - Alkalinity in On-Site & Off-Site Wells

Plot 4 - COD in On-Site & Off-Site Wells

Plot 5 - TDS in On-Site & Off-Site Wells

Plot 6 - Arsenic in On-Site & Off-Site Wells

Plot 7 - Uranium in On-Site & Off-Site Wells

A review of the plots assists in determining if these parameters show evidence of migrating through and off of the Site. Concentrations of analyzed parameters are summarized as follows:

- Arsenic and chloride increased from Upgradient wells to Footprint wells and decreased in Downgradient wells. Downgradient well concentrations were lower than those of Footprint wells and similar to Upgradient wells; this pattern indicates an apparent natural variation of these parameter concentrations and suggests that Landfill activities are unlikely to be impacting these parameters.
- Alkalinity and COD increased from Upgradient to Footprint wells and then remained elevated in Downgradient wells. This indicates that landfill activities are likely impacting the footprint wells and may continue in downgradient well.
- Sulphate, TDS, and uranium show increasing concentrations from Upgradient wells to Downgradient wells, indicating likely landfilling activities impacting water in the Footprint area, and flow-through to the Downgradient areas.

These concentration trends were somewhat similar to the trends in previous years 2022-2024.

9.0 SURFACE WATER ANALYTICAL RESULTS

Keltech tabulated the 2025 surface water analytical results and compared them to the BCWQG AW guidelines. Additionally, the results from NE Pond, Bredin Pond, Tutt Pond, and Slough and the outfall locations were compared to BCWQG IW guidelines. Refer to appended Table 4: Summary of Water Analytical Results - Surface Water 2025. Historical surface water quality data from 2001 to 2025 is provided in Appendix F.

9.1 Surface Water Quality

Surface water samples collected in 2025 from all on-Site and downgradient ponds (NE Pond, Bredin Pond, Tutt Pond, Slough, Little Robert Lake and Robert Lake) showed water quality generally consistent with that of previous years. Of note, was in Bredin Pond concentrations of magnesium, sulphate, sulfur, uranium and TDS in 2025 were lower than in previous years. TDS showed a declining trend in concentrations since 2023. Chromium was consistently not detected since late-2023. Fecal and total coliforms were detectable at all locations in 2025.

ON-SITE: Concentrations of analyzed parameters that exceeded applicable AW and/or IW BCWQG and/or the 95th percentile at on-Site ponds and outfalls were as follows:

- Alkalinity in Slough
- Aluminum in NE and Tutt Ponds
- Copper, phosphorus and zinc at all locations except Slough
- Fluoride and pH in NE Pond
- Molybdenum at all locations

Generally, Slough and in some cases, SSHW and Culvert (for example with aluminum, cobalt, iron, lead and zinc), had higher concentrations of analyzed parameters. This may be a result of the long-term presence of waste and/or leachate and the natural evaporation process.

OFF-SITE: In 2025, the parameters that exceeded applicable BCWQG AW and/or IW LT or ST guidelines in the downgradient off-Site ponds were:

- Alkalinity, iron, pH and selenium in Robert Lake
- Aluminum, arsenic, copper, phosphorus, sulphate, and zinc in Little Robert Lake and Robert Lake
- Molybdenum in Little Robert Lake

OUTFALL/CULVERT DISCHARGE POINTS: In 2025, the parameters that exceeded applicable BCWQG AW and/or IW LT or ST guidelines and/or 95th percentile at SSHW and Culvert were:

- Aluminum, copper, iron, lead, phosphorus, silver, and zinc at SSHW and Culvert that could be related to TSS or sediment in the samples
- Arsenic, cadmium and molybdenum at Culvert

For the 2025 Spring sampling, concentrations of chloride and ammonia at both SSHW and Culvert exceeded BCWQG AW, and the concentration of chloride also exceeded BCWQG IW.

95th PERCENTILE SITE SPECIFIC BACKGROUND CONCENTRATIONS for selected surface water quality parameters were applied to data from NE, Bredin, and Tutt Ponds, Slough, SSHW, Culvert, and off-Site lakes, Little Robert Lake and Robert Lake. The parameters shown in the table below in these surface water bodies/discharge points exceeded the 95th percentile site-specific background concentration during at least one quarter of 2025.

Table I: Select Parameters in Surface Water Exceeding 95th Percentile Concentrations

Location	Qtr.	Parameter															
		Al	Alk	As	B	Cl^-	Co	Cr	Fe	F^-	Mo	P	Pb	Se	SO_4	U	Zn
NE Pond	Q1	x															
	Q2				x					x	x						
	Q3				x					x	x	x					
	Q4	x			x												
	Q1													x			

Location	Qtr.	Parameter														
		Al	Alk	As	B	Cl^-	Co	Cr	Fe	F^-	Mo	P	Pb	Se	SO_4	U	Zn
Bredin Pond	Q2													x			
	Q3				x									x			
	Q4													x			
Tutt Pond	Q1	x					x					x					
	Q2				x		x										
	Q3				x		x					x					
	Q4				x		x					x					
Slough	Q1			x	x		x	x	x			x	x				
	Q2	x	x	x	x		x	x	x		x	x	x	x			x
	Q3	x	x	x	x	x	x	x			x	x		x	x	x	x
	Q4	x	x	x	x		x	x	x			x	x	x	x	x	
S. Storm Headwall 186437	Q1	x					x	x	x			x	x				x
	Q2	x					x	x	x			x	x				x
	Q3	x					x	x	x			x	x				x
	Q4	x					x	x	x			x	x				x
Culvert 1002026	Q1	x					x	x	x			x	x				x
	Q2	x					x	x	x			x	x				x
	Q3	x					x	x	x			x	x				x
	Q4	x			x		x	x	x			x	x				x
Little Robert Lake	Q1	x					x			x^a		x			x		
	Q2	x					x			x^a		x			x		
	Q3	x		x			x			x^a		x			x		
	Q4	x					x			x^a		x			x		
Robert Lake	Q1	x	x		x		x		x	x^a	x	x	x	x		x	x
	Q2	x	x	x	x		x	x	x	x^a	x	x	x	x	x	x	x
	Q3	x	x	x	x		x	x	x	x^a	x	x	x	x	x	x	x
	Q4	x	x	x	x		x	x	x	x^a	x	x	x	x	x	x	x

Table I Notes:
Q or Qtr. - quarter
a - laboratory detection limit is greater than the regulatory criteria

Al - aluminum
Alk - alkalinity
As - arsenic
B - boron
Cl^- - chloride
Co - cobalt
Cr - chromium, total
Fe - iron
F^- - fluoride
Mo - molybdenum
P - phosphorus, total as P (nutrient)
Pb - lead
Se - selenium
SO_4 - sulphate
U - uranium
Zn - zinc

Surface Water Quality Gradient at Ponds Across the Site

The potential for leachate indicator parameters in surface water to migrate across and/or off the Site is visually presented in the appended Plots 8 - 17 (titles listed below) that show leachate indicator parameters of alkalinity, ammonia, arsenic, chloride, COD, molybdenum, phosphorous, sulphate, TDS, and uranium.

Plot 8 - Chloride in On-Site & Off-Site Surface Water

Plot 9 - Sulphate in On-Site & Off-Site Surface Water

Plot 10 - Molybdenum in On-Site & Off-Site Surface Water

Plot 11 - Arsenic in On-Site & Off-Site Surface Water

Plot 12 - TDS in On-Site & Off-Site Surface Water

Plot 13 - Ammonia in On-Site & Off-Site Surface Water

Plot 14 - COD in On-Site & Off-Site Surface Water

Plot 15 - Phosphorus in On-Site & Off-Site Surface Water

Plot 16 - Uranium in On-Site & Off-Site Surface Water

Plot 17 - Alkalinity in On-Site & Off-Site Surface Water

- Full understanding of the interconnectivity of the Upgradient, on-Site, and Downgradient ponds with subsurface hydrogeology is unconfirmed, however surface runoff, with or without leachate contamination, may still impact surface water quality.
- Concentrations of alkalinity in Slough (Footprint), and Robert Lake (Downgradient) are relatively higher compared to Upgradient ponds, indicating that increased concentrations may be attributable to evaporation cycles or Landfill activities.
- In 2025, concentration ranges of ammonia, boron, COD, and chloride at Robert Lake (Downgradient) were either lower or similar to those in Bubna Slough (Upgradient) which suggests that Landfill activities are unlikely to be influencing concentrations of ammonia, chloride, and COD in Robert Lake.
- Concentrations of arsenic slightly increase from the Upstream to Downstream ponds. Slough had notably high arsenic concentrations, suggesting that Landfill activities are likely influencing the concentrations in Slough.
- Concentrations of molybdenum, phosphorus, sulphate, and TDS increased from Bubna Slough (Upgradient) to on-Site ponds and then further increased in Robert Lake (Downgradient). This suggests there is possibly some influence of Landfill activities on the concentrations downgradient of the Site, or other factors/events contributed to this increase in 2025. Groundwater recharge of the lake is unlikely to be contributing to this as the concentrations of molybdenum in Downgradient wells were less than concentrations in Robert Lake, and did not increase relative to Upgradient wells. The volume of flowthrough from Upgradient to Downgradient has not been assessed. According to the 2023 HHCR report by GHD, the increased concentrations may be attributable to evaporation cycles, which may cause metals and other parameter concentrations to increase over time. It may also be related to molybdenum-phosphorous or molybdenum-sulphate relationships/interactions, or influenced by TDS increases.

- Concentrations of uranium varied but were generally consistent between the Bubna Slough (Upgradient) and on-Site ponds, and then were slightly increased in Robert Lake (Downgradient).

10.0 LEACHATE ANALYTICAL RESULTS

This leachate quality discussion focuses on key indicator parameters for which typical concentration ranges are referenced in the GEMLF, Table 1: Typical Leachate Characteristics.

Concentrations of some leachate indicator parameters vary across the Site. Keltech calculated the average values from the 2025 leachate monitoring data and compared them with the typical range provided in Table 1 Guidelines where concentration ranges were available.

Refer to the appended table, Table 5: Summary of Water Analytical Results - Leachate 2025. Appendix E: Graphs 7 to 13 presents graphs showing historical trends in concentrations of indicator parameters in leachate. A summary of our observations is as follows.

- The average concentration of alkalinity, ammonia, chloride, sodium, and sulphate were within the Table 1 Guidelines.
- The average concentrations of BOD, COD, iron, and TOC were lower than the Table 1 Guidelines.
- Some concentrations of indicator parameters were higher than the Table 1 Guidelines as follows:
  - ammonia (987 mg/L) at P1 Leachate MH - 2 in October, was outside the range of 100 mg/L - 800 mg/L
  - sodium (3720 mg/L) at South leachate Wet Well in October, was outside the range of 200 mg/L - 2000 mg/L
  - sulphate (3440 mg/L) at South leachate Wet Well in October, was outside the range of 100 mg/L - 1500 mg/L
- The Table 1 guidelines do not have typical concentration ranges for other Glenmore Landfill indicator parameters of arsenic, boron, chromium, cobalt, fluoride, lithium, manganese, molybdenum, nickel, nitrate, selenium, strontium, TDS, or uranium.

The historical leachate data to 2025 is tabulated in Table H4 in Appendix F.

11.0 QUALITY ASSURANCE / QUALITY CONTROL RESULTS

Refer to Appendix G that summarizes the QA/QC program and includes the requirements of the amended OC. It includes analytical results of field and trip blanks, relative percent difference (RPD) calculations for parent and duplicate samples, and CARO comments. The majority of the analytical data may be relied upon as CARO has found that the data is acceptable and can be relied upon and that field variability and sample composition may influence the few RPDs that were higher than the thresholds.

12.0 CONCLUSIONS

The following conclusions are drawn from Keltech's review and analysis of the water sampling and analytical data provided by the CoK.

Groundwater flow and quality:

- The inferred groundwater flow direction continues to be variable at the Site and surrounding area due to the local topography and the constructed facilities. In 2025, the inferred groundwater flow direction was from the north towards the south down the valley, with downward flow from west of Phase 3 towards the east and middle of the valley. This is consistent with previous years.

These results are somewhat consistent with those of previous years.

- In Downgradient wells, the concentrations of cobalt, fluoride, lithium, nitrate, sulphate, and uranium exceeded one or more of the applicable standards and/or guidelines. This is somewhat consistent with 2024.
- In Footprint wells, concentrations of ammonia, arsenic, boron, chloride, fluoride, lithium, phosphorus, sulphate and uranium exceeded one or more of the applicable standards and guidelines. This differs in some parameters from 2024.
- In Upgradient monitoring wells, concentrations of arsenic, fluoride, nitrate, sulphate, and uranium exceeded one or more applicable standards and/or guidelines.
- Concentrations of chloride and arsenic increased from Upgradient wells to Footprint wells and decreased in Downgradient wells.
- Concentrations of alkalinity and COD increased from Upgradient to Footprint wells and then remained elevated in Downgradient wells.
- Concentrations of sulphate, TDS, and uranium show increasing concentrations from Upgradient wells to Downgradient wells,
- The 2025 concentrations trends of these groundwater parameters are consistent with historical trends.

Surface water quality:

In 2025, parameters that exceeded the BCWQG on-Site (NE, Bredin and Tutt Ponds, Slough, SSHW, Culvert) were:

- Aluminum in Bredin and Tutt Ponds, SSHW and Culvert
- Arsenic in NE Pond, Slough and Culvert
- Boron in Slough
- Chloride and copper in samples from all locations
- Fluoride and pH in NE Pond
- Iron, lead, and silver in SSHW and Culvert
- Phosphorus and zinc in all except for Slough

In 2025, parameters that exceeded the 95th Percentile in on-Site surface water were:

- Alkalinity, chloride, conductivity, selenium, sulphate and uranium in Slough
- Aluminum, cobalt, iron, phosphorus in all except Bredin pond
- Arsenic in Slough, and Culvert
- Boron in NE and Tutt Ponds
- Chromium, lead and zinc in Slough, SSHW, and Culvert
- Fluoride in NE Pond only
- Molybdenum in NE Pond, and Slough

In 2025, the parameters that exceeded applicable guidelines at off-Site ponds (Slough 2, Bubna Slough, Little Robert Lake, Robert Lake) were:

- Aluminum, arsenic, copper, phosphorus, sulphate, and zinc in Little Robert Lake, and Robert Lake
- Arsenic, molybdenum and fluoride in at least one sample from Slough 2
- Copper in Bubna Slough
- pH and selenium in Robert Lake
- Zinc, phosphorus and molybdenum in Slough 2 and Bubna Slough

The surface water quality of the samples collected at on-Site and off-Site locations was generally consistent with previous years. The 95th percentile site-specific background concentration was updated at the end of 2025 for comparison to the data.

Leachate quality:

- Leachate strength varies across the Site and may be related to the age of the waste in lined areas.
- The pH was within the typical range of 5.3 to 8.5.
- The average concentration of alkalinity, ammonia, chloride, sodium, and sulphate were within the Table 1 Guidelines.
- The average concentrations of BOD, COD, iron, and TOC were lower than the Table 1 Guidelines.
- Some concentrations of indicator parameters were higher than the Table 1 Guidelines as follows:
  - ammonia (987 mg/L) at P1 Leachate MH - 2 in October, was outside the range of 100 mg/L - 800 mg/L
  - sodium (3,720 mg/L) at South leachate Wet Well in October, was outside the range of 200 mg/L - 2000 mg/L
  - sulphate (3,440 mg/L) at South leachate Wet Well in October, was outside the range of 100 mg/L – 1,500 mg/L

13.0 RECOMMENDATIONS

The Keltech recommendations for the 2026 monitoring program are as follows:

- Continue as needed, quarterly updating of the 95th percentile site-specific background concentration data for surface water.
- Continue semi-annual groundwater sampling from monitoring wells in the spring when groundwater levels are highest and, in the fall, when groundwater levels are lowest.
- Continue quarterly surface water sampling at on-Site Bredin Pond, Tutt Pond, NE Pond, and Slough to confirm water quality used for irrigation purposes.
- Continue quarterly surface water sampling at off-Site baseline (Bubna Slough & Slough 2) and downgradient water bodies (Little Robert Lake and, Robert Lake) to characterize baseline and compliance downgradient surface water quality for these areas. All surface water samples should continue to be measured and/or analyzed for the parameters listed in Table C.
- Continue quarterly leachate sampling at each leachate collection sump listed in Table C.
- Continue to compare data to the applicable standards, guidelines, and 95th percentile site-specific background concentrations for surface water, plus add in the 95th percentile site-specific background concentration for groundwater when a sufficient number of analytical data for groundwater from the Clay Unit wells is available. At this time there is insufficient data from well GL43-1 (Clay Unit) to calculate valid 95th percentile concentrations. As data accumulates over time then the 95th percentile concentrations can be determined.
- Continue to monitor and record any reported and/or observed operational changes, significant weather events, including precipitation, drought and /or flooding or other on-Site or surrounding lands events/activities such as wildfires and changes in agricultural grazing, irrigation or product application to land that may have the potential to affect surface and groundwater quality at the Site. Provide Keltech with these records for use in preparing the next annual report.

14.0 LIMITATIONS

This report is intended and restricted for the sole use of City of Kelowna (the Client) and BC ENV. Any use of this document by a third party, or any reliance on or decisions made based on findings described in this report, are the sole responsibility of such parties, and Keltech Environmental Ltd. accepts no responsibility for damages, suffered by any third party as a result of decisions made or actions conducted based on this report. No other warranties are implied or expressed.

Keltech Environmental Ltd. makes no representations, warranties, or guarantees as to any given sample (whether it be obtained by Keltech Environmental Ltd. or by the City of Kelowna being representative of any given contaminant, handled, or otherwise managed by the City of Kelowna. All liability is limited to the fee charged.

The conclusions presented in this report represent the judgement of Keltech's assessors based on current environmental and health and safety standards, and on-Site conditions on the date(s) cited in this report. While attempts have been made to relate the data and findings to applicable health, safety or environmental laws and regulations, the report shall not be construed to offer legal opinion, advice or representations as to the requirements of, or compliance with, environmental laws, rules, regulations or policies of federal, provincial or local government agencies.

15.0 CLOSURE

We trust the information contained herein meets your needs. Should you have any questions or comments, please do not hesitate to contact the undersigned at your earliest convenience.

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https://keltechenvironmental-my.sharepoint.com/personal/arobison_keltechenvironmental_com/Documents/Keltech/Projects/Active/2024/Projects/2024-029 GLF (COK) Ann WQ RPT 2024 2025/2025/10 Report/FINAL/2024-029 GLF 2025 Ann WQ Report Final Mar30 26.docx

REFERENCES

BC Contaminated Sites Regulation, Effective April 1997. Reg. 375/96. O.C. 1480/96. Last amended October 27, 2025 by B.C. Reg. 171/2025.

Operational Certificate 12218 Under the Provisions of the Environmental Management Act. Issued by BC Ministry of Environment December 8, 2000, and amended by BC Ministry of Environment and Climate Change Strategy, May 30, 2023.

BC Ministry of Environment. *Glenmore Landfill Groundwater Monitoring Report for 2004-2009 and Groundwater Monitoring Report for 2010 – MR-12218 – Ministry Comments.* Letter from BC Ministry of Environment to City of Kelowna. Dated May 25, 2011

British Columbia Ministry of Environment and Climate Change Strategy. 2025. British Columbia Approved Water Quality Guidelines: Aquatic Life, Wildlife & Agriculture - Guideline Summary. Water Quality Guideline Series, WQG-20. Prov. B.C., Victoria B.C.

BC Ministry of Water, Land and Resource Stewardship 2024. Working Water Quality Guidelines: Aquatic Life, Wildlife & Agriculture. Water Quality Guideline Series, WQG-08-01. Prov. B.C., Victoria B.C.

GHD. *2023 Design, Operations, and Closure Plan: Glenmore Landfill.* Dated December 22, 2023.

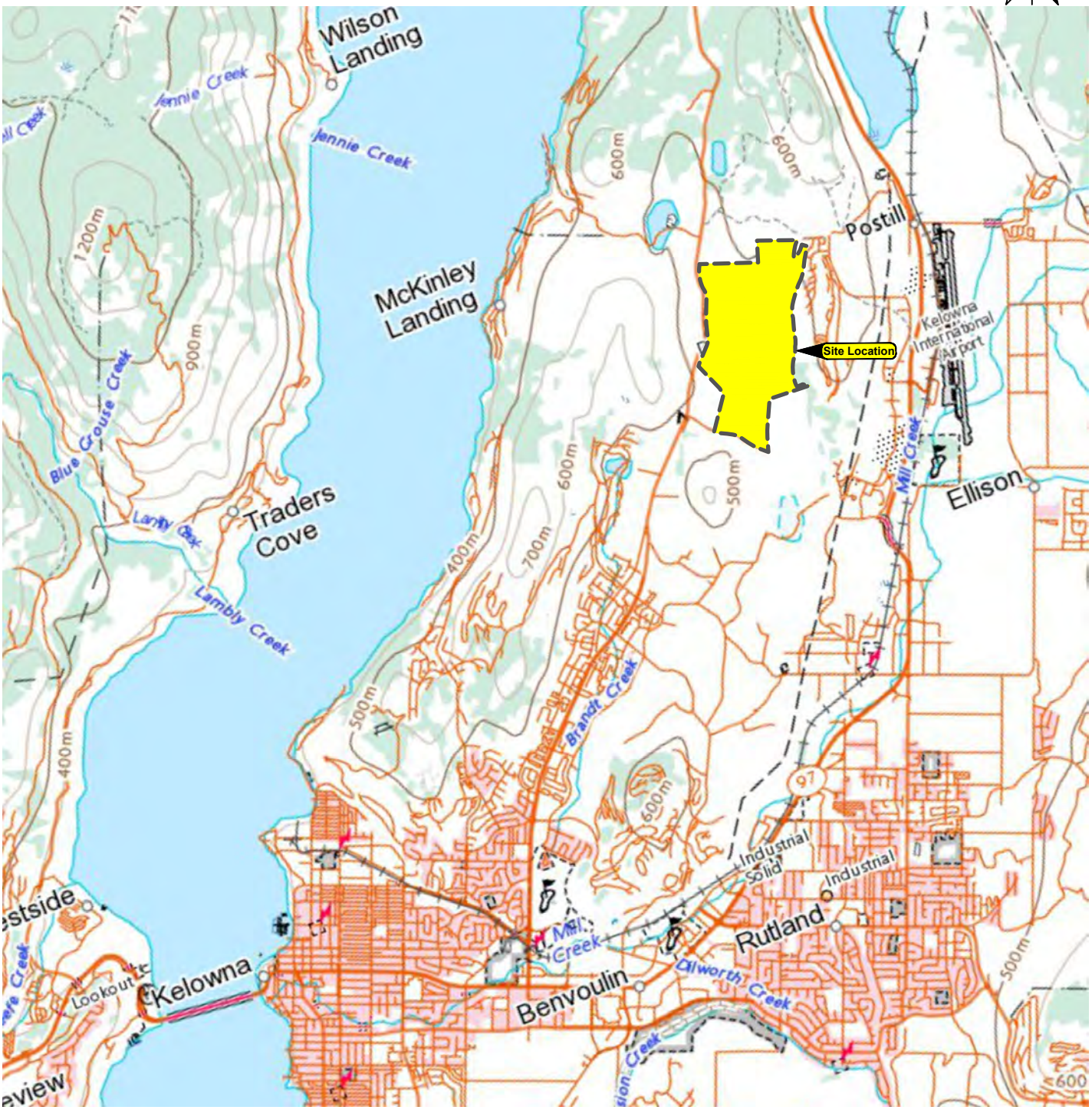
GHD. H*ydrogeology and Hydrology Characterization Report, Glenmore Landfill, City of Kelowna, Project # 12605725*. Dated December 19, 2023.

Guidelines for Environmental Monitoring at Municipal Solid Waste Landfills. Undated. Available online https://www2.gov.bc.ca/assets/gov/environment/waste-management/garbage/guidelines_environmental_monitoring_municipal_solid_waste_Landfills.pdf

BC Field Sampling Manual, Part E Water and Wastewater Sampling, 2013. Available online at: https://www2.gov.bc.ca/assets/gov/environment/research-monitoring-and-reporting/monitoring/emre/manuals/field-sampling-manual/bc_field_sampling_manual_part_e.pdf

Health Canada (2024). Guidelines for Canadian Drinking Water Quality—Summary Tables. Water and Air Quality Bureau, Healthy Environments and Consumer Safety Branch, Health Canada, Ottawa, Ontario.

FIGURES



1.5 0 1.5
SCALE KILOMETRES

LEGEND

SITE

REFERENCES

1. REFERENCE IMAGE FROM NATURAL RESOURCES CANADA TOPORAMA INTERACTIVE MAPPING SERVICE

PROJECT
2025 ANNUAL WATER MONITORING REPORT FOR GLENMORE LANDFILL, 2720 JOHN HINDLE DRIVE, KELOWNA, BC

TITLE
SITE LOCATION MAP

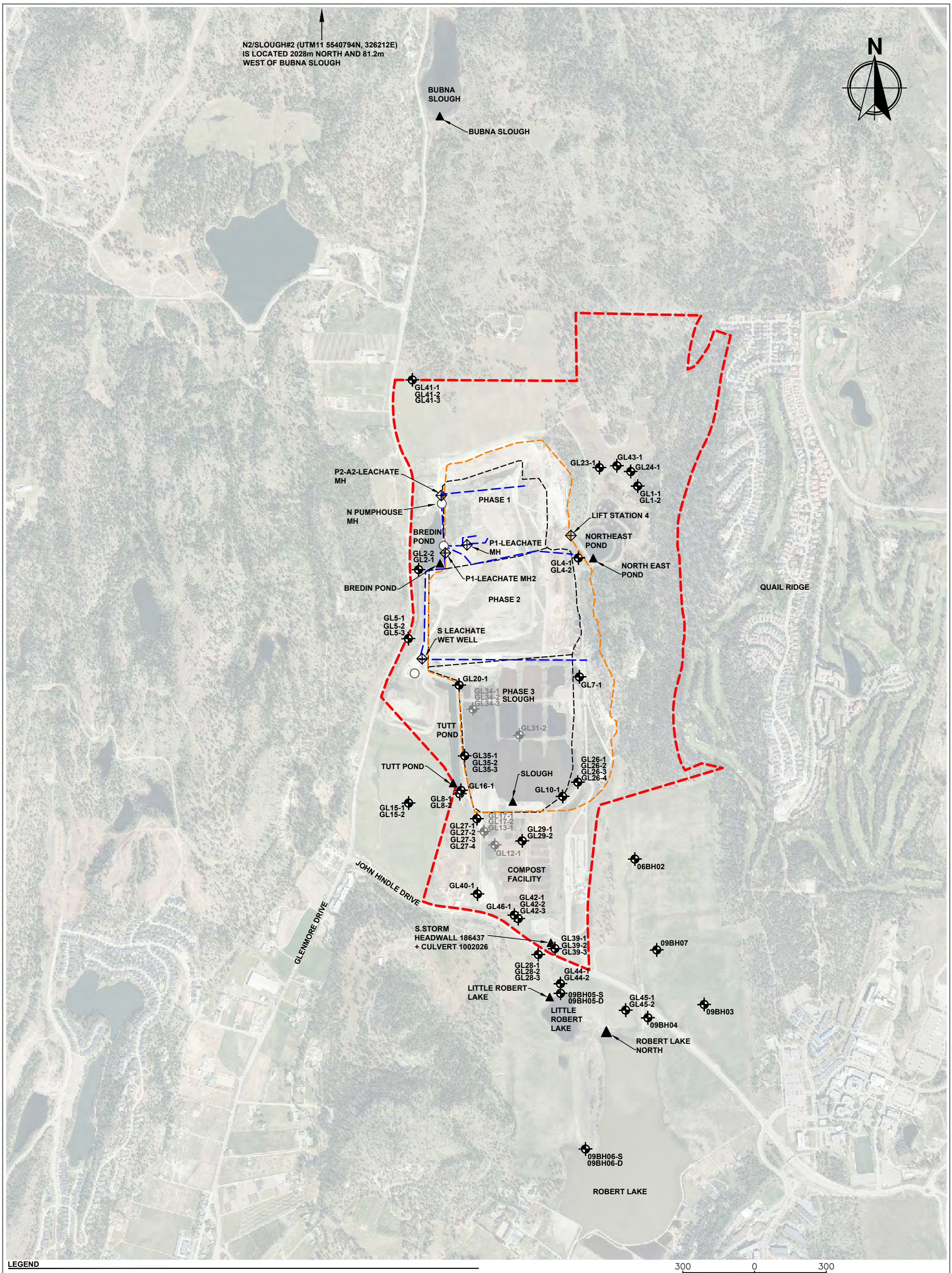
CLIENT
CITY OF KELOWNA

CONSULTANT
Keltech Environmental Ltd.

PROJECT No.	2024-029
REVISION	00
DATE	03-05-2026
CADD	SI
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FIGURE
1

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LEGEND

- APPROXIMATE SITE BOUNDARY (REPORTING ONLY)
- APPROXIAMTE EXTENTS OF LANDFILL (BASED ON ACTIVE AND/OR HISTORICAL LANDFILLING ACTIVITIES)
- LEACHATE COLLECTION SYSTEM
- LIMITS OF FOOTPRINT
- MONITORING WELL LOCATION (GL00-01)
- MONITORING WELL (RECENTLY DECOMMISSIONED) (GL32-1)
- APPROXIMATE MANHOLE LOCATION
- APPROXIMATE LEACHATE SAMPLING LOCATION
- APPROXIMATE SURFACE WATER SAMPLING LOCATION

REFERENCES

1.) **COORDINATE REFERENCE:** UTM ZONE 11n, NAD83
2.) **MAP REFERENCES:** KELOWNA ONLINE MAPPING SERVICE

300 0 300
SCALE METRES

PROJECT
2024 ANNUAL WATER MONITORING REPORT
FOR GLENMORE LANDFILL
2720 JOHN HINDLE DRIVE, KELOWNA, BC

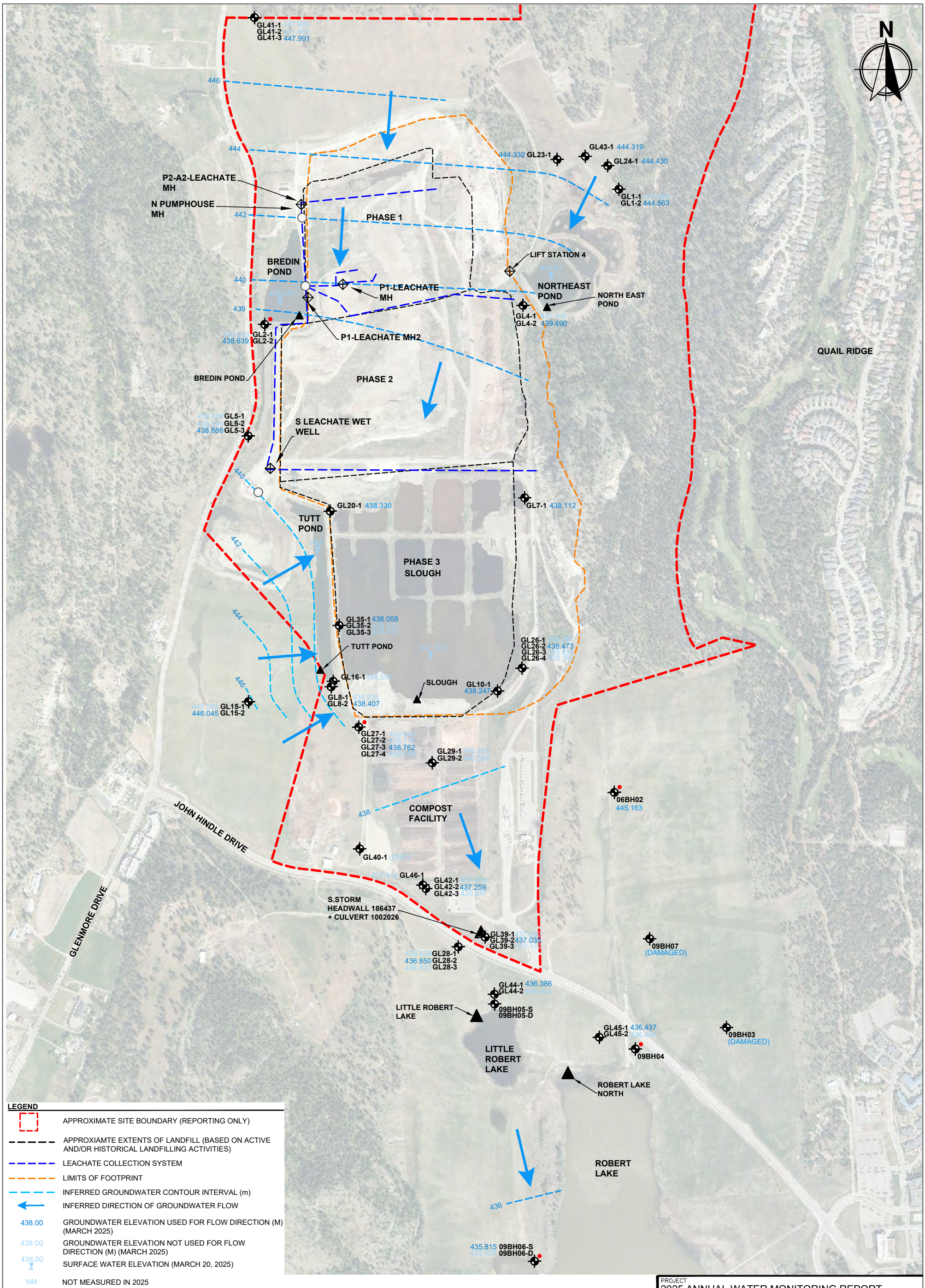
TITLE
SITE PLAN

CLIENT
CITY OF KELOWNA

CONSULTANT
Keltech Environmental Ltd.

PROJECT No.	2024–029
REVISION	00
DATE	03–06–2026
CADD	SI
CHECK	NF

FIGURE
2



LEGEND

- APPROXIMATE SITE BOUNDARY (REPORTING ONLY)
- APPROXIAMTE EXTENTS OF LANDFILL (BASED ON ACTIVE AND/OR HISTORICAL LANDFILLING ACTIVITIES)
- LEACHATE COLLECTION SYSTEM
- LIMITS OF FOOTPRINT
- INFERRED GROUNDWATER CONTOUR INTERVAL (m)
- INFERRED DIRECTION OF GROUNDWATER FLOW
- 438.00 — GROUNDWATER ELEVATION USED FOR FLOW DIRECTION (M) (MARCH 2025)
- 438.00 — GROUNDWATER ELEVATION NOT USED FOR FLOW DIRECTION (M) (MARCH 2025)
- 438.00 — SURFACE WATER ELEVATION (MARCH 20, 2025)
- NM — NOT MEASURED IN 2025
- GL32-1 — MONITORING WELL LOCATION
- GL32-1 — MONITORING WELL (DECOMMISSIONED)
- INDICATES WELL WITH ARTESIAN CONDITIONS
- APPROXIMATE MANHOLE LOCATION
- APPROXIMATE LEACHATE SAMPLING LOCATION
- APPROXIMATE SURFACE WATER SAMPLING LOCATION

REFERENCES

1.) **COORDINATE REFERENCE:** UTM ZONE 11n, NAD83
2.) **MAP REFERENCES:** KELOWNA ONLINE MAPPING SERVICE

PROJECT
2025 ANNUAL WATER MONITORING REPORT
FOR GLENMORE LANDFILL
2720 JOHN HINDLE DRIVE, KELOWNA, BC

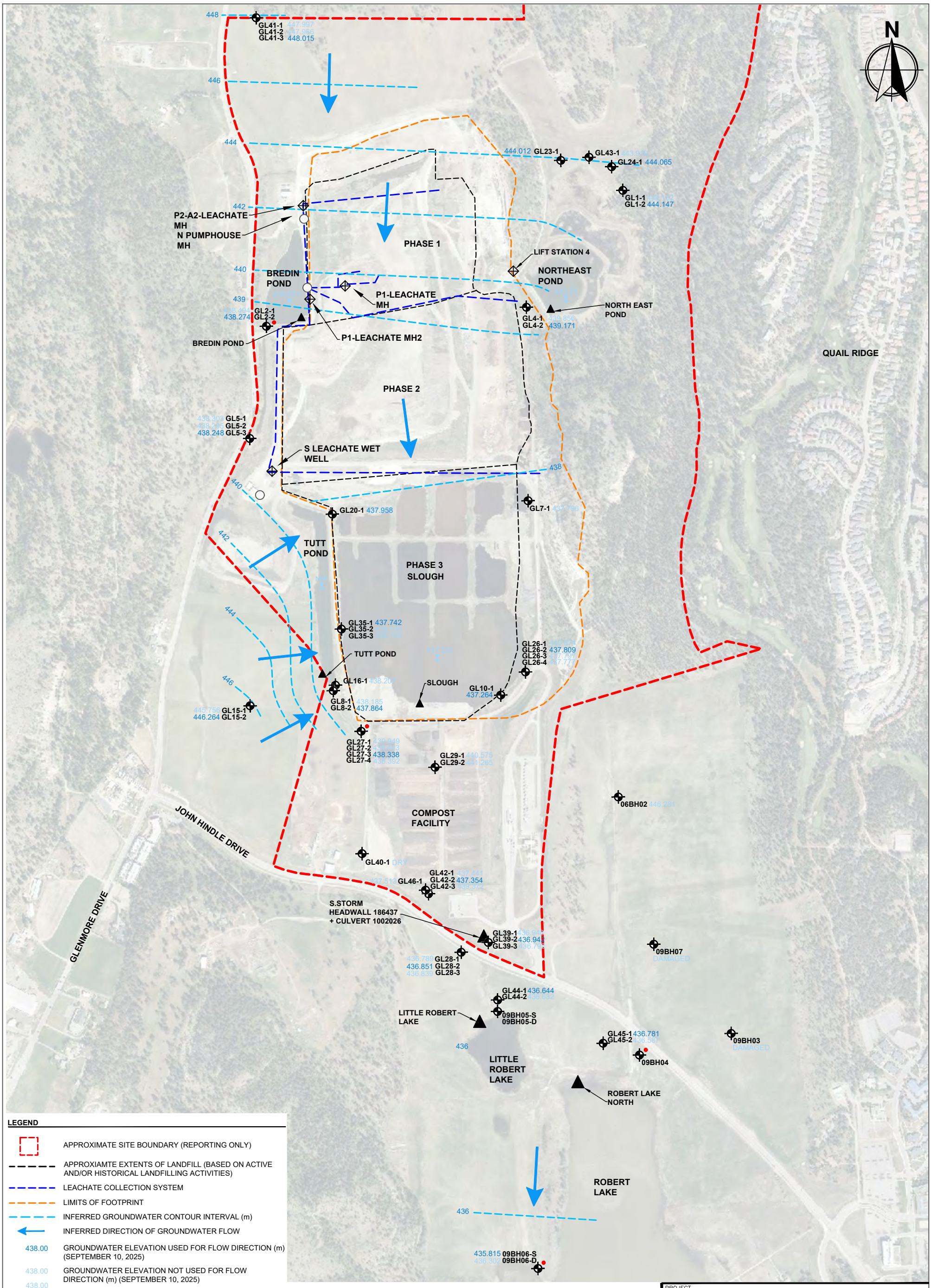
TITLE
INFERRED DIRECTION OF GROUNDWATER FLOW (MARCH 2025)

CLIENT
CITY OF KELOWNA

CONSULTANT
Keltech Environmental Ltd.

PROJECT No.	2024–029
REVISION	00
DATE	03–06–2026
CADD	SI
CHECK	NF

FIGURE
3



LEGEND

- APPROXIMATE SITE BOUNDARY (REPORTING ONLY)
- APPROXIAMTE EXTENTS OF LANDFILL (BASED ON ACTIVE AND/OR HISTORICAL LANDFILLING ACTIVITIES)
- LEACHATE COLLECTION SYSTEM
- LIMITS OF FOOTPRINT
- INFERRED GROUNDWATER CONTOUR INTERVAL (m)
- INFERRED DIRECTION OF GROUNDWATER FLOW
- 438.00 — GROUNDWATER ELEVATION USED FOR FLOW DIRECTION (m) (SEPTEMBER 10, 2025)
- 438.00 — GROUNDWATER ELEVATION NOT USED FOR FLOW DIRECTION (m) (SEPTEMBER 10, 2025)
- 438.00 — SURFACE WATER ELEVATION (SEPTEMBER 19, 2025)
- NM — NOT MEASURED IN 2025
- GL32-1 — MONITORING WELL LOCATION
- INDICATES WELL WITH ARTESIAN CONDITIONS
- APPROXIMATE MANHOLE LOCATION
- APPROXIMATE LEACHATE SAMPLING LOCATION
- APPROXIMATE SURFACE WATER SAMPLING LOCATION

200 0 200
SCALE METRES

REFERENCES

1.) **COORDINATE REFERENCE:** UTM ZONE 11n, NAD83
2.) **MAP REFERENCES:** KELOWNA ONLINE MAPPING SERVICE

PROJECT
2025 ANNUAL WATER MONITORING REPORT
FOR GLENMORE LANDFILL
2720 JOHN HINDLE DRIVE, KELOWNA, BC

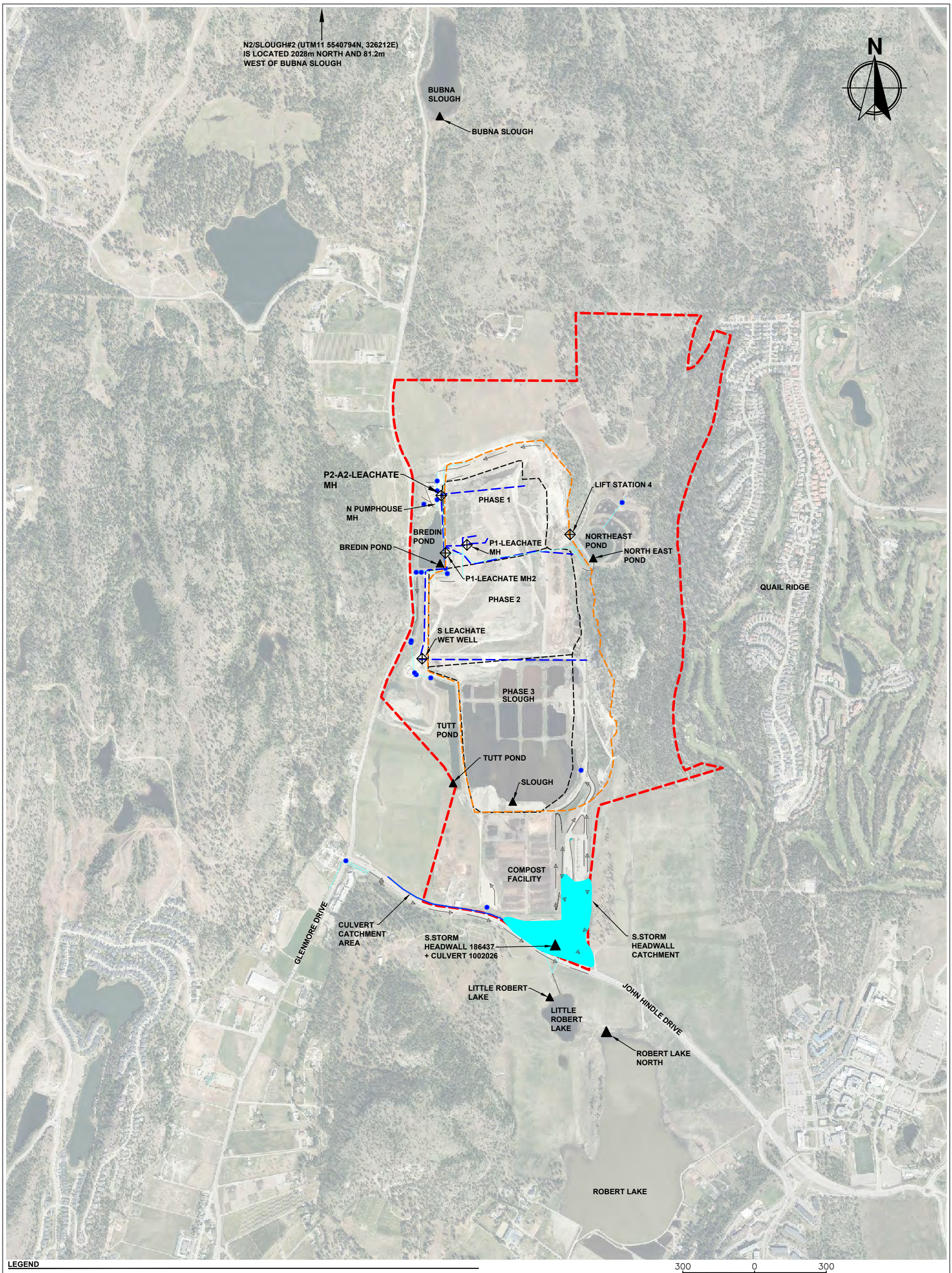
TITLE
INFERRED DIRECTION OF GROUNDWATER FLOW (SEPT 2025)

CLIENT
CITY OF KELOWNA

CONSULTANT
Keltech Environmental Ltd.

PROJECT No.	2024-029
REVISION	00
DATE	03-06-2026
CADD	SI
CHECK	NF

FIGURE
4



LEGEND

- APPROXIMATE SITE BOUNDARY (REPORTING ONLY)
- APPROXIAMTE EXTENTS OF LANDFILL (BASED ON ACTIVE AND/OR HISTORICAL LANDFILLING ACTIVITIES)
- LEACHATE COLLECTION SYSTEM
- LIMITS OF FOOTPRINT
- SURFACE WATER PIPE*
- SURFACE RUNOFF*
- APPROXIMATE MANHOLE LOCATION*
- APPROXIMATE LEACHATE SAMPLING LOCATION
- APPROXIMATE SURFACE WATER SAMPLING LOCATION

300 0 300
SCALE METRES

NOTES

1.) ***:** INFORMATION SOURCED FROM GHD HYDROGEOLOGY AND HYDROLOGY CHARACTERIZATION REPORT FIGURE 3.3, DATED DECEMBER 2023

REFERENCES

1.) **COORDINATE REFERENCE:** UTM ZONE 11n, NAD83
2.) **MAP REFERENCES:** KELOWNA ONLINE MAPPING SERVICE

PROJECT
2025 ANNUAL WATER MONITORING REPORT
FOR GLENMORE LANDFILL
2720 JOHN HINDLE DRIVE, KELOWNA, BC

TITLE
SURFACE WATER FLOW PATH AND PIPING

CLIENT
CITY OF KELOWNA

CONSULTANT
Keltech Environmental Ltd.

PROJECT No.	2024-029
REVISION	02
DATE	03-30-2026
CADD	SI
CHECK	NF

FIGURE
5

TABLES

Table 1: Monitoring Well Construction Details and Current Status - to December 2025

City Current Monitoring Well ID	Consultant Initial Monitoring Well ID	Monitoring Well		Geodetic Elevations[A]				Screen Details				Drilling				Current Status
		UTM Coordinates		Grade	Piezo	Top of screen	Bottom of Screen	Top of Screen	Bottom of Screen	Screen Length	Lithology	Method	Company	Consultant	Year	
		Northing	Easting	(m amsl)	(m amsl)	(m amsl)	(m amsl)	(m bgs)	(m bgs)	(m bgs)						
North and North East of Phase 1																
GL41-1	GL41-1	5537673.4	326191.3	449.7	450.6	440.6	439.0	9.1	10.7	1.6	volcanic bedrock, brown, hard	Sonic Core	VanMars	SNC Lavalin	2019	Active
GL41-2	GL41-2	5537673.3	326191.5	449.7	450.6	443.3	442.4	6.4	7.3	0.9	gravel and silt, trace clay (till)	Sonic Core	VanMars	SNC Lavalin	2019	Active
GL41-3	GL41-3	5537675.7	326192.7	449.7	450.6	447.0	445.5	2.7	4.2	1.5	silt, some clay followed by sand, trace silt	HSA	On the Mark	SNC Lavalin	2019	Active
GL0-1	12-1A	5537338.6	326498.8	449.2	450.0	429.1	426.0	20.1	23.2	3.1	sandy clay (till) followed by bedrock	Sonic Core	MudBay	SLR	2012	Decomm in Sept. 2020
GL0-2	12-1B	5537338.6	326498.8	449.0	450.0	435.0	431.9	14.0	17.1	3.1	sandy silt, some gravel (suspect	Sonic Core	MudBay	SLR	2012	Decomm in Sept. 2020
GL0-3	12-1C	5537338.6	326498.8	449.42	450.49	439.9	436.9	9.5	12.5	3.0	sand and gravel followed by sand, trace silt and gravel	Sonic Core	MudBay	SLR	2012	Decomm in Sept. 2020
GL23-1	GL23-1	5537307.3	326976.6	446.0	446.6	437.8	436.3	8.2	9.7	1.5	sand, compact	HSA	Beck	Golder	2007	Active
GL24-1	GL24-1	5537291.1	327107.7	446.8	447.6	443.6	441.6	3.2	5.2	2.0	sand, compact followed by silty sand (till)	HSA	Beck	Golder	2007	Active
GL1-1	GL1-1	5537230.4	327134.1	446.3	446.9	435.8	434.3	10.5	12.0	1.5	silt, some gravel (till)	HSA	-	Gartner Lee	1990	Active
GL1-2	GL1-2	5537230.4	327134.1	446.3	447.0	443.8	440.3	2.5	6.0	3.5	silty sand followed by sand	HSA	-	Gartner Lee	1990	Active
GL22-1	GL22-1	5537429.7	326934.5	449.4	450.3	438.2	436.6	11.2	12.8	1.6	sand, trace silt	HSA	Beck	Golder	2007	Decomm in Sept/Oct 2016
GL43-1	2024-04	5537316.0	327048.0	447.3	447.3	445.5	444.6	1.8	2.7	0.9	Clay, silty sand seams	SSA	VWD	GHD	2024	Active
Phase 1																
GL3-5	12-14	5537050.6	326414.3	457.1	457.4	435.5	433.9	21.6	23.2	1.6	sand and gravel followed by silty clay with sand	Sonic Core	MudBay	SLR	2012	Decomm in 2017
GL3-1	GL3-1	5537029.2	326492.0	-	-	-	-	-	46.9	-	volcanic bedrock	Air Rotary	-	Gartner Lee	1990	Decomm in May 2011
GL3-2	GL3-2	5537029.2	326492.0	-	-	-	-	16.8	18.5	1.7	silty sand some gravel (till)	HSA	-	Gartner Lee	1990	Decomm in May 2011
GL3-3	GL3-3	5537029.2	326492.0	-	-	-	-	0.5	3.5	3.0	fill followed by silty clay	HSA	-	Gartner Lee	1990	Decomm in May 2011
Phase 2																
GL6-1 (2011)	GL6-1 (2011)	5536528.3	326582.8	439.7	440.5	437.9	434.8	1.8	4.9	3.1	Interbedded clay and garbage (municipal solid waste)	Sonic Core	Beck	SLR	2011	Decomm in Sept. 2021
GL18-1	GL18-1	5536537.1	326574.7	-	-	-	-	>24	-	-	bedrock	Sonic Core	Beck	SLR	2011	Decomm in May 2011
GL18-2	GL18-2	5536537.1	326574.7	442.6	442.9	426.4	423.4	16.2	19.2	3.0	silty sand	Mud Rotary	Foundex	Golder	2005	Decomm in Jan. 2019
GL18-3	GL18-3	5536537.1	326574.7	442.9	442.8	437.5	434.6	5.4	8.3	2.9	landfill refusal	Mud Rotary	Foundex	Golder	2005	Decomm in Jan. 2020
West of Phase 2																
GL2-1	GL2-1	5536880.9	326219.1	438.6	439.0	430.6	429.1	8.0	9.5	1.5	silty clay followed by silty sand	HSA	-	Gartner Lee	1990	Active
GL2-2	GL2-2	5536880.9	326219.1	438.9	439.0	436.4	432.9	2.5	6.0	3.5	silty clay	HSA	-	Gartner Lee	1990	Active
GL5-1	GL5-1	5536592.3	326175.4	439.0	440.0	421.0	420.0	18.0	19.0	1.0	crystalline bedrock	Air Rotary	-	Gartner Lee	1990	Active
GL5-2	GL5-2	5536592.3	326175.4	439.2	440.1	431.7	429.2	7.5	10.0	2.5	sand followed by gravelly silt (till)	HSA	-	Gartner Lee	1990	Active
GL5-3	GL5-3	5536592.3	326175.4	439.2	440.2	437.2	434.2	2.0	5.0	3.0	silty clay	HSA	-	Gartner Lee	1990	Active
East of Phase 2																
GL4-1	GL4-1	5536929.9	326887.8	441.1	441.4	433.4	432.4	7.7	8.7	1.0	silty gravel and sand	HSA	-	Gartner Lee	1990	Active
GL4-2	GL4-2	5536929.9	326887.8	441.1	441.4	439.4	435.9	1.7	5.2	3.5	silty clay	HSA	-	Gartner Lee	1990	Active
Phase 3 Slough																
GL34-1	11-26A	5536303.3	326445.5	439.2	440.0	433.2	431.7	6.0	7.5	1.5	fat clay (reworked soil, fill) with 7 cm sand lenses	Sonic Core	Beck	SLR	2011	Decomm in Jan. 2024
GL34-2	11-26B	5536303.3	326445.5	439.2	439.7	428.5	427.6	10.7	11.6	0.9	silty sand, clay layers	Sonic Core	Beck	SLR	2011	Decomm in Jan. 2024
GL34-3	11-26C	5536303.3	326445.5	439.3	440.1	425.7	424.8	13.6	14.5	0.9	lean clay, trace sand followed by fat clay, trace sand	Sonic Core	Beck	SLR	2011	Decomm in Jan. 2024
GL30-1	11-13A1	5536286.0	326746.8	439.2	440.0	432.6	431.1	6.6	8.1	1.5	fat clay (reworked soil, fill) with 10 cm sand lens	Sonic Core	Beck	SLR	2011	Decomm in Oct. 2019
GL30-2	11-13B	5536286.0	326746.8	439.4	440.7	427.5	426.6	11.9	12.8	0.9	silty sand followed by fat clay	Sonic Core	Beck	SLR	2011	Decomm in Oct. 2019
GL30-3	11-13C	5536286.0	326746.8	439.4	440.6	424.3	423.4	15.1	16.0	0.9	fat clay	Sonic Core	Beck	SLR	2011	Decomm in Oct. 2019
GL31-1	11-18A1	5536191.5	326639.6	439.4	440.3	432.5	431.0	6.9	8.4	1.5	fat clay (reworked soil, fill) followed by lean clay (native)	Sonic Core	Beck	SLR	2011	Decomm in Sept. 2021
GL31-2	11-18B1	5536191.5	326639.6	439.2	440.0	428.6	427.7	10.6	11.5	0.9	lean clay followed by silt with sand	Sonic Core	Beck	SLR	2011	Decomm in Jan. 2024
GL31-3	11-18C	5536191.5	326639.6	439.5	440.4	425.2	424.2	14.3	15.3	1.0	silt some sand	Sonic Core	Beck	SLR	2011	Damaged 2020
GL32-1	11-21A1	5536093.5	326735.0	438.2	439.0	433.6	432.1	4.6	6.1	1.5	fat clay (native) with 1 cm sand lenses	Sonic Core	Beck	SLR	2011	Decomm in Sept. 2021
GL32-2	11-21B	5536093.5	326735.0	437.8	438.7	429.7	428.8	8.1	9.0	0.9	lean clay with sand lenses followed by silty sand	Sonic Core	Beck	SLR	2011	Decomm in Sept. 2021
GL32-3	11-21C1	5536093.5	326735.0	437.8	438.6	427.9	426.9	9.9	10.9	1.0	silty sand, trace clay	Sonic Core	Beck	SLR	2011	Decomm in Sept. 2021
GL33-1	11-22A	5536202.4	326837.1	439.4	440.0	433.8	430.7	5.6	8.7	3.1	fat clay (reworked soil, fill) followed by silty sand with gravel (suspect till)	Sonic Core	Beck	SLR	2011	Decomm in Oct. 2019
GL33-2	11-22B	5536202.4	326837.1	439.5	440.1	430.5	429.0	9.0	10.5	1.5	silty sand with gravel (suspect till)	Sonic Core	Beck	SLR	2011	Decomm in Oct. 2019
GL33-3	11-22C	5536202.4	326837.1	439.5	440.2	427.7	426.2	11.8	13.3	1.5	silty sand with gravel (suspect till) followed by volcanic bedrock (weak)	Sonic Core	Beck	SLR	2011	Decomm in Oct. 2019
GL35-1	11-31A1	5536105.2	326411.2	438.1	439.0	432.0	430.5	6.1	7.6	1.5	fat clay (reworked soil, fill) follwed by silty sand and lean clay	Sonic Core	Beck	SLR	2011	Active
GL35-2	11-31B	5536105.2	326411.2	438.1	439.0	427.5	425.9	10.6	12.2	1.6	lean clay	Sonic Core	Beck	SLR	2011	Active
GL35-3	11-31C	5536105.2	326411.2	438.4	439.3	425.1	423.6	13.3	14.8	1.5	silty sand with gravel (till)	Sonic Core	Beck	SLR	2011	Active
GL36-1	11-3A	5536496.4	326764.1	439.2	439.8	433.7	430.7	5.5	8.5	3.0	fat clay (reworked soil, fill) followed by fat clay (native) with cm sand layers	Sonic Core	Beck	SLR	2011	Decomm in Oct. 2019
GL36-2	11-3B	5536496.4	326764.1	439.3	440.0	429.1	427.6	10.2	11.7	1.5	fat clay (native), trace sand followed by sandy silt	Sonic Core	Beck	SLR	2011	Decomm in Oct. 2019
GL37	12-11	5536489.1	326646.4	439.3	440.1	437.5	431.4	1.8	7.9	6.1	interbedded silt clay and garbage followed by clay, silty layers with wood chunks	Sonic Core	MudBay	SLR	2012	Decomm in 2017
GL38	12-10	5536488.9	326634.4	439.3	440.1	437.5	431.5	1.8	7.8	6.0	interbedded silt clay and garbage followed by fat clay (reworked soil, fill). No recovery below 5 m.	Sonic Core	MudBay	SLR	2012	Decomm in 2017
West of Phase 3 Slough																
GL8-1	GL8-1	5535944.5	326391.9	438.8	439.7	431.3	429.8	7.5	9.0	1.5	sand, some gravel	HSA	-	Gartner Lee	1990	Active
GL8-2	GL8-2	5535944.5	326391.9	438.8	439.6	438.3	434.8	0.5	4.0	3.5	clay	HSA	-	Gartner Lee	1990	Active
GL14-1	GL14-1	5536265.0	326258.7	453.3	453.8	-	-	>8	-	-	bedrock	Mud Rotary	Foundex	Golder	2005	Decomm in 2016
East of Phase 3 Slough																
GL7-1	GL7-1	5536434.3	326891.0	439.0	439.7	436.0	435.5	3.0	3.5	0.5	weathered bedrock	Air Rotary	-	Gartner Lee	1990	Active
GL26-1	09-2-1	5535984.6	326863.3	440.9	441.4	435.8	434.3	5.1	6.6	1.5	clayey silt followed by bedrock, some fractures	Odex	-	Golder	2009	Active
GL26-2	09-2-2	5535984.6	326863.3	440.7	441.6	437.0	435.5	3.7	5.2	1.5	clayey silt, trace sand and gravel	HSA	-	Golder	2009	Active
GL26-3	09-2-3	5535984.6	326863.3	440.7	441.5	438.6	437.3	2.1	3.4	1.3	silty gravelly sand followed by layered clayey silt	SSA	-	Golder	2009	Active
GL26-4	09-2-4	5535984.6	326863.3	440.7	441.5	417.8	414.8	22.9	25.9	3.0	bedrock	Odex	-	Golder	2009	Active
GL10-1	GL10-1	5535933.0	326821.6	438.4	439.4	435.5	430.0	2.9	8.4	5.5	silty clay, some sand and gravel	HSA	-	Gartner Lee	1990	Active
12-16	12-16	5536514.5	326448.7	-	-	-	-	6.1	10.7	4.6	fat clay (reworked soil, fill)	HSA	On the Mark	SLR	2012	Decomm in 2012
GL25-1	09-1-1	5536149.0	327105.1	458.3	459.0	443.7	440.7	14.6	17.6	3.0	sand and gravel with silty clay (till)	Odex	-	Golder	2009	Decomm in 2016
GL25-2	09-1-2	5536149.0	327105.1	458.3	459.108	456.5	455.0	1.8	3.3	1.5	interbedded clay and silty clay	SSA	-	Golder	2009	Decomm in 2016

Table 1: Monitoring Well Construction Details and Current Status - to December 2025

City Current Monitoring Well ID	Consultant Initial Monitoring Well ID	Monitoring Well		Geodetic Elevations[A]				Screen Details				Drilling				Current Status
		UTM Coordinates		Grade	Piezo	Top of screen	Bottom of Screen	Top of Screen	Bottom of Screen	Screen Length	Lithology	Method	Company	Consultant	Year	
		Northing	Easting	(m amsl)	(m amsl)	(m amsl)	(m amsl)	(m bgs)	(m bgs)	(m bgs)						
Compost Facility - South of Phase 3 Slough																
GL27-1	09-3-1	5535841.1	326462.8	438.7	441.6	415.1	413.6	23.6	25.1	1.5	bedrock , some fractures	Odex	-	Golder	2009	Active
GL27-2	09-3-2	5535841.1	326462.8	438.7	440.8	428.2	426.7	10.5	12.0	1.5	silty clay, some sand and gravel (till)	SSA	-	Golder	2009	Active
GL27-3	09-3-3	5535841.1	326462.8	438.6	440.8	430.2	428.7	8.4	9.9	1.5	layered clay followed by silty clay, some sand and gravel (till)	HSA	-	Golder	2009	Active
GL27-4	09-3-4	5535841.1	326462.8	438.7	440.6	437.9	436.9	0.8	1.8	1.0	sandy gravelly silt (fill)	SSA	-	Golder	2009	Active
GL17-1	GL17-1	5535791.4	326494.6	439.2	440.3	-	-	>18	-	-	bedrock	Mud Rotary	Foundex	Golder	2005	Decomm in 2022
GL17-2	GL17-2	5535791.4	326494.6	439.2	439.8	434.4	431.4	4.8	7.8	3.0	silty gravelly sand (till)	Mud Rotary	Foundex	Golder	2005	Decomm in 2022
GL13-1	GL13-1	5535791.4	326494.6	-	439.8	-	-	4.6	7.6	3.0	silty sand with gravel (till)	HSA	-	Gartner Lee	1998	Decomm in 2022
GL12-1	GL12-1	5535729.1	326538.3	441.3	442.3	435.2	432.2	6.1	9.1	3.0	silty sand (till)	HSA	-	Gartner Lee	1998	Decomm in 2022
GL29-1	12-4A	5535749.3	326652.7	443.9	445.1	402.4	399.4	41.5	44.5	3.0	sand and silt followed by bedrock	Sonic Core	MudBay	SLR	2012	Active
GL29-2	12-4B	5535749.3	326652.7	443.9	444.8	436.0	432.9	7.9	11.0	3.1	sand and silt (till)	Sonic Core	MudBay	SLR	2012	Active
West of Compost Facility																
GL15-1	GL15-1	5535905.1	326176.5	452.0	452.3	-	-	>12	-	-	bedrock	Mud Rotary	Foundex	Golder	2005	Active
GL15-2	GL15-2	5535905.1	326176.5	451.7	452.0	448.6	445.6	3.1	6.1	3.0	sandy silt and gravel (till)	Mud Rotary	Foundex	Golder	2005	Active
East of Compost Facility																
06BH02	06BH02	5535672.4	327122.8	445.6	445.4	437.6	434.6	8.0	11.0	3.0	clay followed by sand and gravel	HSA	Kamloops	EBA	2006	Active
South Perimeter of Site																
GL39-1	GL39-1	5535296.8	326790.4	439.5	440.4	430.7	429.5	8.8	10.0	1.2	silt, some sand, clay and gravel (till)	HSA	On the Mark	SNC Lavalin	2019	Active
GL39-2	GL39-2	5535297.6	326789.1	439.6	440.5	435.3	433.5	4.3	6.1	1.8	silty sand , trace gravel and clay	HSA	On the Mark	SNC Lavalin	2019	Active
GL39-3	GL39-3	5535298.3	326787.8	439.6	440.6	438.1	436.6	1.5	3.0	1.5	silty clay, some sand	HSA	On the Mark	SNC Lavalin	2019	Active
GL40-1	GL40-1	5535525.2	326465.2	449.7	450.5	446.7	445.1	3.0	4.6	1.6	sand and gravel, trace clay and silt (till)	HSA	On the Mark	SNC Lavalin	2019	Active / Dry
GL40-2	GL40-2	5535523.8	326466.4	449.6	450.4	435.0	433.4	14.6	16.2	1.6	volcanic bedrock, brown, hard	Sonic Core	VanMars	SNC Lavalin	2019	Decomm in Sept. 2021
GL40-3	GL40-3	5535523.7	326466.2	449.6	450.4	439.8	438.0	9.8	11.6	1.8	clay and silt, some sand, trace gravel (till)	Sonic Core	VanMars	SNC Lavalin	2019	Decomm in Sept. 2021
GL42-1	GL42-1	5535422.7	326636.2	447.6	448.4	429.3	427.7	18.3	19.9	1.6	sand and gravel, trace silt (till)	Sonic Core	VanMars	SNC Lavalin	2019	Active
GL42-2	GL42-2	5535422.6	326636.2	447.6	448.4	437.5	436.0	10.1	11.6	1.5	clayey silt	Sonic Core	VanMars	SNC Lavalin	2019	Active
GL42-3	GL42-3	5535423.9	326637.6	447.7	448.5	441.0	439.2	6.7	8.5	1.8	sand, gravel and cobbles (till)	Sonic Core	VanMars	SNC Lavalin	2019	Active
GL46-1	2024-03	5535422.5	326633.0	448.8	448.8	428.2	426.7	20.6	22.1	1.5	Volcanic rock	Air Rotary	VWD	GHD	2024	Active
09BH01	09BH01	5535385.2	326712.8	-	-	-	-	-	-	-	-	SSA	Beck	SLR	2011	Decomm in Aug. 2011
South and South East of Site																
09BH05-S	09BH05-S	5535090.7	326805.6	-	-	-	-	11.2	14.2	1.8	silty sand	HSA	Kel	EBA	2009	Inaccessible
09BH05-D	09BH05-D	5535090.7	326805.6	-	-	-	-	22.0	23.0	1.8	sand, some gravel, trace silt	HSA	Kel	EBA	2009	Inaccessible
GL44-1	2024-01D	5535149.2	326815.9	437.15	437.20	421.20	419.67	16.0	17.5	1.5	silty sand, sine gravel, trace to some silt (till)	HSA	VWD	GHD	2024	Active
GL44-2	2024-01S	5535149.9	326813.6	437.2348	437.2848	423.9	422.3	13.4	14.9	1.5	Sand, fine-grained, some silt	HSA	VWD	GHD	2024	Active
09BH06-S	09BH06-S	5534457.6	326917.6	435.9	435.9	431.9	430.4	4.0	5.5	1.8	silty clay	HSA	Kel	EBA	2009	Active
09BH06-D	09BH06-D	5534457.6	326917.6	435.6	435.8	428.6	425.6	7.0	10.0	1.8	silty sand	HSA	Kel	EBA	2009	Active
09BH07	09BH07	5535293.6	327214.6	440.9	441.0	434.4	431.4	6.5	9.5	1.8	sand, trace silt	HSA	Kel	EBA	2009	Damaged 2020
09BH03	09BH03	5535064.2	327413.6	440.8	441.0	434.7	431.7	6.1	9.1	1.8	sand, trace silt	HSA	Kel	EBA	2009	Damaged in 2022
09BH04	09BH04	5535008.4	327178.2	436.2	436.4	425.0	422.0	11.2	14.2	1.8	sand and gravel, trace clay	HSA	Kel	EBA	2009	Active/Artesian
GL45-1	2024-02D	5535038.3	327084.7	437.3	437.3	417.8	416.3	19.5	21.0	1.5	sand, fine to coarse grained, followed by sandy silt and gravel (till)	HSA	VWD	GHD	2024	Active
GL45-2	2024-02S	5535040.9	327085.2	437.3	437.3	428.8	427.3	8.5	10.1	1.5	silty sand, fine grained, followed by clay, trace silt	HSA	VWD	GHD	2024	Active
GL28-1	09-4-1	5535273.8	326721.5	442.1	442.1	424.6	423.1	17.5	19.0	1.5	sand, some silt followed by gravel, some sand, trace silt	Odex	-	Golder	2009	Active
GL28-2	09-4-2	5535273.8	326721.5	441.4	441.8	435.9	434.4	5.5	7.0	1.5	silty sand	HSA	-	Golder	2009	Active
GL28-3	09-4-3	5535273.8	326721.5	441.4	441.7	438.9	437.4	2.5	4.0	1.5	layered silty clay, some sand	SSA	-	Golder	2009	Active

Notes:
A. Keltech understands that the geodetic elevations were measured at the time of well installation during the horizontal survey. For up-to-date piezometric elevations, see Figure 2a
HSA hollow stem auger
SSA solid stem auger
Update to the original table prepared by SNC-LAVALIN INC.662036 / 2022 02 10 20220120_662036_Table 1. allMWs.xlsx QAQC CN 2022 02 10

Table 2a: Monitoring Well Top of Pipe Elevations & Groundwater Elevations - 2015-2025

Well ID:	GL0-1	GL0-2	GL0-3	GL1-1	GL1-2	GL2-1	GL2-2	GL3-5	GL4-1	GL4-2	GL5-1	GL5-2	GL5-3	GL6-1 (2011)	GL7-1	GL8-1	GL8-2	GL9-1	GL9-2	GL9-3	GL10-1	GL12-1	GL13-1	GL15-1	GL15-2	GL16-1	GL17-1	GL17-2	GL18-2
Water Elevation Date																													
2015 Well Elevation	450.052	450.008	450.541	446.970	446.982	438.991	438.988	457.820	441.404	441.407	439.973	440.079	440.088	440.511	439.744	439.729	GL8-2	439.592	439.477	439.505	439.392	441.834	439.757	452.37	452.086	439.612	440.286	439.815	442.955
2015-03-17	444.112	440.943	440.898	445.077	444.994	438.791	438.590	439.181	440.059	439.746	438.593	438.591	438.570	437.889	438.051	438.860	438.143	439.502	437.932	437.885	437.901	440.224	439.142	448.059	448.598	438.874		439.08	439.085
2015-06-04	444.202	440.846	440.793	444.922	444.844	438.756	438.581	439.102	440.214	439.698	438.616	438.630	438.610	437.871	438.109	438.779	438.141	439.502	437.939	437.900	438.150	440.159	439.102	447.402	447.997	438.783	439.938	439.067	439.504
2015-08-27	444.213	440.748	440.691	444.461	444.386	437.460	437.716	439.007	439.993	439.516	437.513	437.472	437.343	437.556	437.814	437.530	437.291	439.414	437.509	437.460	437.372	439.985	438.957	447.665	448.251	437.567	439.905	438.9	439.384
2015-11-02	444.211	440.697	440.636	444.565	444.544	438.053	437.953	439.025	440.038	439.585	437.488	437.513	437.334	437.562	437.843	437.259	437.088	439.393	437.682	437.635	437.943	439.891	438.903	447.781	448.325	437.28	439.941	438.955	439.587
2016 Well Elevation	449.999	449.957	450.487	446.955	446.965	438.998	438.994	457.440	441.363	441.371	439.998	440.114	440.119	440.481	439.718	439.642	439.572		439.443	439.435	439.414	442.248		452.317	452.04	439.571	440.243	439.775	442.899
2016-03-22	444.361	440.856	440.797	445.451	445.350	438.888	438.764	439.020	440.254	439.780	438.669	438.651	438.605	437.931	438.137	438.829	438.188	Artesian	438.031	437.945	438.033	440.960	439.274	448.522	449.105	438.893	439.991	439.15	439.735
2016-05-16	444.694	440.942	440.882	445.570	445.506	438.638	438.376	439.201	440.253	439.722	438.529	438.495	438.434	437.891	438.126	438.777	438.019	Artesian	437.944	437.896	437.914	440.486	439.305	448.395	448.851	438.778	439.965	439.108	439.78
2016-09-16	444.907	440.992	440.923	444.820	444.743	438.216	437.759	439.145	440.072	439.600	437.927	437.892	437.808	437.696	437.953	438.047	437.684	Artesian	437.671	437.607	437.604	440.076	439.238	448.989	449.496	438.073	439.982	439.113	439.67
2016-11-24	444.928	440.995	440.925	445.065	444.990	438.649	438.414	439.105	440.072	439.661	438.430	438.475	438.435	437.822	438.020	438.750	438.043	Artesian	437.834	437.785	438.006	439.998	439.318	448.54	449.078	438.759	-	439.193	439.66
2017 Well Elevation																													
2017-03-21	444.930	441.069	441.012	445.443	445.367	438.998	438.563	439.341	440.343	440.676	438.589	438.626	438.579	438.163	438.298	439.030	438.480	Artesian	438.241	438.180	438.260	440.280	439.405	448.705	449.321	439.053	-	439.335	439.69
2017-06-05	445.449	441.309	441.242	445.847	445.670	438.967	438.842		440.234	440.532	438.955	438.949	438.894	438.400	438.492	438.974	438.485	Artesian	438.438	438.367	438.422	440.560	439.507	448.224	447.76	439.031	440.163	439.365	439.743
2017-08-16	445.621	441.351	441.288	444.824	444.742	438.613	438.193	Decommi	440.081	439.953	438.493	438.441	438.381	438.067	438.232	438.561	437.934	Artesian	438.108	438.030	438.009	NM	439.505	448.027	448.419	438.583	-	439.343	439.616
2017-09-22	445.630	441.308	441.242	444.690	444.610	438.547	438.243	sioned	440.067	439.992	438.413	438.389	438.350	437.895	438.113	438.536	437.892	Artesian	437.978	437.893	437.880	440.310	439.466	447.829	448.293	438.548	-	439.322	439.654
2017-11-14	445.660	441.281	441.222	444.841	444.805	438.848	438.685		440.162	440.243	438.693	438.710	438.696	437.900	438.118	438.754	438.164	Artesian	438.041	437.960	438.191	440.095	439.318	447.409	447.998	438.765	-	439.317	439.761
2018 Well Elevation																													
2018-03-16	445.621	441.402	441.348	445.732	445.693	438.998	438.865		440.554	440.720	438.987	438.986	438.939	438.426	NM	438.993	438.730	Artesian	438.519	438.434	438.479	NM	439.608	447.799	448.705	439.008	-	439.565	440.099
2018-05-25	446.338	441.829	441.575	445.756	445.645	438.884	438.612	Decommi	440.438	439.800	438.870	438.835	438.805	438.516	NM	438.919	438.472	Artesian	438.565	438.485	438.515	440.723	439.668	448.435	448.993	438.941	-	439.505	440.304
2018-08-30	446.861	443.054	443.056	444.814	444.725	438.687	438.481	sioned	439.819	439.331	438.564	438.563	438.525	437.544	NM	438.843	438.115	Artesian	438.083	438.003	437.945	440.284	439.401	448.572	448.946	438.851	439.959	439.302	440.001
2018-11-16	446.734	442.592	442.576	445.355	445.246	438.998	438.814		439.994	439.506	438.843	438.815	438.810	437.972	438.206	438.942	438.342	Artesian	438.208	438.135	438.206	439.958	439.248	447.748	448.231	438.96	Artesian	439.223	440.017
2019 Well Elevation	449.997	449.947	450.490	446.944	446.951	438.999	438.992		441.353	441.357	440.023	440.137	440.150	440.449	439.721	439.650	439.574	439.565	439.449	439.444	439.418	442.251	439.759	452.322	452.039	439.577	440.247	439.783	
2019-03-21	446.512	442.622	442.591	445.674	445.579	438.999	436.592		440.153	439.647	438.913	438.868	438.859	438.359	438.456	438.861	438.719	Artesian	438.457	438.461	438.480	439.766	439.328	447.301	447.921	438.827	440.247	439.251	
2019-06-06	446.395	442.265	442.245	445.341	445.229	438.739	438.551		439.898	439.348	438.619	438.606	438.582	438.139	438.310	438.631	438.260	Artesian	438.287	438.205	438.186	439.750	439.158	446.871	447.34	437.422	440.247	439.049	
2019-07-12	446.297	442.160	442.137	445.100	445.000			Decommi	439.881	439.322	438.545	438.493	438.445	437.839	-	438.700	438.147	439.565	438.156	438.091	438.105	439.676	439.114	448.299	448.541	437.692	440.247	439.02	Decomn
2019-08-12	446.215	442.050	442.022	444.874	444.773	438.503	438.116	sioned	439.806	439.258	438.293	438.287	438.223	437.015	438.054	438.587	437.899	-	438.032	437.973	438.132	439.684	439.074	448.608	449.032	438.633	440.234	438.976	
2019-08-13	-	-	-	-	-	-	-		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
2019-10-28	446.003	441.875	441.841	445.129	445.033	438.779	438.613		439.891	439.348	438.624	438.622	438.617	437.540	437.821	438.669	438.116	439.565	437.934	437.873	437.999	439.652	439.060	447.217	447.638	438.715	440.047	438.985	
2020 Well Elevation																													
2020-03-21	445.870	441.760	441.720	445.730	445.610	438.770	438.990		440.250	439.600	438.820	438.800	438.780	438.200	438.320	438.880	439.390	439.540	438.310	438.260	438.250	440.060	439.330	447.45	448.01	438.93	440.21	439.72	
2020-06-04				445.570	445.450	438.810	438.400	Decommi	440.320	439.570	438.570	438.520	438.480	438.160	438.300	438.690	438.270	439.520	438.280	438.210	438.220	440.060	439.350	448.93	449.43	438.74	440.23	439.21	Decomn
2020-09-15	Decommisioned			445.040	444.950	438.690	438.520	sioned	439.900	439.260	438.590	438.570	438.550	437.860	438.000	438.860	438.050	439.520	437.950	437.890	437.750	440.060	439.300	449.00	450.09	439.01	440.24	439.18	
2020-11-26				445.290	445.200	438.900	438.640		439.900	439.330	438.710	438.680	438.660	437.510	438.020	439.030	438.210	439.540	438.080	439.040	438.110	439.950	439.260	448.82	449.39	439.08	440.18	439.18	
2021 Well Elevation																													
2021-03-29				445.440	445.340	438.870	438.640		440.100	439.480	438.720	438.690	438.670	438.210	438.300	438.670	438.370	439.540	438.330	438.290	438.300	439.990	439.260	448.04	448.53	439.00	440.17	439.15	
2021-06-15				445.160	445.080	438.590	438.180	Decommi	439.860	439.250	438.330	438.290	438.220	438.110	438.180	438.900	437.730	439.530	438.160	438.110	438.070	439.840	439.240	448.87	449.38	438.97	440.19	439.12	
2021-09-29	Decommisioned			444.410	444.330	438.830	438.650	sioned	439.690	439.080	438.510	438.650	438.790	Decommi	437.840	438.740	438.040	439.570	Decommisioned		437.710	439.690	439.080	447.25	447.71	438.79	440.19	439.01	Decomn
2021-10-26				444.900	444.830	438.750	438.300		439.770	439.170	438.470	438.420	438.360	sioned	437.860	438.410	437.930	439.570			437.890	439.660	439.090	447.50	448.11	438.47	440.13	439.03	
2022 Well Elevation (piezo)				446.924	446.943	438.987	438.976		441.345	441.363	439.955	440.092	440.115		439.679	439.652	439.546				439.383	442.234	440.875	452.302	452.046	439.549	440.774	440.677	
2022-03-29				445.284	445.204	438.986	438.584		440.177	439.533	438.620	438.616	438.584		438.143	438.736	438.302				438.118	440.193	439.401	447.66	448.33	438.77	440.17	439.19	
2022-06-24	Decommisioned			445.171	445.090	438.873	438.478	Decommi	440.084	439.367	438.578	438.551	438.510	Decommi	438.129	438.825	438.661	Decommisioned			438.097	440.201	439.420	447.97	448.60	438.93	440.15	439.27	Decomn
2022-09-29				444.573	444.494	438.660	438.345	sioned	439.725	439.096	438.322	438.325	438.305	sioned	437.721	438.603	437.960				437.620	439.983	439.258	448.47	449.02	438.62	440.20	439.12	
2022-10-27				444.930	444.869	438.792	438.491		439.783	439.158	438.490	438.488	438.473		437.721	438.691	438.046				437.775	439.950	439.256	447.75	448.26	438.72	440.10	439.13	
2023 Well Elevation (piezo)				446.924	446.943	438.987	438.976		441.345	441.363	439.955	440.092	440.115		439.679	439.652	439.546				439.383			452.302	452.046	439.549			
2023-03-29				444.998	444.937	438.967	438.588		440.045	439.413	438.600	438.592	438.574		437.986	438.672	438.272				438.069			447.09	447.62	438.70			
2023-05-26	Decommisioned			444.836	444.763	438.763	438.371	Decommi	439.438	439.503	438.422	438.406	438.357	Decommi	438.078	438.442	438.034	Decommisioned			437.936	Decommisioned		448.39	450.32	438.47	Decommisioned		Decomn
2023-09-26				443.067	444.003	438.715	438.461	sioned	439.588	438.998	-	438.437	438.420	sioned	-	438.466	437.933				437.253			446.67	447.19	438.47			
2023-11-21				444.261	444.151	438.822	438.536		439.755	439.097	438.500	438.517	438.503		437.517	438.490	438.008				437.593			443.37	446.83	438.51			
2024 Well Elevation (piezo)				446.924	446.943	438.987	438.976		441.345	441.363	439.955	440.092	440.115		439.679	439.652	439.546				439.383			452.302	452.046	439.549			
2024-03-13				444.563	444.506	438.877	438.546		439.939	439.334	438.560	438.566	438.534		437.997	438.511	438.186				437.888			446.06	446.53	438.52			
2024-06-06	Decommisioned			444.457	444.414	438.937	438.543	Decommi	439.893	439.177	438.537	438.541	438.518	Decommi	437.979	438.495	438.146	Decommisioned			437.752	Decommisioned		446.00	446.46	438.51	Decommisioned		Decomn
2024-09-09				444.078	444.025	438.620	438.374	sioned	439.732	439.064	438.342	438.342	438.322	sioned	437.786	438.281	437.923				437.308			445.81	446.28	438.28			
2024-11-19				444.231	444.184	438.887	438.559		439.812	439.190	438.557	438.56	438.55		437.748	438.454	438.056				437.705			445.73	446.20	438.47			
2025 Well Elevation (piezo)				446.942	446.972	439.003	439.000		441.342	441.361	439.978	440.124	440.132		439.707	439.644	439.528				439.383			452.312	452.019	439.553			
2025-03-24				444.589	444.563	439.003	438.639		440.168	439.49	438.684	438.695	438.688		438.112	438.533	438.407				438.247			445.592	446.045	438.551			
2025-05-30	Decommisioned			444.623	444.578	438.993	438.536	Decommi	440.091	439.312	438.551	438.574	438.481	Decommi	438.078	438.459	438.081	Decommisioned			437.841	Decommisioned		445.663	446.173	438.471	Decommisioned		Decomn
2025-09-10				444.182	444.147	438.494	438.274	sioned	439.856	439.171	438.303	438.295	438.248	sioned	437.796	438.185	437.864				437.264			445.756	446.264	438.207			
2025-11-21				444.334	444.294	438.832	438.659		439.901	439.258	438.625	438.579	438.58		437.785	438.451	438.084				437.732			445.641	446.107	438.474			

Table 2a: Monitoring Well Top of Pipe Elevations & Groundwater Elevations - 2015-2025

Well ID:	GL18-3	GL20-1	GL23-1	GL24-1	06BH02	09BH03	09BH04	09BH06-D	09BH06-S	09BH07	GL26-1	GL26-2	GL26-3	GL26-4	GL27-1	GL27-2	GL27-3	GL27-4	GL28-1	GL28-2	GL28-3	GL29-1	GL29-2	GL30-1	GL30-2	GL30-3	GL31-1	GL31-2
Water Elevation Date																												
2015 Well Elevation	442.89	441.229	446.633	447.604	445.441	441.01	436.362	435.814	435.867	441.046	441.453	441.533	441.516	441.575	440.089	439.314	439.32	439.143	442.111	441.862	441.781	445.083	444.879	440.13	440.852	440.709	440.273	440.048
2015-03-17	437.99	438.21	444.578	444.98	444.101	435.871	436.062	435.615	435.419	437.047	440.595	438.178	438.261	438.176	439.969	438.325	438.408	438.256	436.376	436.7	436.701	440.178	441.419	437.907	438.073	438.07	437.861	437.947
2015-06-04	437.93	438.261	444.481	444.817	444.273	435.758	435.937	435.593	435.432	436.971	440.592	438.608	438.566	438.435	439.617	438.135	438.302	438.154	436.236	436.454	436.459	440.227	441.444	437.922	438.084	438.137	437.868	437.979
2015-08-27	437.66	437.844	444.128	444.393	444.131	435.625	435.773	435.345	435.072	436.834	440.454	437.782	437.796	437.735	439.581	438.049	438.003	437.565	436.129	436.421	436.436	440.153	441.167	437.655	437.824	437.878	437.575	437.719
2015-11-02	437.66	437.711	444.143	444.516	444.35	435.644	435.881	435.471	435.312	436.911	440.447	438.293	438.253	438.097	439.594	438.039	438.022	437.724	436.113	436.293	436.309	440.164	440.994	437.647	437.804	437.91	437.503	437.606
2016 Well Elevation	442.828	441.16	446.602	447.614	445.351	441	436.336	435.798	435.871	441.054	441.455	441.513	441.498	441.568	440.047	439.273	439.286	439.092	442.067	441.783	441.723	445.047	444.744	439.992	440.719	440.559	440.253	439.987
2016-03-22	438.183	438.202	445.013	445.419	444.796	436.277	-	435.786	435.522	437.772	440.917	438.279	438.346	438.313	439.827	438.524	438.537	438.304	436.609	436.841	436.878	440.455	441.056	437.867	438.02	438.076	437.864	438.012
2016-05-16	438.093	438.161	444.895	445.835	445.227	436.381	436.321	435.654	435.401	437.699	440.921	438.183	438.2	438.153	439.847	438.231	438.351	438.002	436.448	436.697	436.693	440.467	441.364	437.943	438.102	438.172	437.862	438.002
2016-09-16	437.818	437.895	444.219	444.796	445.201	436.399	-	435.698	435.362	438.474	440.777	437.924	437.954	437.864	439.786	438.198	438.181	437.764	436.672	436.924	436.928	440.485	441.172	437.768	437.948	438.06	437.673	437.817
2016-11-24	437.888	438.028	444.645	445.025	445.331	436.245	-	435.748	435.486	438.004	440.82	438.264	438.343	438.246	440.032	438.413	438.406	438.474	436.599	436.851	436.855	440.462	441.395	437.853	438.03	438.099	437.761	437.888
2017 Well Elevation										441.042																		
2017-03-21	438.218	438.631	445.273	445.523	-	436.602	-	-	435.6	439.432	441.067	438.553	438.628	438.549	-	438.571	438.781	438.554	436.885	437.281	437.285	440.627	441.373	438.134	438.328	438.288	438.034	438.217
2017-06-05	438.598	438.552	445.187	445.782	-	436.601	-	-	435.527	438.782	441.305	438.654	438.724	438.635	-	438.609	438.711	438.587	436.802	437.1	437.095	440.826	441.764	438.367	438.527	438.521	438.222	438.406
2017-08-16	438.308	438.22	444.398	444.854	445.259	-	-	435.67	435.309	439.287	441.16	438.234	438.229	438.186	-	438.381	438.396	438.045	436.842	437.387	437.39	440.778	441.309	438.132	438.17	438.223	438.013	438.157
2017-09-22	438.118	438.095	444.346	444.683	445.171	436.139	-	435.578	435.346	438.627	441.086	438.129	438.123	438.092	-	438.291	438.346	437.971	436.518	436.821	436.814	440.726	441.015	438.013	438.144	438.127	437.908	438.042
2017-11-14	438.088	438.161	444.468	444.843	445.111	436.049	436.166	435.618	435.43	438.351	441.02	438.464	438.448	438.389	-	438.435	438.5	438.462	436.425	436.655	436.647	440.726	440.735	438.002	438.147	438.175	437.895	438.036
2018 Well Elevation															441.547	440.776	440.789	440.57										
2018-03-16	438.678	438.717	445.226	445.649	-	-	-	-	-	-	441.305	438.821	438.885	438.859	-	440.277	-	-	436.844	437.249	437.231	440.899	441.576	438.38	438.563	438.564	438.234	438.402
2018-05-25	438.688	438.585	445.347	445.844	-	436.47	-	-	435.566	-	-	438.749	438.783	438.789	-	-	-	-	436.858	437.328	437.313	441.055	441.849	438.487	438.628	438.639	438.361	438.519
2018-08-30	437.673	438.393	444.43	444.844	-	436.385	-	435.768	435.564	439.682	441.225	438.367	438.431	438.42	-	439.977	439.927	439.778	436.607	436.867	436.855	440.905	441.308	438.016	438.165	438.195	438.069	438.123
2018-11-16	438.068	438.332	444.643	446.325	-	436.318	-	-	435.569	439.377	441.166	438.468	438.51	438.477	440.187	438.316	438.534	438.36	436.698	437.051	437.044	440.928	441.259	438.102	438.258	438.287	438.028	438.21
2019 Well Elevation		441.138	446.597	447.568	445.37	440.985	436.348	435.827	435.884	441.011	441.442	441.56	441.491	441.507	441.562	440.796	440.807	440.585	442.056	441.787	441.736	445.05	444.756	439.998	440.699	440.555	440.241	439.985
2019-03-21		438.476	445.146	445.637	445.37	436.336	436.348	435.827	435.694	439.701	441.172	438.55	438.571	438.487	441.302	438.835	439.188	438.955	436.633	436.918	436.854	440.916	441.095	438.368	438.484	438.485	438.24	438.426
2019-06-06		438.348	445.018	445.339	445.37	435.986	436.348	435.827	435.684	439.641	441.212	438.458	438.402	438.319	440.24	438.646	438.458	438.551	436.595	436.819	436.815	440.8	441.244	438.21	438.32	438.364	438.092	438.246
2019-07-12	nisioned	438.211	444.863	445.095	-	-	-	-	-	-	441.161	438.487	438.599	438.472	440.233	438.532	438.363	438.405	436.79	436.97	436.963	440.852	441.276	438.061	438.186	438.231	437.963	438.132
2019-08-12		438.022	444.584	444.827	-	437.52	Artesian	Artesian	435.582	439.697	441.119	438.487	438.846	438.686	440.241	438.449	438.251	438.292	436.791	436.934	436.929	440.811	441.379	437.858	438.057	438.111	437.833	438.01
2019-08-13		-	-	-	445.37	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2019-10-28		438.157	444.802	445.089	445.37	436.744	436.348	435.827	435.606	439.051	441.032	438.338	438.386	438.292	440.11	438.387	438.333	438.214	436.677	436.872	436.862	440.74	441.123	Decommisioned			437.721	437.895
2020 Well Elevation																												
2020-03-21		438.40	445.37	445.72	-	-	-	-	-	-	441.43	438.50	438.49	438.41	440.10	438.64	438.61	438.59	-	-	-	440.94	441.56				438.06	438.26
2020-06-04	nisioned	438.28	445.36	445.59	Artesian	437.08	-	Artesian	435.71	439.18	441.28	438.59	438.61	438.53	440.25	438.65	438.56	438.60	436.89	437.17	436.16	440.93	441.73	Decommisioned			438.06	438.23
2020-09-15		438.17	444.35	445.01	-	436.84	Artesian		435.64	-	441.19	438.17	438.14	438.06	440.16	438.36	438.33	438.23	437.06	437.50	437.49	440.88	441.40				-	437.97
2020-11-26		438.25	444.95	445.27	-	436.58			435.71	-	441.16	438.38	438.41	438.34	440.16	438.41	438.48	438.38	436.79	437.09	437.08	440.83	441.37				-	438.07
2021 Well Elevation																												
2021-03-29		438.38	445.26	445.43	Artesian	436.42			435.76	436.11	441.29	438.50	438.45	438.38	440.15	438.54	438.62	438.53	436.71	436.98	436.98	440.92	441.33				Damaged	438.29
2021-06-15		438.08	444.94	445.16	Artesian	436.97			435.71	Damaged	441.24	438.33	438.32	438.29	440.17	438.48	438.41	438.43	437.25	438.19	438.21	440.92	441.23				Damaged	438.12
2021-09-29	nisioned	438.19	443.80	444.37	CNL	436.97	Artesian	Artesian	435.638	Damaged	441.01	438.16	438.21	438.17	440.00	438.23	438.20	438.03	436.78	437.08	437.08	440.74	440.90	Decommisioned			Damaged	437.78
2021-10-26		437.99	444.73	444.86	CNL	436.80			435.663	Damaged	441.02	438.30	438.39	438.35	440.09	438.24	438.23	438.08	436.71	436.98	436.98	440.77	440.79				Decommissioned	437.79
2022 Well Elevation (piezo)		441.125	446.572	447.537	446.264	440.96	436.299	436.239	435.813	440.966	441.416	441.46	441.457	441.532	441.535	440.821	440.744	440.679	441.996	441.726	441.687	445.006	444.722					439.934
2022-03-29		438.28	444.78	445.26	damaged	436.94		Artesian	435.76	-	440.98	438.41	438.49	438.52	440.18	438.57	438.59	438.95	436.82	437.20	437.20	440.81	441.60			Decommissioned		438.10
2022-06-24	nisioned	438.33	445.00	445.13	445.869	437.12	Artesian		435.73	-	441.15	438.44	438.53	438.56	440.19	438.51	438.63	438.91	436.80	437.06	437.06	440.82	441.82	Decommisioned				438.07
2022-09-29		438.03	444.39	-	445.912	Damaged		435.93	435.69	-	441.03	438.06	438.19	438.26	440.14	438.25	438.27	438.52	436.78	436.98	436.98	440.74	441.27					437.75
2022-10-27		438.11	444.48	444.91	445.763	-		435.90	435.67	-	441.02	438.24	438.42	438.39	440.15	438.23	438.32	438.18	436.71	436.92	436.93	440.73	441.00					437.72
2023 Well Elevation (piezo)		441.125	446.572	447.537	446.264	440.96	436.299	436.239	435.813	440.966	441.416	441.46	441.457	441.532	441.535	440.821	440.744	440.679	441.996	441.726	441.687	445.006	444.722					439.934
2023-03-29		438.20	444.83	444.96	445.38			435.889	435.72	Damaged	441.03	438.30	438.40	438.42	440.08	438.61	438.51	438.39	436.61	436.80	436.80	Damaged	441.26					438.00
2023-05-26	nisioned	438.18	444.67	444.79	445.536	Damaged	Artesian	435.829	435.62	438.54	441.03	438.24	438.29	438.28	440.09	438.55	438.40	438.46	436.56	436.76	436.76	440.83	440.60	Decommisioned			Decommissioned	438.01
2023-09-26		438.04	443.93	443.99	-			435.80	435.56	Damaged	440.88	438.19	438.05	437.81	440.01	438.33	438.20	438.29	436.67	436.82	436.82	440.61	441.00					437.54
2023-11-21		438.11	443.46	444.19	445.564			435.76	435.55		440.79	437.91	437.98	437.97	440.04	438.42	438.26	438.26	436.55	436.71	436.71	440.56	440.55					437.61
2024 Well Elevation (piezo)		441.125	446.572	447.537	446.264	440.96	436.299	436.239	435.813	440.966	441.416	441.46	441.457	441.532	441.535	440.821	440.744	440.679	441.996	441.726	441.687	445.006	444.722					
2024-03-13		438.16	444.28	444.48	445.254			435.87	435.65		440.94	438.15	438.21	438.23	439.99	438.69	438.55	438.59	437.05	436.74	436.28	440.693	441.07					
2024-06-06	nisioned	438.19	444.25	444.39	445.43	Damaged	Artesian	435.813	435.57	Damaged	440.92	438.11	438.18	438.24	440.02	438.62	438.52	438.69	436.76	437.12	437.15	440.62	441.11				Decommision	
2024-09-09		438.00	443.92	444.01	445.69			435.85	433.56		440.89	437.82	437.86	437.87	439.98	438.50	438.38	438.50	436.91	437.14	437.14	440.61	441.07					
2024-11-19		438.14	443.95	444.14	445.20			435.79	435.56		440.85	437.93	437.91	437.85	440.00	438.35	438.42	438.46	436.63	436.81	436.82	440.58	440.37					
2025 Well Elevation (piezo)		441.115	446.578	447.507	446.281	440.96	436.338	436.302	435.815	440.966	441.42	441.496	441.471	441.549	441.521	440.810	440.724	440.564	442.032	441.761	441.705	445.024	444.742					
2025-03-24		438.33	444.332	444.43	445.163			435.923	435.815		440.887	438.473	438.454	438.503	439.945	438.716	438.762	438.658	436.634	436.85	436.822	440.705	440.568					
2025-05-30	nisioned	438.233	444.329	444.468	445.117	Damaged	Artesian	435.868	435.552	Damaged	440.922	438.204	438.178	438.16	439.936	438.703	438.757	438.635	436.64	436.79	436.766	440.639	441.141				Decommision	
2025-09-10		437.958	444.012	444.065	446.281			436.302	435.815		440.874	437.809	437.797	437.777	439.949	438.493	438.338	438.392	436.789	436.851	436.839	440.575	441.265					
2025-11-21		438.201	444.052	444.198	444.971			435.975	435.55		440.775	438.169	438.145	438.175	439.861	438.426	438.417	438.318	436.556	436.715	436.701	440.682	440.31					

Table 2a: Monitoring Well Top of Pipe Elevations & Groundwater Elevations - 2015-2025

Well ID:	GL31-3	GL32-1	GL32-2	GL32-3	GL33-1	GL33-2	GL33-3	GL34-1	GL34-2	GL34-3	GL35-1	GL35-2	GL35-3	GL36-1	GL36-2	GL36-3	GL37	GL38	GL39-1	GL39-2	GL39-3
Water Elevation Date																					
2015 Well Elevation	440.359	438.993	438.692	438.682	440.448	440.516	440.518	440.061	439.982	440.15	438.955	439.043	439.264	440.148	440.135	440.080	440.248	440.228			
2015-03-17	437.991	437.803	437.994	438.042	438.11	438.121	438.117	437.935	438.382	438.395	438.17	438.739	438.734	438.099	438.390	438.460	437.888	437.880	-	-	-
2015-06-04	437.994	437.855	438.003	438.079	438.146	438.161	438.156	437.996	438.384	438.41	438.167	438.663	438.653	438.156	438.436	438.490	437.864	437.858	-	-	-
2015-08-27	437.818	437.633	437.756	437.787	437.848	437.862	437.856	437.683	437.84	437.855	437.023	437.575	437.734	438.030	438.236	438.292	437.527	437.521	-	-	-
2015-11-02	437.695	437.553	437.72	437.752	437.859	437.881	437.88	437.443	437.547	437.552	436.754	437.273	437.265	437.987	438.284	438.337	437.568	437.568	-	-	-
2016 Well Elevation	440.33	438.97	438.666	438.644	440.173	440.255	440.258	440.033	439.884	440.065	438.914	439.003	439.224	440.045	440.052	440.057	440.144	440.075			
2016-03-22	438.2	437.859	-	438.134	437.938	437.935	437.959	437.981	438.359	438.395	438.115	438.769	438.685	438.133	438.465	438.591	437.859	437.804	-	-	-
2016-05-16	438.031	437.885	-	438.094	438.155	438.173	438.163	437.991	438.282	438.32	438.013	438.591	438.578	438.190	438.517	438.584	437.882	437.876	-	-	-
2016-09-16	437.772	437.729	437.882	437.894	437.981	437.996	437.997	437.812	438.025	438.037	437.519	438.028	438.04	438.13	438.44	438.50	437.70	437.69	-	-	-
2016-11-24	437.87	437.75	437.964	437.989	438.045	438.06	438.054	437.833	438.192	438.205	437.95	438.638	438.625		438.487	438.529	437.745	437.800	-	-	-
2017 Well Elevation														439.861							
2017-03-21	438.308	438.04	-	-	438.334	438.345	438.343	438.161	438.585	438.597	438.289	438.958	438.936	438.096	438.603	438.666	438.152	438.143	-	-	-
2017-06-05	438.565	-	-	-	438.543	438.55	438.539	438.402	438.726	438.735			439.056	438.332	438.726	438.768	438.370	438.371	-	-	-
2017-08-16	438.278	-	-	-	438.275	438.286	438.284	438.205	438.412	438.426	438.029	438.542	438.542	438.183	438.554	438.558	438.054	438.043	-	-	-
2017-09-22	438.169	438	-	-	438.148	438.16	438.15	438.074	438.299	438.315	437.976	438.492	438.49	438.13	438.48	438.48	Decommisioned		-	-	-
2017-11-14	438.179	437.94	-	-	438.141	438.164	438.157	438.058	438.357	438.37	438.132	438.663	438.655	438.196	438.529	438.525			-	-	-
2018 Well Elevation																					
2018-03-16	438.478	-	-	-	438.568	438.579	438.574	438.361	438.715	438.726			438.871	438.346	438.877	438.792			-	-	-
2018-05-25	438.59	-	-	-	438.642	438.656	438.647	438.48	438.688	438.747				438.511	438.997	438.877	Decommisioned		-	-	-
2018-08-30	438.173	-	-	-	438.145	438.156	438.141	438.189	438.467	438.505	438.145		438.791	438.015	438.563	438.533			-	-	-
2018-11-16	438.315	-	-	-	438.235	438.243	438.236	438.275	438.612	438.622	438.315	438.883	438.864	438.259	438.621	438.598			-	-	-
2019 Well Elevation	440.325	439.018	438.693	438.718	440.034	440.141	440.181	440.014	439.735	440.045	438.934	439.026	439.245	439.797	440.039	440.043			440.410	440.460	440.560
2019-03-21	438.512	-	-	-	438.455	438.461	438.471	438.38	438.723	438.726				438.398	438.829	438.813			-	-	-
2019-06-06	438.317	-	-	-	438.315	438.332	438.332	438.195	438.466	438.466	438.255	438.637	438.635	438.382	438.718	438.691			-	-	-
2019-07-12	438.228	-	-	-	438.181	438.201	438.206	438.124	438.38	438.185	438.131	438.712	438.692	438.224	438.588	438.563	Decommisioned		-	-	-
2019-08-12	438.099	-	-	-	438.071	438.086	438.079	438.02	438.261	438.271	437.941	438.598		438.041	438.466	438.446			-	-	-
2019-08-13	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-			-	-	-
2019-10-28	438.005	437.198	-	-	Decommisioned			437.951	438.247	438.246	438.13	438.68	438.667	Decommisioned					-	-	-
2020 Well Elevation																					
2020-03-21	438.33	-	-	-				438.22	438.29	438.57	438.37	438.84	438.83						437.09	437.13	437.19
2020-06-04	438.33	-	-	-	Decommisioned			438.20	438.48	438.48	438.13	438.69	438.67	Decommisioned			Decommisioned		437.14	437.23	437.21
2020-09-15	-	437.93	438.04	-				438.04	438.36	438.35	438.18	438.83	438.82						437.43	437.51	437.63
2020-11-26	-	437.94	-	-				438.11	438.49	438.48	438.26	439.00	438.98						437.13	437.20	437.28
2021 Well Elevation																					
2021-03-29	Damaged	-	CNA	CNA				438.27	438.60	438.60	438.36	CNA	438.91						437.02	437.06	437.14
2021-06-15	Damaged	CNA	CNA	CNA				438.11	438.39	438.40	437.98	438.94	438.93						437.20	437.51	437.49
2021-09-29	Damaged	Decommissioned			Decommisioned			437.87	438.21	438.22	438.12	438.70	438.69	Decommisioned			Decommisioned		437.04	437.09	437.12
2021-10-26	Decommissioned							437.88	438.18	438.18	437.94	438.41	438.41						437.04	437.08	437.05
2022 Well Elevation (piezo)								440.001	439.719	440.021	438.902	438.979	439.206						440.353	440.385	440.521
2022-03-29								438.08	438.43	438.42	438.21	438.676	438.69						437.19	437.25	437.43
2022-06-24	Decommissioned				Decommisioned			438.08	438.38	438.38	438.17	438.84	438.84	Decommisioned			Decommisioned		437.15	437.19	437.23
2022-09-29								437.87	438.14	438.13	437.95	438.52	438.53						437.21	437.24	437.15
2022-10-27								437.86	438.17	438.16	438.04	438.60	438.61						437.07	437.12	437.15
2023 Well Elevation (piezo)								440.001	439.719	440.021	438.902	438.979	439.206						440.353	440.385	440.521
2023-03-29								437.98	438.32	438.32	438.16	438.559	438.58						436.89	436.93	437.83
2023-05-26	Decommissioned				Decommisioned			437.97	438.21	438.41	437.99	438.38	438.39	Decommisioned			Decommisioned		436.84	436.88	436.89
2023-09-26								-	437.99	437.98	437.90	438.33	438.34						436.95	436.96	436.93
2023-11-21								-	438.06	438.02	437.92	438.38	438.38						436.78	436.83	436.87
2024 Well Elevation (piezo)											438.902	438.979	439.206						440.353	440.385	440.521
2024-03-13											438.18	438.406	438.37						436.87	436.90	437.37
2024-06-06	ed				Decommisioned						438.04	438.38	438.41	Decommisioned			Decommisioned		436.94	437.03	436.88
2024-09-09											437.89	438.17	438.11						436.96	437.24	437.36
2024-11-19											437.95	438.32	438.33						436.94	436.97	437.11
2025 Well Elevation (piezo)											438.881	438.993	439.205						440.400	440.402	440.516
2025-03-24											438.058	438.435	438.441						437.052	437.035	438.412
2025-05-30	ed				Decommisioned						438.048	438.365	438.573	Decommisioned			Decommisioned		436.871	436.879	436.921
2025-09-10											437.742	438.1	438.109						436.948	436.942	436.792
2025-11-21											437.937	438.313	438.342						436.52	436.809	436.742

Table 2a: Monitoring Well Top of Pipe Elevations & Groundwater Elevations - 2015-2025

Well ID:	GL40-1	GL40-2	GL40-3	GL41-1	GL41-2	GL41-3	GL42-1	GL42-2	GL42-3	GL43-1	GL44-1	GL44-2	GL45-1	GL45-2	GL46-1
Water Elevation Date															
2015 Well Elevation															
2015-03-17	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2015-06-04	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2015-08-27	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2015-11-02	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2016 Well Elevation															
2016-03-22	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2016-05-16	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2016-09-16	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2016-11-24	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2017 Well Elevation															
2017-03-21	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2017-06-05	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2017-08-16	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2017-09-22	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2017-11-14	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2018 Well Elevation															
2018-03-16	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2018-05-25	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2018-08-30	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2018-11-16	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2019 Well Elevation	448.430	448.420	448.470	450.490	450.450	450.440	450.570	450.550	450.570						
2019-03-21	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2019-06-06	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2019-07-12	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2019-08-12	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2019-08-13	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2019-10-28	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2020 Well Elevation															
2020-03-21	-	443.50	443.55	448.39	448.33	448.36	440.04	439.79	-	-	-	-	-	-	-
2020-06-04	-	443.27	443.29	448.13	448.15	448.16	440.05	439.79	-	-	-	-	-	-	-
2020-09-15	-	443.08	443.12	447.76	447.65	447.66	449.37	440.16	-	-	-	-	-	-	-
2020-11-26	-	441.58	441.61	447.41	447.36	447.38	440.04	439.82	-	-	-	-	-	-	-
2021 Well Elevation															
2021-03-29		442.91	442.96	448.23	448.18	448.20	439.99	439.72	Dry	-	-	-	-	-	-
2021-06-15		440.62	440.58	447.91	447.86	447.87	439.96	439.74	Dry	-	-	-	-	-	-
2021-09-29	Dry	Decommissioned		447.86	447.80	447.82	439.90	439.71	Dry	-	-	-	-	-	-
2021-10-26				447.86	447.81	447.82	439.82	439.63	Dry	-	-	-	-	-	-
2022 Well Elevation (piezo)	450.489			450.574	450.571	450.588	448.406	448.407	448.435						
2022-03-29	445.35	Decommissioned		448.07	448.04	448.09	438.01	437.75	438.95	-	-	-	-	-	-
2022-06-24	Dry			448.18	448.15	448.20	Damaged	437.66	Dry	-	-	-	-	-	-
2022-09-29				448.06	448.04	448.09	-	437.64	-	-	-	-	-	-	-
2022-10-27				448.08	448.06	448.11	-	437.55	-	-	-	-	-	-	-
2023 Well Elevation (piezo)				450.574	450.571	450.588	448.406	448.407	448.435						
2023-03-29	Dry	Decommissioned		448.03	448.00	448.05	437.64	437.52	439.88	-	-	-	-	-	-
2023-05-26				448.01	447.98	448.03	437.59	437.40	439.57	-	-	-	-	-	-
2023-09-26				447.43	447.40	447.45	437.45	437.33	439.44	-	-	-	-	-	-
2023-11-21				446.99	446.94	446.99	437.40	437.27	439.03	Installed in 2024 by Valley Wide Drilling					
2024 Well Elevation (piezo)				450.574	450.571	450.588	448.406	448.407	448.435	447.2939	437.1994	437.2848	437.29	437.34	448.8197
2024-03-13	Dry	Decommissioned		447.89	447.87	447.91	437.41	437.31	439.26	-	-	-	-	-	-
2024-06-06				447.81	447.81	447.84	437.66	437.57	439.20	-	-	-	-	-	-
2024-09-09				447.65	447.66	447.71	437.67	437.56	439.87	443.8159	436.5914	436.6138	436.699	436.528	-
2024-11-19				446.35	447.60	447.64	437.68	437.34	439.65	443.91	436.38	436.42	436.45	436.39	437.59
2025 Well Elevation (piezo)				450.610	450.589	450.590	448.408	448.416	448.419	447.291	437.227	437.280	437.308	437.346	448.835
2025-03-24	Dry	Decommissioned		447.990	447.967	447.991	437.408	437.259	439.247	444.319	436.386	436.403	436.437	436.45	437.514
2025-05-30				447.88	447.863	447.878	437.541	437.397	439.467	444.296	436.34	436.293	436.506	436.335	437.586
2025-09-10				447.997	447.966	448.015	437.441	437.354	439.372	443.91	436.644	436.632	436.781	436.587	437.513
2025-11-21				447.891	447.862	447.886	437.352	437.246	439.098	444.015	436.366	436.378	436.452	436.312	437.424

Table 2b: Surface Water Elevations

LOCATION ID	BREDIN POND	NORTHEAST POND	SLOUGH	TUTT POND
Measurement date				
2015 Elevation	**439.211**	**444.22**	**439.249**	**440.72**
2015-03-17	438.701	443.53	437.859	438.58
2015-06-04	438.761	443.58	437.839	438.59
2015-06-16	438.721	NM	437.639	438.569
2015-07-29	438.651	NM	437.624	437.58
2015-08-27	438.651	443.15	437.519	NM
2015-09-18	438.651	NM	437.504	436.67
2015-10-21	438.681	NM	437.514	NM
2015-11-02	438.691	443.18	437.559	436.47
2015-12-11	438.701	NM	437.671	437.515
2016 Elevation	**NM**	**NM**	**NM**	**440.677**
2016-01-21	438.691	NM	437.729	438.237
2016-02-23	438.751	NM	437.869	438.547
2016-03-22	438.781	443.83	437.959	438.447
2016-04-26	438.651	NM	437.959	438.397
2016-05-16	438.691	NM	437.899	438.177
2016-05-20	NM	443.85	NM	NM
2016-06-22	438.691	NM	437.859	438.417
2016-07-12	438.691	NM	437.809	438.427
2016-08-19	438.701	NM	437.749	437.927
2016-09-16	438.551	443.28	437.689	437.337
2016-10-18	438.701	NM	437.739	436.987
2016-11-24	438.721	443.18	437.809	438.367
2016-12-16	438.781	NM	437.779	438.427
2017 Elevation	**NM**	**NM**	**NM**	**440.689**
2017-02-21	438.711	443.66	437.999	438.479
2017-03-21	438.721	446.53	438.149	NM
2017-04-18	438.811	443.48	438.309	438.689
2017-05-08	438.811	443.48	438.359	438.709
2017-06-05	438.901	443.28	438.399	438.839
2017-06-21	438.851	443.16	438.359	438.799
2017-07-17	438.651	443.1	438.219	438.909
2017-08-16	438.581	443.07	438.059	438.009
2017-09-22	438.501	446.03	437.899	438.129
2017-10-26	438.691	446.12	437.859	438.399
2017-11-14	438.711	443.17	437.899	438.659
2017-12-08	438.911	443.31	437.919	438.889
2018 Elevation	**439.171**	**444.216**	**439.238**	**440.719**
2018-03-16	438.871	443.866	438.419	438.847
2018-04-17	438.991	NM	438.669	438.914
2018-05-25	438.931	NM	438.519	438.529
2018-06-19	438.821	443.686	438.379	438.639
2018-07-13	438.761	442.426	438.248	438.787
2018-08-13	438.741	442.511	437.908	438.369
2018-08-30	438.721	442.326	437.739	438.499
2018-09-17	438.761	442.326	437.568	438.819
2018-10-11	438.821	442.996	437.668	438.879
2018-11-16	438.781	443.016	437.968	438.819
2018-12-12	438.771	443.076	438.118	438.799
2019 Elevation	**439.171**	**444.216**	**439.238**	**440.739**
2019-01-04	438.791	443.126	438.193	438.859
2019-03-21	438.761	443.174	438.278	438.819
2019-03-28	438.741	443.236	438.403	438.799
2019-04-08	NM	444.165	439.222	NM
2019-04-09	438.461	443.516	438.436	438.689
2019-05-02	438.671	443.806	438.348	438.649
2019-05-09	438.751	443.546	438.288	438.599
2019-05-29	438.601	442.506	438.198	438.474
2019-06-06	438.661	442.566	438.148	438.599
2019-07-05	438.681	442.646	437.918	438.409
2019-07-12	NM	442.694	437.883	438.266
2019-07-17	438.651	442.709	437.835	438.084
2019-07-26	NM	442.089	437.774	437.932
2019-08-01	NM	442.716	437.718	437.909
2019-08-09	438.321	442.381	437.641	438.19
2019-08-12	438.281	442.394	437.631	438.06
2019-08-21	438.081	442.384	437.549	437.981
2019-08-28	438.071	442.406	437.498	438.124
2019-09-04	NM	442.446	437.468	438.079
2019-09-17	NM	442.546	437.468	438.149
2019-09-27	NM	442.645	437.523	438.209
2019-10-19	NM	442.714	437.593	438.288
2019-10-28	NM	442.836	437.683	438.677
2019-11-08	438.681	442.894	437.666	438.739
2020 Elevations				**438.152**
2020-01-28	438.791	443.477	438.039	438.781
2020-02-12	438.801	NM	438.108	438.78
2020-03-21	NM	443.786	438.149	NM
2020-04-07	438.751	NM	438.183	NM
2020-05-20	438.791	NM	NM	NM
2020-06-04	438.741	NM	438.129	NM
2020-07-22	438.731	NM	437.899	NM
2020-08-12	438.841	NM	437.784	NM
2020-09-11	NM	NM	NM	438.512
2020-09-15	438.691	442.986	437.676	NM
2020-09-23	NM	NM	NM	438.282
2020-09-28	NM	NM	NM	438.152
2020-10-07	NM	NM	NM	438.152
2020-10-15	438.741	442.326	437.659	438.212
2020-11-06	NM	NM	NM	438.572
2020-11-12	NM	NM	NM	438.572
2020-11-19	NM	NM	NM	438.572
2020-11-26	438.701	442.745	437.717	438.572
2020-12-09	NM	NM	NM	438.572
2020-12-21	438.711	442.946	437.789	438.572
2021 Elevations	**439.166**	**444.165**	**439.219**	**437.707**
2021-01-14	438.656	443.065	437.849	438.572
2021-02-25	438.656	443.305	438.019	438.572
2021-03-29	438.646	443.505	438.155	438.572
2021-04-22	438.336	443.585	438.139	438.557
2021-05-17	438.646	443.055	438.089	438.357
2021-06-15	438.67	442.44	437.97	<437.707

Table 2b: Surface Water Elevations

LOCATION ID	BREDIN POND	NORTHEAST POND	SLOUGH	TUTT POND
Measurement date				
2021-07-12	438.636	442.405	437.789	438.167
2021-08-04	438.566	442.315	437.649	438.097
2021-09-29	438.556	442.43	437.508	438.647
2021-10-26	438.626	442.634	437.493	438.08
2021-11-08	438.486	442.755	437.519	438.137
2021-12-07	438.646	443.025	437.619	438.577
2022 Elevations	**439.146**	**444.166**	**439.192**	**437.688**
2022-01-11	438.636	443.26	437.572	438.558
2022-02-03	438.626	443.43	437.752	438.478
2022-03-09	438.636	NM	NM	438.428
2022-03-23	438.646	444.12	NM	438.428
2022-03-29	438.626	444.07	437.937	438.428
2022-04-20	438.626	444.07	437.971	438.438
2022-05-25	438.636	434.17	437.912	438.158
2022-06-24	438.646	443.46	437.862	438.308
2022-07-19	438.636	442.91	437.721	438.088
2022-08-25	438.636	442.58	437.491	438.438
2022-09-29	438.636	442.61	437.285	438.258
2022-10-27	438.526	442.73	437.236	438.398
2022-11-23	438.646	442.93	437.249	438.438
2022-12-12	438.636	443.01	437.286	438.438
2024 Elevations	**439.171**	**444.166**	**439.229**	**440.694**
2024-01-10	438.681	442.88	437.232	439.819
2024-02-16	438.671	443.09	437.669	439.844
2024-03-13	438.641	443.17	437.877	439.919
2024-04-18	438.721	442.55	437.850	439.914
2024-05-22	438.721	443.23	437.814	439.924
2024-06-19	438.651	443.22	437.777	439.944
2024-07-18	438.601	443.12	437.669	439.994
2024-08-19	438.551	442.98	437.585	440.114
2024-09-24	438.611	442.92	437.520	440.144
2024-10-28	438.661	442.97	437.501	440.034
2024-11-21	438.651	443.07	437.508	NM
2023-12-17	438.651	443.14	437.529	NM
2025 Elevations	**439.171**	**444.166**	**439.229**	**440.694**
2025-01-21	438.651	443.28	437.642	NM
2025-02-20	438.661	443.30	437.719	NM
2025-03-20	438.551	443.63	437.922	NM
2025-04-21	438.611	443.77	437.974	NM
2025-05-20	438.531	443.75	437.912	NM
2025-06-20	438.321	443.60	437.797	NM
2025-07-21	438.251	443.44	437.667	NM
2025-08-25	438.541	443.30	437.505	NM
2025-09-19	438.631	443.21	437.335	NM
2025-10-21	438.681	443.18	437.196	NM
2025-11-20	438.711	443.25	437.335	NM
2025-12-18	438.731	443.37	437.682	NM

NM not measured

Table 3 - Summary of Water Analytical Results - Groundwater 2025

LOCATION			BC CSR Standards			BC WQ Guidelines[a]		Upgradient: Spring								Upgradient: Fall						Footprint: Spring			
SAMPLE ID								GL 1-1	GL 1-2	GL 23-1	GL 24-1	GL 41-1	GL 41-2	GL 41-3	GL 43-1	GL 15-1	GL 15-2	GL 41-1	GL 41-2	GL 41-3	GL 43-1	GL 2-1	GL 2-2	GL 4-1	GL 4-2
SAMPLE DATE			AW	DW	P9	AW - LT	AW - ST	23 May 2025	23 May 2025	23 May 2025	23 May 2025	28 May 2025	28 May 2025	28 May 2025	23 May 2025	21 Aug 2025	16 Sep 2025	20 Aug 2025	20 Aug 2025	20 Aug 2025	21 Aug 2025	22 May 2025	21 May 2025	26 May 2025	26 May 2025
MATRIX								Water	Water	Water	Water	Water	Water	Water	Water	Water	Water	Water	Water	Water	Water	Water	Water	Water	Water
LAB ID								25E3308-01	25E3308-02	25E3308-03	25E3308-04	25E4018-02	25E4018-03	25E4018-04	25E3308-05	25H3114-02	25I2281-01	25H2860-01	25H2860-02	25H2860-03	25H3114-01	25E3100-01	25E3008-04	25E3424-01	25E3424-02
Parameter	**Unit**	**RL**	**Bold**	Underline	Shadow	*Italics*		**Analytical Results**																	
Calculations																									
Hardness, Dissolved (as CaCO3)	mg/L	0.125	-	-	-	-	-	688	832	1,360	855	354	388	401	1,600	412	2,280	345	388	364	1,210	603	638	620	729
General																									
Alkalinity (total) as CaCO3	mg/L	1	-	-	-	-	-	571	600	932	697	397	355	369	821	417	494	397	365	365	837	192	153	502	644
Alkalinity (P)	mg/L	1	-	-	-	-	-	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Alkalinity (Bicarbonate as CaCO3)	mg/L	1	-	-	-	-	-	571	600	932	697	397	355	369	821	417	494	397	365	365	837	192	153	502	644
Alkalinity (Carbonate as CaCO3)	mg/L	1	-	-	-	-	-	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Alkalinity (Hydroxide) as CaCO3	mg/L	1	-	-	-	-	-	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Ammonia as N	mg/L	0.05 - 5	1.31..18.5	-	-	0.102	0.681	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	0.07	0.083	*0.146*	<0.050
Carbon, Dissolved Organic	mg/L	0.5 - 5	-	-	-	-	-	3.02	3.08	10.5	3.92	3.43	2.5	2.26	15.4	1.68	5.41	3.56	2.32	2.77	17.5	1.54	2.04	2.43	3.78
Chemical Oxygen Demand	mg/L	20	-	-	-	-	-	<20	<20	34	<20	<20	<20	<20	55	<20	<20	<20	<20	<20	40	<20	<20	<20	<20
pH (Lab)	-	0.1	-	-	-	6.5-9	6.5-9	8.09	7.94	7.93	8.08	8.14	8.14	8.08	7.9	8.1	7.93	8.15	8.07	8.1	8.15	8	7.86	8.15	8.08
Phosphorus, Dissolved Reactive	mg/L	0.005 - 0.1	-	-	-	-	-	0.0057	0.0095	0.0051	0.104	0.37	0.145	0.0287	4.09	0.0201	0.0102	0.298	0.0355	0.0294	4.61	0.0054	<0.0050	0.0091	0.0202
Solids, Total Dissolved	mg/L	15 - 150	-	-	-	-	-	1,120	1,130	1,690	1,240	678	686	674	2,520	971	4,020	701	717	692	2,560	1,390	1,530	1,290	1,370
Anions																									
Bromide	mg/L	0.1 - 10	-	-	-	-	-	0.13	0.13	0.21	0.17	<0.10	<0.10	<0.10	<1.00	<1.00	<1.00	<0.10	<0.10	<0.10	<1.00	0.64	<2.50	<0.10	<0.10
Chloride	mg/L	0.1 - 50	1,500	250	-	150	600	108	101	23.3	74.7	101	113	123	40.9	18.6	165	99.9	105	98.9	46.4	95.9	131	20	28.1
Fluoride	mg/L	0.1 - 10	2..3	1.5	-	-	0.4..1.876	1.38	1.14	0.56	1.34	0.92	0.78	0.78	1.32	1.83	1.8	0.83	0.75	0.79	1.92	0.35	0.54	*1.89*	*2.72*
Nitrate (as N)	mg/L	0.01 - 1	400	10	-	3	32.8	0.164	0.213	1.05	0.392	1.84	1.88	1.74	44	<0.100	1.14	1.53	2	1.53	42.5	<0.010	<0.010	<0.010	<0.010
Nitrite (as N)	mg/L	0.01 - 1	0.2..2	1	-	0.02..0.2	0.06..0.6	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.100[b]	<0.010	<0.100[b]	<0.010	<0.010	<0.010	0.109	<0.010	0.015	<0.010	<0.010
Sulphate	mg/L	1 - 1000	1,280..4,290	500	-	128..429	-	232	223	475	307	77.2	75	75.3	980	350	1,840	78.6	92.9	76.7	1,170	*565*	*746*	*507*	421
Metals, dissolved																									
Aluminum	µg/L	1 - 5	-	9,500	230	2	-	4.2	1.5	<1.0	1.1	1.2	1.5	<1.0	8.7	1.8	1.1	<1.0	3.7	43.1	1.9	*28*	<1.0	<1.0	<1.0
Antimony	µg/L	0.05 - 0.25	90	6	2.7	74	250	0.126	0.06	<0.050	0.177	0.201	0.068	0.066	0.637	<0.050	<0.050	0.185	0.064	0.068	0.881	<0.20	<0.050	<0.050	<0.050
Arsenic	µg/L	0.05 - 0.5	50	10	13	5	5	0.545	0.451	0.466	1.45	1.85	0.909	0.967	15.9	0.336	0.497	1.65	0.902	1.01	16.1	1.31	2.28	2.55	0.434
Barium	µg/L	0.1 - 5	10,000	1,000	240	-	-	41.6	42	71.2	36.3	50.9	39.9	39.7	47.4	36.5	17.3	53.7	43.8	41.3	48.3	69	45.4	16.9	33.1
Beryllium	µg/L	0.01 - 0.1	1.5	8	1.3	-	-	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.10	<0.010	<0.010	<0.010
Bismuth	µg/L	0.01 - 0.1	-	-	-	-	-	<0.010	<0.010	0.015	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.10	<0.010	<0.010	<0.010
Boron	µg/L	2 - 50	12,000	5,000	880	1,200	-	38.9	43.5	30.9	123	27.2	20.2	22.2	79.5	11.5	14.8	22.5	18.4	18.9	93.5	<50.0	10.8	11.4	16
Cadmium	µg/L	0.002 - 0.134	0.5..4	5	0.33	-	0.038..2.801	0.0708	0.0216	0.0234	0.0435	0.123	0.0076	0.0123	0.105	0.141	1.06	0.155	0.0097	0.0159	0.117	0.022	<0.0080	<0.0120	<0.0200
Calcium	mg/L	0.05 - 0.25	-	-	-	-	-	63.4	64.7	103	50.2	33.5	42.2	39.6	97	41.2	310	33.5	42.8	38.2	92	135	134	55.3	45.2
Chromium (III+VI)	µg/L	0.5 - 2.5	10	50	19	-	-	<0.50	0.63	<0.50	1.4	1.54	1.8	1.93	<0.50	<0.50	1.48	1.5	2.35	2.16	<0.50	<0.50	<0.50	<0.50	<0.50
Cobalt	µg/L	0.005 - 0.1	40	1	16	0.39..0.9	110	0.126	0.084	0.467	0.247	0.0403	0.0266	0.0256	0.365	0.258	0.0669	0.0401	0.0381	0.122	0.422	<0.10	0.0258	0.0354	0.044
Copper	µg/L	0.1 - 0.5	20..90	1,500	32	0	1	0.72	0.8	1.16	0.97	1.9	0.64	0.61	5.47	0.15	1.17	1.34	0.63	0.82	6.54	*<0.40*	<0.10	<0.10	*0.48*
Iron	µg/L	2 - 10	-	6,500	12,000	-	350	<2.0	<2.0	<2.0	7.1	<2.0	<2.0	<2.0	9.3	4.8	<2.0	<2.0	<2.0	65.6	<2.0	196	*1,110*	*634*	2.6
Lead	µg/L	0.05 - 0.25	40..160	10	6.7	0.75..16.8	-	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	0.077	<0.050	<0.20	<0.050	<0.050	<0.050
Lithium	µg/L	0.05 - 0.25	-	8	96	-	-	40.2	55.5	46.4	38.5	32.6	26.7	30	32.4	17.8	52	28.3	26.3	25.4	33.4	13.6	13.5	31.6	23.4
Magnesium	µg/L	5 - 25	-	-	-	-	-	129,000	163,000	269,000	177,000	65,700	68,600	73,400	329,000	75,100	366,000	63,400	68,300	65,100	238,000	64,200	73,800	117,000	150,000
Manganese	µg/L	0.05 - 0.25	-	1,500	7,600	768..2,585	816..3,394	20.7	1.07	74.5	1.6	0.17	0.694	<0.050	182	103	0.939	1.22	2.92	6.22	342	161	186	78.3	7.68
Mercury	µg/L	0.01	0.25	1	0.57	0.01	-	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010
Molybdenum	µg/L	0.01 - 0.1	10,000	250	45	7600	46000	24.7	19	12	12.5	12	9.19	9.03	136	6.47	13.7	11.5	9.66	9.39	131	14.4	19.6	28.6	79.4
Nickel	µg/L	0.04 - 0.4	250..1,500	80	44	-	-	1.35	1.03	6.38	2.46	0.853	0.294	0.319	7.57	1.4	1.51	0.726	0.304	0.491	8.16	<0.40	0.122	0.303	1.01
Phosphorus	µg/L	10 - 50	-	-	-	5-15	5-15	<10	<10	<10	146	490	59	36	5,930	19	10	335	37	34	5,430	*<50*	*<10*	*21*	*18*
Potassium	µg/L	20 - 100	-	-	-	-	-	11,800	12,100	18,700	10,500	13,400	12,100	12,800	16,900	1,700	11,500	11,500	10,700	11,600	14,200	5,110	4,890	7,260	8,480
Selenium	µg/L	0.1 - 0.5	20	10	120	1	1	3.13	5.13	0.33	12.3	0.54	0.78	0.82	4.52	0.26	6.58	0.61	1.27	0.89	3.24	<0.50	<0.10	<0.10	0.2
Silicon	µg/L	100 - 1000	-	-	-	-	-	11,000	11,200	12,500	9,510	10,900	10,800	11,100	12,100	9,950	11,100	10,200	10,700	11,300	13,900	9,300	9,410	10,200	7,800
Silver	µg/L	0.01 - 0.05	0.5..15	20	0.98	0.12	-	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	0.013	<0.010	<0.010	<0.010	<0.010	<0.050	<0.010	<0.010	<0.010
Sodium	mg/L	0.02 - 0.1	-	-	1,600	-	-	165	149	211	221	166	127	147	458	192	527	151	119	128	441	150	213	199	216
Strontium	µg/L	0.1 - 1	-	2,500	47,000	-	-	2,890	2,900	4,920	2,140	1,340	1,600	1,550	3,720	4,760	8,310	1,400	1,710	1,690	3,400	4,330	3,940	2,490	2,500
Sulfur	µg/L	1000 - 5000	-	-	-	-	-	96,800	89,800	208,000	117,000	28,900	30,000	30,900	394,000	122,000	1,020,000	27,300	33,200	31,100	425,000	219,000	298,000	174,000	164,000
Tellurium	µg/L	0.05 - 0.5	-	-	-	-	-	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.50	<0.050	<0.050	<0.050
Thallium	µg/L	0.004 - 0.02	3	-	0.68	-	-	0.0057	<0.0040	<0.0040	0.0067	0.0081	<0.0040	<0.0040	0.0164	0.0062	0.0077	0.0126	<0.0040	<0.0040	0.018	<0.020	<0.0040	<0.0040	0.0057
Thorium	µg/L	0.01 - 0.1	-	-	-	-	-	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	0.021	<0.010	<0.10	<0.010	<0.010	<0.010
Tin	µg/L	0.1 - 0.5	-	2,500	-	-	-	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.20	<0.100	<0.100	<0.100
Titanium	µg/L	0.2 - 5	1,000	-	330	-	-	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	0.6	<0.20	<0.20	<0.20	<0.20	2.14	0.25	<5.0	<0.20	<0.20	<0.20
Tungsten	µg/L	0.2 - 1	-	3	-	-	-	0.35	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	2.23	<0.20	<0.20	<0.20	0.22	<1.0	<0.20	<0.20	<0.20
Uranium	µg/L	0.001 - 0.02	85	20	87	-	-	48	48.5	68.7	78.4	13.9	12.3	12.5	168	9.72	179	13.9	13.4	11.8	151	2.16	2.31	44.9	70.3
Vanadium	µg/L	1 - 5	-	20	30	-	-	<1.00	2.33	<1.00	2.47	2.68	2.06	1.74	15.6	1.43	1.08	2.34	1.81	1.87	14.5	<5.0	<1.00	<1.00	<1.00
Zinc	µg/L	1 - 5	75..2,400	3,000	29	1	5.6..167	<1.0	<1.0	<1.0	<1.0	1.9	<1.0	<1.0	<1.0	<1.0	3	2	<1.0	<1.0	<1.0	*<4.0*	*<1.0*	*<1.0*	*<1.0*
Zirconium	µg/L	0.02 - 0.1	-	-	-	-	-	0.079	0.049	0.31	0.334	0.066	0.023	<0.020	0.704	0.055	0.061	0.043	0.025	0.108	0.759	<0.10	<0.020	0.06	0.226

Notes:

Analytical Reports: 25C2620,25C2966,25C3571,25D0598,25E1808,25E3008,25E3100,25E3308,25E3424,25E4018,25F0108,25H2860, 25H3114, 25H3772, 25H3964, 25H4198, 25H4267, 25I0165, 25I1149,25I2281, 25J4101, 25J4396

CSR - Contaminated Sites Regulation, BC Reg. 375/96; O.C. 140/93, includes amendments up to October 27, 2025 by BC Reg. 171/2025

a. BC Water Quality Guidelines (Approved or Working); in this case the guidelines pply at wells in the vicinity of on-site surface water (GL4-1, GL4-2, GL2-1, GL2-2, GL20-1, GL35-1, GL35-2, GL35-3, GL16-1, GL8-1, and GL8-2) as per TG15 and the DOCP

b. laboratory detection limit exceeds the regulatory criteria

LT - Long-term chronic ST - Short-term acute

AW - criteria for the protection of freshwater aquatic ecosystem

DW - criteria for the protection of drinking water use

P9 - Protocol 9 For Contaminated Sites - Establishing Locatl Background Concentrations in Groundwater. Table 1. Regional estimated for local background concentrations in groundwater for inorganic substances - Thomspon Okanagan Region

DOCP: 2023 Design, Operations and Closure Plan

TG15 - Technical Guidance 15 Concentration Limits for the Protection of Aquatic Receiving Environments

Bold	Concentration > BC CSR AW Standard
Underline	Concentration > BC CSR DW Standard
Italics	Concentration > BCWQG AW-LT and/or AW-ST Guildine (at applicable wells only)
Shadow	Concentration > BC CSR P9 Concentration

If the concentration exceeds applicable AW/DW standards and/or AW guideline but is less than P9, the value is BLACK font, not red.

If the concentration exceeds P9 but is less than applicable AW/DW standards and/or AW guidelines, the value is BLACK font not red.

Table 3 - Summary of Water Analytical Results - Groundwater 2025

LOCATION			BC CSR Standards			BC WQ Guidelines[a]		Footprint: Spring						Footprint: Fall							Downgradient: Spring				
SAMPLE ID								GL 5-2	GL 16-1	GL 20-1	GL 27-1	GL 27-3	GL 35-3	GL 2-1	GL 2-2	GL 4-1	GL 4-2	GL 20-1	GL 27-1	GL 27-3	09BH06-D	GL 28-1	GL 28-2	GL 28-3	GL 29-1
SAMPLE DATE			AW	DW	P9	AW - LT	AW - ST	28 May 2025	13 May 2025	21 May 2025	13 May 2025	13 May 2025	22 May 2025	29 Aug 2025	09 Sep 2025	29 Aug 2025	29 Aug 2025	26 Aug 2025	27 Aug 2025	27 Aug 2025	02 Jun 2025	26 May 2025	26 May 2025	26 May 2025	13 May 2025
MATRIX								Water	Water	Water	Water	Water	Water	Water	Water	Water	Water	Water	Water	Water	Water	Water	Water	Water	Water
LAB ID								25E4018-01	25E1808-05	25E3008-03	25E1808-01	25E1808-02	25E3100-02	25H4267-01	25I1149-01	25H4267-02	25H4267-03	25H3772-04	25H3964-01	25H3964-02	25F0108-05	25E3424-03	25E3424-04	25E3424-05	25E1808-03
Parameter	**Unit**	**RL**	**Bold**	Underline	Shadow	*Italics*		**Analytical Results**																	
Calculations																									
Hardness, Dissolved (as CaCO3)	mg/L	0.125	-	-	-	-	-	647	628	382	92.9	5,970	1,950	687	612	658	727	424	109	6,530	506	1,870	2,180	2,790	818
General																									
Alkalinity (total) as CaCO3	mg/L	1	-	-	-	-	-	455	861	2,660	1,320	527	1,680	169	211	518	676	3,020	1,410	573	385	498	598	769	506
Alkalinity (P)	mg/L	1	-	-	-	-	-	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Alkalinity (Bicarbonate as CaCO3)	mg/L	1	-	-	-	-	-	455	861	2,660	1,320	527	1,680	169	211	518	676	3,020	1,410	573	385	498	598	769	506
Alkalinity (Carbonate as CaCO3)	mg/L	1	-	-	-	-	-	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Alkalinity (Hydroxide) as CaCO3	mg/L	1	-	-	-	-	-	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Ammonia as N	mg/L	0.05 - 5	1.31..18.5	-	-	0.102	0.681	<0.050	*0.368*	***7.3***	0.265	0.498	*1.74*	*0.122*	0.055	*0.156*	<0.050	***78.3***	0.229	0.641	0.134	0.103	<0.050	<0.050	0.242
Carbon, Dissolved Organic	mg/L	0.5 - 5	-	-	-	-	-	1.79	1.57	55.8	2.49	10.7	5.04	2.2	1.44	3.03	3.84	73.9	1.98	10.5	2.7	13.4	5.18	9.72	85.2
Chemical Oxygen Demand	mg/L	20	-	-	-	-	-	<20	<20	282	<20	250	<20	<20	<20	<20	21	236	<20	32	<20	31	<20	21	174
pH (Lab)	-	0.1	-	-	-	6.5-9	6.5-9	8.03	7.83	7.6	8.26	7.88	7.57	7.86	7.79	8.14	8.13	7.87	8	7.73	8.12	7.82	7.75	7.86	8.01
Phosphorus, Dissolved Reactive	mg/L	0.005 - 0.1	-	-	-	-	-	0.0068	0.0085	0.087	0.0382	<0.0050	<0.0050	<0.0050	0.0072	0.0069	0.018	0.166	0.0414	0.0064	0.0076	<0.0050	0.0084	0.0388	0.0482
Solids, Total Dissolved	mg/L	15 - 150	-	-	-	-	-	1,090	2,680	3,220	1,430	17,900	7,030	1,530	1,220	1,310	1,320	3,360	1,620	17,400	1,010	2,790	5,620	7,180	1,660
Anions																									
Bromide	mg/L	0.1 - 10	-	-	-	-	-	<0.10	<1.00	<0.10	<0.10	2.36	1.34	0.84	0.52	0.16	0.19	1.3	<0.10	<10.0	<1.00	<1.00	<1.00	<1.00	<0.10
Chloride	mg/L	0.1 - 50	1,500	250	-	150	600	132	118	*266*	36	*765*	*333*	131	98.6	21.5	32.4	*300*	37.7	*518*	12	99.5	42.8	67.3	80.5
Fluoride	mg/L	0.1 - 10	2..3	1.5	-	-	0.4..1.876	1.05	<1.00	0.34	***3.14***	<1.00	<1.00	0.58	0.28	*1.84*	*2.91*	0.55	***3.1***	***<10.0***	1.45	*2.05*	<1.00[b]	<1.00[b]	0.87
Nitrate (as N)	mg/L	0.01 - 1	400	10	-	3	32.8	<0.010	<0.100	0.053	<0.010	<0.100	<0.100	<0.010	<0.010	0.018	<0.010	<0.500	<0.010	<1.00	<0.100	<0.100	*13.1*	8.18	5.87
Nitrite (as N)	mg/L	0.01 - 1	0.2..2	1	-	0.02..0.2	0.06..0.6	<0.010	<0.100[b]	<0.010	<0.010	<0.100[b]	<0.100[b]	0.014	<0.010	<0.010	<0.010	0.015	<0.010	<1.00[b]	<0.100[b]	<0.100[b]	<0.100[b]	<0.100[b]	0.074
Sulphate	mg/L	1 - 1000	1,280..4,290	500	-	128..429	-	293	*1,260*	79.8	16.6	***11,800***	*3,310*	*746*	*546*	*538*	*476*	26.4	13.7	***11,500***	*535*	*1,740*	*3,010*	*4,240*	*563*
Metals, dissolved																									
Aluminum	µg/L	1 - 5	-	9,500	230	2	-	1.1	*<2.0*	*45.4*	1.6	<5.0	*2.1*	<1.0	1	*<2.0*	1	*47.3*	2	29.4	<1.0	<1.0	<1.0	<1.0	4.1
Antimony	µg/L	0.05 - 0.25	90	6	2.7	74	250	<0.050	<0.100	0.322	<0.050	<0.250	<0.100	<0.050	<0.050	<0.050	<0.050	0.35	<0.050	<0.250	<0.050	<0.050	<0.050	0.123	1.19
Arsenic	µg/L	0.05 - 0.5	50	10	13	5	5	0.431	*18.6*	*8.07*	6.48	5.87	0.19	1.06	0.898	2.61	0.44	*10.6*	7.89	7.59	2.7	1.64	0.365	0.743	2.83
Barium	µg/L	0.1 - 5	10,000	1,000	240	-	-	31.9	16.0	158	496	8.87	15.7	53.1	66.3	16.6	31.6	168	517	8.21	51.9	10.8	14	16.2	107
Beryllium	µg/L	0.01 - 0.1	1.5	8	1.3	-	-	<0.010	<0.020	0.034	0.056	<0.050	0.048	<0.010	<0.010	<0.010	<0.010	0.029	0.063	0.082	<0.010	0.011	<0.010	<0.010	0.044
Bismuth	µg/L	0.01 - 0.1	-	-	-	-	-	<0.010	<0.020	<0.020	<0.010	<0.050	<0.020	<0.010	<0.010	<0.010	<0.010	<0.020	0.013	0.094	<0.010	<0.010	<0.010	<0.010	<0.010
Boron	µg/L	2 - 50	12,000	5,000	880	1,200	-	29.7	70.4	*1,690*	70.6	45.6	80.2	11.3	12.2	13.9	19.2	*2,080*	75.9	43.7	10.4	16.7	19.6	6.7	484
Cadmium	µg/L	0.002 - 0.134	0.5..4	5	0.33	-	0.038..2.801	0.0184	0.0205	0.0056	<0.0040	<0.0400	<0.0040	<0.0120	0.0386	<0.0120	<0.0240	0.0098	<0.0040	0.091	<0.0040	0.0275	0.0643	0.0938	0.0828
Calcium	mg/L	0.05 - 0.25	-	-	-	-	-	75.6	75.800	49.1	14.3	433	200	153	122	50.5	43.9	46.6	15.2	424	80.5	244	428	385	180
Chromium (III+VI)	µg/L	0.5 - 2.5	10	50	19	-	-	<0.50	<1.00	**10.9**	<0.50	<2.50	<1.00	<0.50	<0.50	<0.50	<0.50	**13**	<0.50	<2.50	<0.50	<0.50	<0.50	<0.50	1.09
Cobalt	µg/L	0.005 - 0.1	40	1	16	0.39..0.9	110	0.0138	0.641	*7.9*	<0.0050	*1.35*	0.0134	0.0437	0.0278	0.0285	0.5	*10.2*	0.0051	*1.72*	0.214	0.916	0.297	0.0995	*11.1*
Copper	µg/L	0.1 - 0.5	20..90	1,500	32	0	1	0.29	<0.20	*0.58*	<0.10	<0.50	<0.20	<0.10	0.19	<0.10	0.14	*0.39*	<0.10	0.67	<0.10	0.38	0.77	1.26	36.8
Iron	µg/L	2 - 10	-	6,500	12,000	-	350	<2.0	*871*	*10,900*	525	2,860	*9,620*	*1,270*	25.5	*721*	96.1	*11,700*	846	3,690	532	1,240	<2.0	<2.0	56.3
Lead	µg/L	0.05 - 0.25	40..160	10	6.7	0.75..16.8	-	<0.050	<0.100	<0.100	<0.050	<0.250	<0.100	<0.050	<0.050	<0.050	<0.050	<0.100	<0.050	0.273	<0.050	<0.050	0.06	<0.050	0.052
Lithium	µg/L	0.05 - 0.25	-	8	96	-	-	*64.1*	*250*	*69.2*	*211*	*91.5*	*402*	*16.5*	*14.8*	*36.2*	*26.1*	*78.9*	*254*	*88.5*	*48.6*	*75.1*	*48.2*	*46.1*	*55.2*
Magnesium	µg/L	5 - 25	-	-	-	-	-	111,000	106,000	63,000	13,900	1,190,000	353,000	74,300	74,300	129,000	150,000	74,800	17,200	1,330,000	74,100	306,000	270,000	444,000	89,400
Manganese	µg/L	0.05 - 0.25	-	1,500	7,600	768..2,585	816..3,394	2.82	555	288	71	378	279	204	112	79.2	281	304	91.3	457	204	403	22.2	8.39	159
Mercury	µg/L	0.01	0.25	1	0.57	0.01	-	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	0.011	<0.010	<0.010	<0.010	<0.010
Molybdenum	µg/L	0.01 - 0.1	10,000	250	45	7600	46000	13	15.6	3.19	24.1	*65.8*	0.831	20.8	16.5	27.7	*79.4*	2.78	22.1	*65.1*	18.3	14.2	5.77	14.1	37.3
Nickel	µg/L	0.04 - 0.4	250..1,500	80	44	-	-	0.186	1.33	13.2	<0.040	2.95	0.324	0.072	0.215	0.271	1.73	13.7	<0.040	3.23	0.337	2.96	2.43	3.48	*51.8*
Phosphorus	µg/L	10 - 50	-	-	-	5-15	5-15	<10	*96*	*2,300*	75	63	*<20*	*<10*	*<10*	*22*	*25*	*2,640*	112	91	27	15	<10	50	68
Potassium	µg/L	20 - 100	-	-	-	-	-	9,290	18,400	106,000	14,400	29,400	34,400	5,390	4,380	7,770	8,250	120,000	14,400	27,100	5,340	10,900	14,300	12,300	27,900
Selenium	µg/L	0.1 - 0.5	20	10	120	1	1	0.11	<0.20	0.61	0.21	0.68	<0.20	<0.10	<0.10	<0.10	<0.10	0.47	<0.10	1.24	0.11	0.12	0.54	0.31	1.03
Silicon	µg/L	100 - 1000	-	-	-	-	-	10,100	5,950	13,600	6,140	10,900	23,700	9,460	8,330	11,300	8,060	15,500	6,790	11,000	11,000	11,400	12,800	11,700	11,800
Silver	µg/L	0.01 - 0.05	0.5..15	20	0.98	0.12	-	<0.010	<0.020	<0.020	<0.010	<0.050	<0.020	<0.010	<0.010	<0.010	<0.010	<0.020	<0.010	0.073	<0.010	<0.010	<0.010	<0.010	<0.010
Sodium	mg/L	0.02 - 0.1	-	-	1,600	-	-	201	775	1,200	654	3,670	1,700	210	151	216	221	1,300	739	3,750	183	379	779	1,150	250
Strontium	µg/L	0.1 - 1	-	2,500	47,000	-	-	3,790	15,700	1,220	3,230	12,300	8,380	4,620	4,230	2,360	2,470	1,090	3,330	11,100	2,010	6,630	8,980	8,750	3,110
Sulfur	µg/L	1000 - 5000	-	-	-	-	-	119,000	440,000	34,100	6,430	4,900,000	1,560,000	277,000	191,000	182,000	166,000	15,700	7,480	4,500,000	159,000	786,000	1,270,000	1,820,000	217,000
Tellurium	µg/L	0.05 - 0.5	-	-	-	-	-	<0.050	<0.100	<0.100	<0.050	<0.250	<0.100	<0.050	<0.050	<0.050	<0.050	<0.100	<0.050	<0.250	<0.050	<0.050	<0.050	<0.050	<0.050
Thallium	µg/L	0.004 - 0.02	3	-	0.68	-	-	0.004	0.0233	<0.0080	<0.0040	<0.0200	<0.0080	<0.0040	<0.0040	<0.0040	0.0104	<0.0080	<0.0040	0.0684	0.0077	0.0106	0.0113	0.0206	0.027
Thorium	µg/L	0.01 - 0.1	-	-	-	-	-	<0.010	<0.020	<0.020	<0.010	<0.050	<0.020	<0.010	<0.010	<0.010	<0.010	<0.020	<0.010	0.066	<0.010	<0.010	<0.010	<0.010	0.015
Tin	µg/L	0.1 - 0.5	-	2,500	-	-	-	<0.100	<0.200	2.31	<0.100	<0.500	<0.200	<0.100	<0.100	<0.100	<0.100	2.77	<0.100	<0.500	<0.100	<0.100	<0.100	<0.100	0.137
Titanium	µg/L	0.2 - 5	1,000	-	330	-	-	<0.20	<0.40	50.9	<0.20	<1.00	<0.40	<0.20	<0.20	<0.20	<0.20	58.5	0.21	<1.00	<0.20	<0.20	<0.20	<0.20	0.56
Tungsten	µg/L	0.2 - 1	-	3	-	-	-	<0.20	1.59	<0.40	1.5	<1.00	<0.40	<0.20	<0.20	<0.20	0.31	0.42	1.73	<1.00	<0.20	<0.20	<0.20	<0.20	1.3
Uranium	µg/L	0.001 - 0.02	85	20	87	-	-	*28.3*	6.42	4.76	0.302	*77.9*	9.92	2.68	2.96	*44.2*	*68.4*	1.32	0.325	*75.3*	14.6	***149***	***265***	***278***	*74*
Vanadium	µg/L	1 - 5	-	20	30	-	-	3.09	<2.00	13.3	<1.00	<5.00	<2.00	<1.00	<1.00	<1.00	<1.00	15.4	<1.00	<5.00	<1.00	<1.00	<1.00	1.14	2.41
Zinc	µg/L	1 - 5	75..2,400	3,000	29	1	5.6..167	<1.0	*<2.0*	*<2.0*	<1.0	<5.0	*<2.0*	*<1.0*	*<1.0*	*<1.0*	*<1.0*	*<2.0*	<1.0	<5.0	<1.0	1.2	<1.0	<1.0	2.9
Zirconium	µg/L	0.02 - 0.1	-	-	-	-	-	0.023	0.319	9.15	1.91	0.365	1.76	<0.020	<0.020	0.058	0.285	11	1.8	0.34	<0.020	0.141	0.057	0.559	2.41

Notes:

Analytical Reports: 25C2620,25C2966,25C3571,25D0598,25E1808,25E3008,25E3100,25E3308,25E3424,25E4018,25F0108,25H2860, 25H3114, 25H3772, 25H3964, 25H4198, 25H4267, 25I0165, 25I1149,25I2281, 25J4101, 25J4396

CSR - Contaminated Sites Regulation, BC Reg. 375/96; O.C. 140/93, includes amendments up to October 27, 2025 by BC Reg. 171/2025

a. BC Water Quality Guidelines (Approved or Working); in this case the guidelines pply at wells in the vicinity of on-site surface water (GL4-1, GL4-2, GL2-1, GL2-2, GL20-1, GL35-1, GL35-2, GL35-3, GL16-1, GL8-1, and GL8-2) as per TG15 and the DOCP

b. laboratory detection limit exceeds the regulatory criteria

LT - Long-term chronic ST - Short-term acute

AW - criteria for the protection of freshwater aquatic ecosystem

DW - criteria for the protection of drinking water use

P9 - Protocol 9 For Contaminated Sites - Establishing Locatl Background Concentrations in Groundwater. Table 1. Regional estimated for local background concentrations in groundwater for inorganic substances - Thomspon Okanagan Region

DOCP: 2023 Design, Operations and Closure Plan

TG15 - Technical Guidance 15 Concentration Limits for the Protection of Aquatic Receiving Environments

Bold	Concentration > BC CSR AW Standard
Underline	Concentration > BC CSR DW Standard
Italics	Concentration > BCWQG AW-LT and/or AW-ST Guildine (at applicable wells only)
Shadow	Concentration > BC CSR P9 Concentration

If the concentration exceeds applicable AW/DW standards and/or AW guideline but is less than P9, the value is BLACK font, not red.

If the concentration exceeds P9 but is less than applicable AW/DW standards and/or AW guidelines, the value is BLACK font not red.

Table 3 - Summary of Water Analytical Results - Groundwater 2025

LOCATION			BC CSR Standards			BC WQ Guidelines[a]		Downgradient: Spring									Downgradient: Fall							
SAMPLE ID								GL 29-2	GL 39-1	GL 39-2	GL 42-1	GL 42-2	GL 44-1	GL 44-2	GL 45-1	GL 45-2	GL 46-1	GL 28-1	GL 28-2	GL 28-3	GL 29-1	GL 29-2	GL 39-1	GL 39-2	GL 44-1
SAMPLE DATE			AW	DW	P9	AW - LT	AW - ST	13 May 2025	21 May 2025	21 May 2025	22 May 2025	22 May 2025	02 Jun 2025	02 Jun 2025	02 Jun 2025	02 Jun 2025	22 May 2025	02 Sep 2025	02 Sep 2025	02 Sep 2025	27 Aug 2025	27 Aug 2025	26 Aug 2025	26 Aug 2025	28 Aug 2025
MATRIX								Water	Water	Water	Water	Water	Water	Water	Water	Water	Water	Water	Water	Water	Water	Water	Water	Water	Water
LAB ID								25E1808-04	25E3008-01	25E3008-02	25E3100-03	25E3100-04	25F0108-01	25F0108-02	25F0108-03	25F0108-04	25E3100-05	25I0165-01	25I0165-02	25I0165-03	25H3964-03	25H3964-04	25H3772-01	25H3772-02	25H4198-01
Parameter	**Unit**	**RL**	**Bold**	Underline	Shadow	*Italics*		**Analytical Results**																	
Calculations																									
Hardness, Dissolved (as CaCO3)	mg/L	0.125	-	-	-	-	-	2,940	1,970	567	5,370	1,770	2,960	2,190	1,750	1,180	1,920	1,840	2,250	2,650	848	3,000	2,390	480	2,840
General																									
Alkalinity (total) as CaCO3	mg/L	1	-	-	-	-	-	295	595	294	693	840	675	583	1,840	802	1,530	521	627	796	532	317	628	297	703
Alkalinity (P)	mg/L	1	-	-	-	-	-	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Alkalinity (Bicarbonate as CaCO3)	mg/L	1	-	-	-	-	-	295	595	294	693	840	675	583	1,840	802	1,530	521	627	796	532	317	628	297	703
Alkalinity (Carbonate as CaCO3)	mg/L	1	-	-	-	-	-	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Alkalinity (Hydroxide) as CaCO3	mg/L	1	-	-	-	-	-	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Ammonia as N	mg/L	0.05 - 5	1.31..18.5	-	-	0.102	0.681	<0.050	<0.050	<0.050	0.102	<0.050	0.313	0.399	0.414	0.137	0.279	0.146	<0.050	<0.050	0.126	<0.050	<0.050	<0.050	0.321
Carbon, Dissolved Organic	mg/L	0.5 - 5	-	-	-	-	-	19.1	9.9	2.94	12.4	6.29	4.6	5.79	4.26	2.71	5.97	14	6.02	8.79	69.1	16.3	11.6	3.36	5.09
Chemical Oxygen Demand	mg/L	20	-	-	-	-	-	25	29	<20	45	28	<20	<20	<20	<20	<20	49	26	33	175	39	33	<20	<20
pH (Lab)	-	0.1	-	-	-	6.5-9	6.5-9	7.86	7.88	8.07	7.72	7.9	7.86	7.92	7.37	8.11	7.97	7.84	7.68	7.73	7.84	7.64	7.88	8.13	7.93
Phosphorus, Dissolved Reactive	mg/L	0.005 - 0.1	-	-	-	-	-	0.0205	<0.0050	0.0052	<0.0050	0.014	<0.0050	<0.0050	<0.0050	0.0131	0.983	<0.0050	0.006	0.0333	0.0454	0.0167	<0.0050	0.0053	<0.0050
Solids, Total Dissolved	mg/L	15 - 150	-	-	-	-	-	6,710	3,890	1,280	12,700	5,730	5,430	4,450	4,400	2,220	5,430	3,030	4,230	4,590	1,770	7,160	4,150	1,240	5,760
Anions																									
Bromide	mg/L	0.1 - 10	-	-	-	-	-	<1.00	<1.00	<0.10	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	0.22	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<0.10	<1.00
Chloride	mg/L	0.1 - 50	1,500	250	-	150	600	186	121	142	208	95.5	48.5	122	42.9	23.4	104	101	52.2	66.9	80.7	211	121	160	49.8
Fluoride	mg/L	0.1 - 10	2..3	1.5	-	-	0.4..1.876	1.5	1.32	0.55	<1.00	<1.00	2.27	1.28	1.32	1.17	0.99	1.38	<1.00	<1.00	1.08	2.13	1.48	<1.00	1.2
Nitrate (as N)	mg/L	0.01 - 1	400	10	-	3	32.8	<0.100	12.4	0.074	0.31	13	<0.100	<0.100	<0.100	<0.100	<0.010	<0.100	11.5	7.43	3.93	<0.100	9.65	<0.100	<0.100
Nitrite (as N)	mg/L	0.01 - 1	0.2..2	1	-	0.02..0.2	0.06..0.6	<0.100[b]	<0.100[b]	<0.010	<0.100[b]	<0.100[b]	<0.100[b]	<0.100[b]	<0.100[b]	<0.100[b]	0.016	<0.100[b]	<0.100[b]	<0.100[b]	**0.204**	<0.100[b]	<0.100[b]	<0.100[b]	<0.100[b]
Sulphate	mg/L	1 - 1000	1,280..4,290	500	-	128..429	-	4,280	1,800	482	**7,660**	2,930	3,700	3,350	2,170	1,190	2,350	2,130	3,550	**4,480**	609	4,280	1,920	386	3,140
Metals, dissolved																									
Aluminum	µg/L	1 - 5	-	9,500	230	2	-	<1.0	12.5	<1.0	<5.0	<1.0	2	1.7	<2.0	1.4	<1.0	2.4	3.4	<2.0	4.1	<2.0	2.6	1.1	8.7
Antimony	µg/L	0.05 - 0.25	90	6	2.7	74	250	0.121	<0.050	0.069	0.868	0.55	<0.050	<0.050	<0.100	<0.050	0.511	<0.050	<0.050	<0.100	1.12	0.109	<0.050	0.056	<0.050
Arsenic	µg/L	0.05 - 0.5	50	10	13	5	5	1.32	0.353	0.275	2.23	0.775	5.53	3.37	2.38	1.9	5.73	1.69	0.282	0.536	2.76	1.15	0.354	0.304	5.8
Barium	µg/L	0.1 - 5	10,000	1,000	240	-	-	23.7	9.78	20.6	14.5	19.7	39.2	18.2	61.5	31.7	131	10.8	12.7	15.4	111	21.9	10.2	18.7	26.3
Beryllium	µg/L	0.01 - 0.1	1.5	8	1.3	-	-	<0.010	<0.010	<0.010	<0.050	<0.010	<0.010	<0.010	0.036	<0.010	<0.010	<0.010	<0.010	<0.020	0.042	<0.020	<0.010	<0.010	0.011
Bismuth	µg/L	0.01 - 0.1	-	-	-	-	-	<0.010	<0.010	<0.010	<0.050	<0.010	<0.010	<0.010	<0.020	<0.010	<0.010	<0.010	<0.010	<0.020	<0.010	0.025	<0.010	<0.010	<0.010
Boron	µg/L	2 - 50	12,000	5,000	880	1,200	-	50.4	18.2	8.2	22	23.6	27.1	26.6	52.1	37.8	58.2	19.1	24.3	9.2	465	52.2	18.7	9.3	26.1
Cadmium	µg/L	0.002 - 0.134	0.5..4	5	0.33	-	0.038..2.801	0.111	0.0661	<0.0280	0.209	0.185	<0.0040	<0.0060	<0.0040	0.0231	<0.0060	<0.0120	0.0715	0.11	0.0924	0.0678	0.0656	0.0184	<0.0040
Calcium	mg/L	0.05 - 0.25	-	-	-	-	-	445	217	55	415	149	317	247	225	126	202	222	409	323	179	419	232	48.6	282
Chromium (III+VI)	µg/L	0.5 - 2.5	10	50	19	-	-	<0.50	<0.50	<0.50	<2.50	0.59	<0.50	<0.50	<1.00	<0.50	<0.50	<0.50	<0.50	<1.00	0.9	<1.00	<0.50	<0.50	<0.50
Cobalt	µg/L	0.005 - 0.1	40	1	16	0.39..0.9	110	0.24	0.175	0.115	1.71	0.0639	4.17	1.77	0.788	0.935	0.784	0.701	0.31	0.113	27	1.44	0.207	0.216	2.84
Copper	µg/L	0.1 - 0.5	20..90	1,500	32	0	1	1.32	3.1	0.71	2.38	1.43	<0.10	0.1	<0.20	0.14	0.44	<0.10	0.63	1.22	34.8	0.47	2.3	0.66	<0.10
Iron	µg/L	2 - 10	-	6,500	12,000	-	350	112	<2.0	<2.0	878	<2.0	2,490	2,740	19,400	611	31.2	1,260	3.4	<4.0	59.6	137	2.5	<2.0	2,140
Lead	µg/L	0.05 - 0.25	40..160	10	6.7	0.75..16.8	-	<0.050	<0.050	<0.050	<0.250	<0.050	<0.050	<0.050	<0.100	<0.050	<0.050	<0.050	<0.050	<0.100	<0.050	<0.100	<0.050	<0.050	<0.050
Lithium	µg/L	0.05 - 0.25	-	8	96	-	-	86.2	76.4	11.4	199	170	132	52.7	604	53.3	414	80.2	56.2	44.9	54.7	92.4	86.9	12.1	152
Magnesium	µg/L	5 - 25	-	-	-	-	-	444,000	347,000	104,000	1,050,000	339,000	525,000	381,000	289,000	211,000	343,000	311,000	299,000	447,000	97,500	473,000	440,000	87,100	519,000
Manganese	µg/L	0.05 - 0.25	-	1,500	7,600	768..2,585	816..3,394	168	20.1	16.3	118	1	1,590	1,300	1,480	414	191	374	23.7	35.1	410	783	27.9	27.8	952
Mercury	µg/L	0.01	0.25	1	0.57	0.01	-	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010
Molybdenum	µg/L	0.01 - 0.1	10,000	250	45	7600	46000	57.6	24.5	30.9	25.1	15.1	15	27.6	11.9	20.6	21.6	14.4	5.68	13.6	40.9	69	24.9	39.1	15.9
Nickel	µg/L	0.04 - 0.4	250..1,500	80	44	-	-	4.26	1.16	1.02	13.7	13	7.43	3.94	5.35	2.43	4.83	2.83	2.52	4.59	55.6	13.4	1.22	0.96	5.68
Phosphorus	µg/L	10 - 50	-	-	-	5-15	5-15	25	<10	<10	<50	10	29	18	34	17	1,450	15	<10	41	70	25	<10	<10	31
Potassium	µg/L	20 - 100	-	-	-	-	-	22,400	13,500	4,650	25,200	12,800	26,800	15,100	24,400	12,900	14,100	10,900	14,900	12,400	25,500	20,900	14,200	4,140	20,900
Selenium	µg/L	0.1 - 0.5	20	10	120	1	1	0.41	0.6	0.32	0.83	1.1	0.15	0.41	0.25	0.1	1.19	<0.10	0.5	0.24	1.11	0.21	0.49	0.13	<0.10
Silicon	µg/L	100 - 1000	-	-	-	-	-	9,880	11,600	7,970	7,590	8,610	15,400	11,300	23,700	11,900	9,410	11,500	13,700	11,700	11,200	9,150	12,400	7,930	15,900
Silver	µg/L	0.01 - 0.05	0.5..15	20	0.98	0.12	-	<0.010	0.01	<0.010	<0.050	<0.010	<0.010	<0.010	<0.020	<0.010	<0.010	<0.010	<0.010	<0.020	<0.010	<0.020	<0.010	<0.010	<0.010
Sodium	mg/L	0.02 - 0.1	-	-	1,600	-	-	1,050	491	212	1,680	1,170	869	749	959	482	1,010	394	898	1,200	253	1,010	520	176	747
Strontium	µg/L	0.1 - 1	-	2,500	47,000	-	-	7,940	6,140	1,250	12,700	7,910	9,140	5,360	6,830	2,670	5,880	6,210	8,430	7,890	3,410	7,490	5,940	1,110	8,360
Sulfur	µg/L	1000 - 5000	-	-	-	-	-	1,860,000	851,000	192,000	2,970,000	1,390,000	1,430,000	997,000	816,000	400,000	1,010,000	749,000	1,280,000	1,660,000	233,000	1,550,000	871,000	126,000	1,200,000
Tellurium	µg/L	0.05 - 0.5	-	-	-	-	-	<0.050	<0.050	<0.050	<0.250	<0.050	<0.050	<0.050	<0.100	<0.050	<0.050	<0.050	<0.050	<0.100	<0.050	<0.100	<0.050	<0.050	<0.050
Thallium	µg/L	0.004 - 0.02	3	-	0.68	-	-	0.0069	0.0288	0.0071	0.299	0.0761	0.0075	<0.0040	<0.0080	<0.0040	0.0341	0.0085	0.008	0.0229	0.0241	<0.0080	0.0255	0.0049	0.0069
Thorium	µg/L	0.01 - 0.1	-	-	-	-	-	<0.010	<0.010	<0.010	0.068	<0.010	<0.010	<0.010	<0.020	<0.010	<0.010	<0.010	0.013	<0.020	0.01	<0.020	<0.010	<0.010	<0.010
Tin	µg/L	0.1 - 0.5	-	2,500	-	-	-	<0.100	0.914	<0.100	<0.500	<0.100	<0.100	0.258	<0.200	<0.100	<0.100	<0.100	<0.100	<0.200	0.125	<0.200	<0.100	<0.100	0.108
Titanium	µg/L	0.2 - 5	1,000	-	330	-	-	<0.20	<0.20	<0.20	<1.00	<0.20	<0.20	<0.20	0.46	<0.20	0.69	<0.20	<0.20	<0.40	0.61	<0.40	<0.20	<0.20	0.33
Tungsten	µg/L	0.2 - 1	-	3	-	-	-	<0.20	<0.20	<0.20	<1.00	<0.20	<0.20	<0.20	<0.40	<0.20	0.72	<0.20	<0.20	<0.40	1.41	<0.40	<0.20	<0.20	<0.20
Uranium	µg/L	0.001 - 0.02	85	20	87	-	-	200	226	36.6	533	170	172	66.4	89.6	53.9	222	137	249	242	71.1	206	252	28.9	178
Vanadium	µg/L	1 - 5	-	20	30	-	-	<1.00	<1.00	<1.00	<5.00	<1.00	<1.00	<1.00	<2.00	<1.00	1.82	<1.00	<1.00	<2.00	2.29	<2.00	<1.00	<1.00	<1.00
Zinc	µg/L	1 - 5	75..2,400	3,000	29	1	5.6..167	3.7	<1.0	<1.0	<5.0	3.4	1.2	1.5	<2.0	<1.0	1.6	1.3	<1.0	<2.0	3.4	4	<1.0	<1.0	1.3
Zirconium	µg/L	0.02 - 0.1	-	-	-	-	-	0.055	0.056	<0.020	0.488	0.574	0.611	0.229	4.82	0.517	5.96	0.151	0.072	0.509	2.32	0.061	0.07	<0.020	0.536

Notes:

Analytical Reports: 25C2620,25C2966,25C3571,25D0598,25E1808,25E3008,25E3100,25E3308,25E3424,25E4018,25F0108,25H2860, 25H3114, 25H3772, 25H3964, 25H4198, 25H4267, 25I0165, 25I1149,25I2281, 25J4101, 25J4396

CSR - Contaminated Sites Regulation, BC Reg. 375/96; O.C. 140/93, includes amendments up to October 27, 2025 by BC Reg. 171/2025

a. BC Water Quality Guidelines (Approved or Working); in this case the guidelines pply at wells in the vicinity of on-site surface water (GL4-1, GL4-2, GL2-1, GL2-2, GL20-1, GL35-1, GL35-2, GL35-3, GL16-1, GL8-1, and GL8-2) as per TG15 and the DOCP

b. laboratory detection limit exceeds the regulatory criteria

LT - Long-term chronic ST - Short-term acute

AW - criteria for the protection of freshwater aquatic ecosystem

DW - criteria for the protection of drinking water use

P9 - Protocol 9 For Contaminated Sites - Establishing Locatl Background Concentrations in Groundwater. Table 1. Regional estimated for local background concentrations in groundwater for inorganic substances - Thomspon Okanagan Region

DOCP: 2023 Design, Operations and Closure Plan

TG15 - Technical Guidance 15 Concentration Limits for the Protection of Aquatic Receiving Environments

Bold	Concentration > BC CSR AW Standard
Underline	Concentration > BC CSR DW Standard
Italics	Concentration > BCWQG AW-LT and/or AW-ST Guildine (at applicable wells only)
Shadow	Concentration > BC CSR P9 Concentration

If the concentration exceeds applicable AW/DW standards and/or AW guideline but is less than P9, the value is BLACK font, not red.

If the concentration exceeds P9 but is less than applicable AW/DW standards and/or AW guidelines, the value is BLACK font not red.

Table 3 - Summary of Water Analytical Results - Groundwater 2025

LOCATION			BC CSR Standards			BC WQ Guidelines[a]		Downgradient: Fall			
SAMPLE ID								GL 44-2	GL 45-1	GL 45-2	GL 46-1
SAMPLE DATE			AW	DW	P9	AW - LT	AW - ST	28 Aug 2025	28 Aug 2025	28 Aug 2025	26 Aug 2025
MATRIX								Water	Water	Water	Water
LAB ID								25H4198-02	25H4198-03	25H4198-04	25H3772-03
Parameter	**Unit**	**RL**	**Bold**	Underline	Shadow	*Italics*					
Calculations											
Hardness, Dissolved (as CaCO3)	mg/L	0.125	-	-	-	-	-	2,300	2,150	1,160	1,300
General											
Alkalinity (total) as CaCO3	mg/L	1	-	-	-	-	-	624	1,280	837	2,050
Alkalinity (P)	mg/L	1	-	-	-	-	-	<1.0	<1.0	<1.0	<1.0
Alkalinity (Bicarbonate as CaCO3)	mg/L	1	-	-	-	-	-	624	1,280	837	2,050
Alkalinity (Carbonate as CaCO3)	mg/L	1	-	-	-	-	-	<1.0	<1.0	<1.0	<1.0
Alkalinity (Hydroxide) as CaCO3	mg/L	1	-	-	-	-	-	<1.0	<1.0	<1.0	<1.0
Ammonia as N	mg/L	0.05 - 5	1.31..18.5	-	-	0.102	0.681	0.405	0.479	0.209	0.475
Carbon, Dissolved Organic	mg/L	0.5 - 5	-	-	-	-	-	6.02	5.74	2.74	4.4
Chemical Oxygen Demand	mg/L	20	-	-	-	-	-	<20	<20	<20	<20
pH (Lab)	-	0.1	-	-	-	6.5-9	6.5-9	7.92	7.52	8.09	8.11
Phosphorus, Dissolved Reactive	mg/L	0.005 - 0.1	-	-	-	-	-	<0.0050	<0.0050	0.0057	0.169
Solids, Total Dissolved	mg/L	15 - 150	-	-	-	-	-	5,250	4,840	2,390	4,610
Anions											
Bromide	mg/L	0.1 - 10	-	-	-	-	-	<1.00	<1.00	<1.00	<1.00
Chloride	mg/L	0.1 - 50	1,500	250	-	150	600	100	42.1	20	65.5
Fluoride	mg/L	0.1 - 10	2..3	1.5	-	-	0.4..1.876	<1.00	1.32	<1.00	1.25
Nitrate (as N)	mg/L	0.01 - 1	400	10	-	3	32.8	<0.100	<0.100	<0.100	<0.100
Nitrite (as N)	mg/L	0.01 - 1	0.2..2	1	-	0.02..0.2	0.06..0.6	<0.100[b]	<0.100[b]	<0.100[b]	<0.100[b]
Sulphate	mg/L	1 - 1000	1,280..4,290	500	-	128..429	-	2,830	1,940	904	1,250
Metals, dissolved											
Aluminum	µg/L	1 - 5	-	9,500	230	2	-	<1.0	1.9	1.5	2.1
Antimony	µg/L	0.05 - 0.25	90	6	2.7	74	250	<0.050	<0.050	<0.050	0.127
Arsenic	µg/L	0.05 - 0.5	50	10	13	5	5	3.68	3.47	1.88	4.43
Barium	µg/L	0.1 - 5	10,000	1,000	240	-	-	17.1	34.3	29.9	183
Beryllium	µg/L	0.01 - 0.1	1.5	8	1.3	-	-	<0.010	0.035	<0.010	<0.020
Bismuth	µg/L	0.01 - 0.1	-	-	-	-	-	<0.010	<0.010	<0.010	<0.020
Boron	µg/L	2 - 50	12,000	5,000	880	1,200	-	28.5	40.4	33.3	82.6
Cadmium	µg/L	0.002 - 0.134	0.5..4	5	0.33	-	0.038..2.801	<0.0060	<0.0020	0.056	<0.0040
Calcium	mg/L	0.05 - 0.25	-	-	-	-	-	285	241	118	127
Chromium (III+VI)	µg/L	0.5 - 2.5	10	50	19	-	-	<0.50	<0.50	<0.50	<1.00
Cobalt	µg/L	0.005 - 0.1	40	1	16	0.39..0.9	110	2.06	0.877	0.997	1.12
Copper	µg/L	0.1 - 0.5	20..90	1,500	32	0	1	<0.10	<0.10	<0.10	<0.20
Iron	µg/L	2 - 10	-	6,500	12,000	-	350	3,800	15,000	845	751
Lead	µg/L	0.05 - 0.25	40..160	10	6.7	0.75..16.8	-	<0.050	<0.050	<0.050	<0.100
Lithium	µg/L	0.05 - 0.25	-	8	96	-	-	70.1	480	44.6	824
Magnesium	µg/L	5 - 25	-	-	-	-	-	385,000	376,000	209,000	237,000
Manganese	µg/L	0.05 - 0.25	-	1,500	7,600	768..2,585	816..3,394	1,410	1,020	580	346
Mercury	µg/L	0.01	0.25	1	0.57	0.01	-	<0.010	<0.010	<0.010	<0.010
Molybdenum	µg/L	0.01 - 0.1	10,000	250	45	7600	46000	25.9	17.3	20.6	6.37
Nickel	µg/L	0.04 - 0.4	250..1,500	80	44	-	-	4.44	4.89	3	2.62
Phosphorus	µg/L	10 - 50	-	-	-	5-15	5-15	18	25	21	368
Potassium	µg/L	20 - 100	-	-	-	-	-	14,500	21,000	11,200	12,300
Selenium	µg/L	0.1 - 0.5	20	10	120	1	1	0.12	0.13	<0.10	<0.20
Silicon	µg/L	100 - 1000	-	-	-	-	-	12,900	22,100	11,600	8,730
Silver	µg/L	0.01 - 0.05	0.5..15	20	0.98	0.12	-	<0.010	<0.010	<0.010	<0.020
Sodium	mg/L	0.02 - 0.1	-	-	1,600	-	-	776	883	417	1,240
Strontium	µg/L	0.1 - 1	-	2,500	47,000	-	-	5,870	6,390	2,640	4,710
Sulfur	µg/L	1000 - 5000	-	-	-	-	-	1,230,000	804,000	359,000	578,000
Tellurium	µg/L	0.05 - 0.5	-	-	-	-	-	<0.050	<0.050	<0.050	<0.100
Thallium	µg/L	0.004 - 0.02	3	-	0.68	-	-	<0.0040	<0.0040	<0.0040	<0.0080
Thorium	µg/L	0.01 - 0.1	-	-	-	-	-	<0.010	<0.010	<0.010	<0.020
Tin	µg/L	0.1 - 0.5	-	2,500	-	-	-	0.225	<0.100	<0.100	<0.200
Titanium	µg/L	0.2 - 5	1,000	-	330	-	-	<0.20	<0.20	<0.20	0.51
Tungsten	µg/L	0.2 - 1	-	3	-	-	-	<0.20	<0.20	<0.20	1.1
Uranium	µg/L	0.001 - 0.02	85	20	87	-	-	89.3	68.2	51.1	140
Vanadium	µg/L	1 - 5	-	20	30	-	-	<1.00	<1.00	<1.00	<2.00
Zinc	µg/L	1 - 5	75..2,400	3,000	29	1	5.6..167	1	<1.0	<1.0	<2.0
Zirconium	µg/L	0.02 - 0.1	-	-	-	-	-	0.343	2.73	0.523	7.18

Notes:
Analytical Reports: 25C2620,25C2966,25C3571,25D0598,25E1808,25E3008,25E3100,25E3308,25E3424,25E4018,25F0108,25H2860, 25H3114, 25H3772, 25H3964, 25H4198, 25H4267, 25I0165, 25I1149,25I2281, 25J4101, 25J4396

CSR - Contaminated Sites Regulation, BC Reg. 375/96; O.C. 140/93, includes amendments up to October 27, 2025 by BC Reg. 171/2025
a. BC Water Quality Guidelines (Approved or Working); in this case the guidelines pply at wells in the vicinity of on-site surface water (GL4-1, GL4-2, GL2-1, GL2-2, GL20-1, GL35-1, GL35-2, GL35-3, GL16-1, GL8-1, and GL8-2) as per TG15 and the DOCP
b. laboratory detection limit exceeds the regulatory criteria
LT - Long-term chronic ST - Short-term acute
AW - criteria for the protection of freshwater aquatic ecosystem
DW - criteria for the protection of drinking water use
P9 - Protocol 9 For Contaminated Sites - Establishing Locatl Background Concentrations in Groundwater. Table 1. Regional estimated for local background concentrations in groundwater for inorganic substances - Thomspon Okanagan Region
DOCP: 2023 Design, Operations and Closure Plan
TG15 - Technical Guidance 15 Concentration Limits for the Protection of Aquatic Receiving Environments

Bold	Concentration > BC CSR AW Standard
Underline	Concentration > BC CSR DW Standard
Italics	Concentration > BCWQG AW-LT and/or AW-ST Guildine (at applicable wells only)
Shadow	Concentration > BC CSR P9 Concentration

If the concentration exceeds applicable AW/DW standards and/or AW guideline but is less than P9, the value is BLACK font, not red.
If the concentration exceeds P9 but is less than applicable AW/DW standards and/or AW guidelines, the value is BLACK font not red.

Table 4: Summary of Water Analytical Results - Surface Water 2025

LOCATION ID			BC Water Quality Guidelines (WQG)				Site Specific Standard[a]	NE Pond				Bredin Pond				Tutt Pond				Slough				S.Storm Headwall 186437		Culvert 1002026		Little Robert Lake	
FIELD ID								NE Pond	NE Pond	NE Pond	NE Pond	Bredin Pond	Bredin Pond	Bredin Pond	Bredin Pond	Tutt Pond	Tutt Pond	Tutt Pond	Tutt Pond	Slough	Slough	Slough	Slough	S.Storm Headwall 186437	S Storm HW186437	Culvert 1002026	Culvert 1002026	Little Robert Lake	Little Robert Lake
DATE SAMPLED							95th Percentile	11 Mar 2025	15 May 2025	22 Sep 2025	05 Nov 2025	11 Mar 2025	15 May 2025	22 Sep 2025	05 Nov 2025	11 Mar 2025	15 May 2025	22 Sep 2025	05 Nov 2025	11 Mar 2025	15 May 2025	22 Sep 2025	05 Nov 2025	13 Mar 2025	17 Dec 2025	13 Mar 2025	17 Dec 2025	12 Mar 2025	16 May 2025
MATRIX								Water	Water	Water	Water	Water	Water	Water	Water	Water	Water	Water	Water	Water	Water	Water	Water	Water	Water	Water	Water	Water	Water
LAB ID			AWf - LT	AWf - ST	IW - LT	IW - ST		25C1300-01	25E2222-01	25I3095-01	25K0542-01	25C1300-02	25E2222-02	25I3095-02	25K0542-02	25C1300-03	25E2222-03	25I3095-03	25K0542-03	25C1300-04	25E2222-04	25I3095-04	25K0542-04	25C1660-01	25L2353-01	25C1660-02	25L2353-02	25C1509-02	25E2377-03
Parameter	Unit	RL	**Bold**	Underline	Shaded	Shadow	*Italics*																						
Calculations																													
Hardness (as CaCO3)	mg/L	0.125	-	-	-	-	-	553	884	1,000	1,020	519	502	550	493	709	785	792	791	662	1,060	1,360	1,010	159	136	186	191	1,730	1,930
Hardness, Diss (as CaCO3)	mg/L	0.125	-	-	-	-	-	541	912	1,090	1,060	517	518	507	505	715	810	852	853	681	1,020	1,220	986	144	103	162	134	1,750	1,920
Nitrite + Nitrate as N	mg/L	0.01	-	-	-	-	-	0.141	<0.100	<0.01	<0.100	0.625	<0.100	<0.01	0.213	0.259	<0.250	<0.01	<0.100	<0.100	<0.0100	<1	<0.100	1.61	0.553	2.01	2.15	<0.500	<0.100
Nitrogen (Total)	µg/L	50	-	-	-	-	-	1,150	1,220	2,920	1,640	1,400	641	3,030	1,160	1,880	1,020	1,400	1,560	10,500	12,200	53,100	33,400	4,270	2,240	4,970	5,830	2,280	2,180
General																													
Alkalinity (total) as CaCO3	mg/L	1	-	-	-	-	1213	440	712	943	971	463	450	491	496	504	547	628	634	939	*1,660*	*5,390*	*2,000*	92.6	120	105	148	635	724
Alkalinity (P)	mg/L	1	-	-	-	-	-	64.8	101	165	132	8.4	37.7	63.8	46.5	13	54.6	104	87.3	134	190	1,540	318	<1.0	<1.0	<1.0	<1.0	13	63.7
Alkalinity (Bicarbonate as	mg/L	1	-	-	-	-	-	311	509	613	708	446	375	364	403	478	438	420	460	670	1,280	2,310	1,360	92.6	120	105	148	609	597
Alkalinity (Carbonate as	mg/L	1	-	-	-	-	-	130	203	330	263	16.8	75.3	128	93	26	109	208	175	269	380	3,080	637	<1.0	<1.0	<1.0	<1.0	26	127
Alkalinity (Hydroxide) as	mg/L	1	-	-	-	-	-	<1.0	<1.0	<1	<1.0	<1.0	<1.0	<1	<1.0	<1.0	<1.0	<1	<1.0	<1.0	<1.0	<1	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Ammonia as N	mg/L	0.05	0.102	0.681	-	-	1.28	0.052	<0.050	0.066	<0.050	**0.233**	0.092	**0.23**	<0.050	**0.715**	**0.132**	0.063	**0.376**	0.26	2.01	0.73	4.71	**0.251**	<0.050	**0.143**	0.073	<0.050	0.089
Carbon, Total Organic	mg/L	0.5 - 5	-	-	-	-	-	11.2	14	24.7	20.6	5.49	5.58	9.36	7.84	9.44	10.6	15.8	12.6	69.6	118	487	262	12.6	14.2	16.4	16.9	21.3	23.2
Carbon, Dissolved Organic	mg/L	0.5 - 5	-	-	-	-	-	10.5	13.6	22.2	18.8	5.33	5.47	8.48	7.23	9.08	10.1	14	12.5	67	114	429	227	10.6	10.8	16.1	16.1	19.4	22.9
Chemical Oxygen Demand	mg/L	20	-	-	-	-	-	35	45	105	59	<20	<20	59	32	30	33	40	38	244	361	1,920	984	118	69	114	109	68	79
Conductivity (Lab)	µS/cm	2	-	-	-	-	-	1,580	2,400	2,860	2,890	1,420	1,380	1,420	1,410	2,110	2,430	2,670	2,550	4,970	7,960	27,300	9,390	1,040	453	1,090	615	5,450	5,740
Conductivity (Field)	µS/cm	1	-	-	-	-	8599.1	1,577	2,416	3,049	2,899	1,403	1,368	1,544	1,404	2,133	2,930	2,826	2,508	4,876	7,811	*29,750*	8,120	1,010	467.7	1,086	616.9	5,490	5,716
Nitrogen, Total Kjeldahl	mg/L	0.05 - 1	-	-	-	-	-	1.01	1.22	2.92	1.64	0.775	0.641	3.03	0.947	1.62	1.02	1.4	1.56	10.5	12.2	53.1	33.4	2.66	1.68	2.96	3.68	2.28	2.18
pH (Lab)	-	0.1	6.5-9	6.5-9	5-9.5	5-9.5	-	8.9	8.94	**9.11**	8.88	8.37	8.64	8.83	8.62	8.42	8.7	8.99	8.82	9.06	8.92	9.47	9.14	7.68	7.48	7.83	7.68	8.38	8.61
Phosphorus, Total (as P)	mg/L	0.005 - 0.1	-	-	-	-	0.2709	0.134	0.131	*0.377*	0.214	0.204	0.0976	0.217	0.184	*0.319*	0.21	*0.497*	*0.452*	*1.21*	*1.85*	*3.79*	*6.24*	*1.81*	*1.56*	*3.39*	*4.88*	*1.43*	*2.74*
Phosphorus, Dissolved	mg/L	0.005 - 0.025	-	-	-	-	-	0.0533	0.0736	0.0091	<0.0050	0.154	0.0695	<0.005	<0.0050	0.254	0.166	0.419	0.335	0.55	1.49	0.149	2.51	1.80	0.667	2.17	2.44	1.13	1.98
Solids, Total Dissolved	mg/L	15 - 150	-	-	-	-	-	1,020	1,630	2,160	2,060	826	818	892	885	1,390	1,510	1,910	1,550	3,170	5,900	24,700	7,180	593	412	-	541	4,310	4,900
Solids, Total Suspended	mg/L	1.8 - 18	-	-	-	-	-	-	7		13.8	-	2.8	-	4.4	-	5.6	-	3.8	-	31.3	-	87.8	-	188	-	33.6	-	24
Anions																													
Bromide	mg/L	0.1	-	-	-	-	-	<1.00	0.2	<0.1	<0.10	<1.00	0.13	0.13	<0.10	<1.00	0.31	0.11	<1.00	<1.00	<0.10	<10	1.41	0.25	<0.10	0.24	<0.10	<5.00	<1.00
Chloride	mg/L	1	150	600	100	100	1068	96.7	150	**208**	**238**	105	97	131	133	**172**	**197**	**246**	**175**	332	588	*2,270*	765	**212**	50.8	**179**	79.6	112	110
Fluoride	mg/L	0.1	-	0.4..1.876	1	2	1.053	<1.00	*1.24*	*1.31*	<1.00	<1.00	0.78	0.9	0.77	<1.00	0.75	0.82	<1.00	<1.00	0.44	<10[b]	<1.00	<0.10	0.13	<0.10	0.18	<5.00[b]	<1.00
Nitrate (as N)	mg/L	0.01	3	32.8	-	-	-	0.141	<0.100	<0.01	<0.100	0.625	<0.100	<0.01	0.213	0.259	<0.250	<0.01	<0.100	<0.100	<0.010	<1	<0.100	1.61	0.553	2.01	2.15	<0.500	<0.100
Nitrite (as N)	mg/L	0.01	0.02..0.2	0.06..0.6	-	-	-	<0.100	<0.010	<0.01	<0.100	<0.100	<0.010	<0.01	<0.010	<0.100	<0.010	<0.01	<0.100	<0.100	<0.010	<1	<0.100	<0.010	<0.010	<0.010	<0.010	<0.500[b]	<0.100
Sulphate	mg/L	1	128..429	-	-	-	1965	285	**430**	**556**	**553**	118	107	140	125	386	**474**	**609**	396	952	1,860	*8,340*	*2,030*	19	33.6	15.7	25.9	***2,540***	***2,420***
Microbiological																													
Coliforms, Fecal (Q-Tray)	MPN/100mL	1	-	-	-	-	-	7	2	68	25	46	56	162	10	14	15	66	2	138	56	3	259	306	1,040	173	248	5	161
Coliforms, Total (Q-Tray)	MPN/100mL	1	-	-	-	-	-	548	225	> 242000	1,730	579	365	1,550	185	117	23	1,410	387	742	51,700	7,220	17,800	14,000	18,700	13,300	54,800	115	2,420
Metals, Total																													
Aluminum	µg/L	2	1.85	-	-	5,000	87.97	***245***	**22.2**	**39.4**	***184***	**47.7**	**24.1**	**28.6**	**51.2**	***226***	**85**	**60**	**65.5**	*892*	*1,270*	61.5	*345*	***5,470***	***15,700***	***10,100***	***28,800***	***350***	***350***
Antimony	µg/L	0.05	74	250	-	-	-	0.167	0.256	0.389	0.267	0.084	0.092	0.105	0.088	0.143	0.191	0.346	0.304	3.5	4.77	25.6	10.9	0.730	0.654	0.863	0.742	0.367	0.464
Arsenic	µg/L	0.05	5	5	100	100	6.872	2.21	3.93	**5.47**	3.88	0.766	0.996	1.04	0.963	2.24	3	**6.62**	**5.34**	*22.5*	*40.2*	*158*	*66.1*	4.85	**6.59**	***8.56***	***14.4***	4.27	**5.09**
Barium	µg/L	0.1	-	-	-	-	-	43.1	16.3	31.2	106	85.8	88.8	104	91.4	67.1	60.3	70.5	68.4	37.4	15.2	19.4	58.2	84.3	164	99.8	243	50.1	54.8
Beryllium	µg/L	0.01	-	-	-	-	-	0.01	<0.010	<0.01	<0.010	<0.010	<0.010	<0.01	<0.010	0.011	<0.010	<0.01	<0.010	0.035	0.044	<0.1	<0.050	0.316	0.698	0.617	1.46	0.013	0.012
Bismuth	µg/L	0.01	-	-	-	-	-	<0.010	<0.010	<0.01	<0.010	<0.010	<0.010	<0.01	<0.010	<0.010	<0.010	<0.01	<0.010	0.026	0.024	<0.1	<0.050	0.124	0.226	0.213	0.397	<0.010	<0.010
Boron	µg/L	2	1,200	-	500	-	38.85	24.8	*42.3*	*74.3*	*68.8*	21.4	29.6	*40.3*	30.3	31.8	*42.7*	*46.8*	*44.6*	*304*	670	*2,360*	*779*	28.2	27.5	38	*55.6*	24.5	34.5
Cadmium	µg/L	0.002 - 0.012	0.018..0.457	0.038..2.801	-	-	-	<0.0120	<0.0060	<0.008	<0.0100	<0.0060	<0.0040	<0.0066	0.0127	0.0084	<0.0060	<0.008	0.0085	0.0334	0.0188	<0.02	0.0451	0.109	0.17	0.161	**0.284**	0.0079	<0.0080
Calcium	mg/L	0.05	-	-	-	-	-	22.9	26.5	18.9	18.8	43.5	43.7	24	31.2	50.5	58.8	43.3	44.6	24.9	38.2	10.7	41.8	45.7	34.2	50.3	44.5	173	222
Chromium (III+VI)	µg/L	0.5	-	-	-	-	2.5	<0.50	<0.50	<0.5	<0.50	<0.50	<0.50	<0.5	<0.50	0.52	<0.50	<0.5	<0.50	*2.84*	*3.1*	*<5*	*3.03*	*13.6*	*32.6*	*21.2*	*45.6*	0.66	0.76
Cobalt	µg/L	0.005	0.39..0.9	110	50	-	0.32575	*0.355*	0.249	0.172	0.298	0.0989	0.116	0.111	0.107	*0.443*	*0.519*	*0.336*	*0.368*	*1.49*	*1.69*	*0.885*	*1.45*	***3.36***	***7.75***	***5.95***	***13.6***	*0*	*0.722*
Copper	µg/L	0.2	0.2	0.9	-	200	-	**1.28**	**0.91**	**1.15**	**0.45**	**0.61**	**0.51**	**1.21**	**0.47**	**1.03**	**1.03**	**0.98**	**0.56**	5.73	4.36	<2	3.21	**16.2**	**27.6**	**25.7**	**48.6**	**1.12**	**1.16**
Iron	µg/L	2	-	1,000	-	-	112.8	*257*	28.8	59.1	*191*	69.4	32	40.9	45.6	*323*	96.2	82.8	92.4	*1,160*	*1,640*	101	*580*	*7,320*	*19,600*	*13,300*	*35,300*	*356*	*425*
Lead	µg/L	0.05	0.75..16.8	-	-	200	0.3812	0.146	0.055	0.106	0.133	0.066	0.053	<0.05	<0.050	0.144	0.071	0.087	0.081	*1.12*	*0.557*	<0.5	*0.465*	*4.43*	***10.1***	***7.77***	***17.6***	0.181	0.241
Lithium	µg/L	0.05	-	-	-	-	-	20.8	35.3	39.9	37.8	27.4	24.7	33.2	27	26.6	29	29.8	29.1	37.1	66.9	177	70.9	8.92	15.5	13.1	24.9	47.5	42.8
Magnesium	µg/L	5	-	-	-	-	-	120,000	199,000	232,000	237,000	99,500	95,400	119,000	101,000	141,000	155,000	166,000	165,000	146,000	233,000	323,000	220,000	10,900	12,300	14,700	19,400	316,000	333,000
Manganese	µg/L	0.05	768..2,585	816..3,394	-	-	-	80.3	33.9	98.9	35.9	19.8	27.8	52.1	8.43	60.5	37.9	58.4	42	60.5	60.2	18.6	74.2	169	439	327	833	960	1,820
Mercury	µg/L	0.01	0.01	-	-	2	0.005	<0.010	<0.010	<0.01	<0.010	<0.010	<0.010	<0.01	<0.010	<0.010	<0.010	<0.01	<0.010	<0.010	<0.010	<0.01	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010
Molybdenum	µg/L	0.01	7,600	46,000	10	50	15.91	15	*20.9*	*16.1*	*22.3*	10.6	12	11.5	13.9	10.5	11.7	9.48	10.3	15.8	*20.4*	*28.7*	10.6	6.39	8.52	8.29	11.1	7.13	9.95
Nickel	µg/L	0.04	-	-	-	-	-	2.09	2.31	2.15	2.54	0.707	0.758	0.657	0.797	2.11	2.66	2.1	2.08	6.94	12	17.2	9.24	9.97	23.7	17.9	42.2	1.79	2.28
Phosphorus	µg/L	10 - 70	5-15	5-15	-	-	-	**147**	**159**	**285**	**130**	**215**	**125**	**210**	<70	**341**	**279**	**553**	**451**	1,250	2,340	4,480	6,610	**1,810**	**1,680**	**3,230**	**4,620**	**1,570**	**2,790**
Potassium	µg/L	20	-	-	-	-	-	9,110	14,800	20,600	19,400	11,000	10,400	14,100	11,700	12,300	13,400	15,400	14,600	133,000	219,000	1,020,000	329,000	15,300	13,000	20,000	23,200	29,100	30,700
Selenium	µg/L	0.1	1	1	10	10	0.587	0.2	0.28	0.32	0.34	*0.82*	*0.85*	*0.92*	*0.91*	0.46	0.47	0.46	0.5	0.44	*0.69*	*1.4*	*0.74*	0.23	0.38	0.31	0.49	0.36	0.44
Silicon	µg/L	100	-	-	-	-	-	2,630	820	3,210	3,130	9,820	5,820	18,900	17,800	7,290	1,620	4,170	6,550	5,640	4,290	2,900	6,210	15,100	35,000	24,000	56,100	3,170	1,400
Silver	µg/L	0.01	0.12	-	-	-	-	<0.010	0.013	0.013	0.011	<0.010	0.011	<0.01	0.01	<0.010	0.01	0.011	0.014	0.028	0.023	<0.1	<0.050	0.068	**0.124**	0.115	**0.208**	<0.010	<0.010
Sulfur (As S)	µg/L	1,000	-	-	-	-	-	105,000	-	-	-	47,300	-	-	-	154,000	-	-	-	500,000	-	-	-	-	-	-	-	1,070,000	-
Sodium	mg/L	0.02	-	-	-	-	-	171	300	359	365	127	127	149	137	243	296	333	318	1,010	1,750	8,530	2,690	128	50.1	131	69.9	894	990
Strontium	µg/L	0.1	-	-	-	-	-	1,830	3,220	3,800	3,720	2,640	2,770	2,850	2,750	3,660	4,400	4,800	4,550	1,390	2,310	955	3,390	390	294	396	369	5,400	6,020
Sulfur	µg/L	1,000	-	-	-	-	-	-	197,000	203,000	204,000	-	47,100	51,400	47,100	-	216,000	211,000	195,000	-	877,000	3,660,000	1,150,000	7,600	11,500	7,800	9,900	-	1,160,000
Tellurium	µg/L	0.05	-	-	-	-	-	<0.050	<0.050	<0.05	<0.050	<0.050	<0.050	<0.05	<0.050	<0.050	<0.050	<0.05	<0.050	<0.050	<0.100	<0.5	<0.250	<0.050	<0.050	<0.050	0.053	<0.050	0.065
Thallium	µg/L	0.004	-	-	-	-	-	<0.0040	<0.0040	<0.004	0.0055	<0.0040	<0.0040	<0.004	<0.0040	<0.0040	<0.0040	<0.004	<0.0040	0.0114	<0.0080	<0.04	<0.0200	0.0793	0.175	0.153	0.354	0.0055	<0.0040
Thorium	µg/L	0.01	-	-	-	-	-	0.045	0.012	0.014	0.027	<0.010	<0.010	<0.01	<0.010	0.039	0.014	0.01	0.011	0.086	0.065	<0.1	<0.050	0.541	1.52	0.977	2.95	0.051	0.046
Tin	µg/L	0.1	-	-	-	-	-	<0.100	<0.100	<0.1	<0.100	<0.100	<0.100	<0.1	<0.100	<0.100	<0.100	<0.1	<0.100	0.534	0.5	3.27	1.05	0.277	0.561	0.366	0.469	<0.100	<0.100
Titanium	µg/L	0.2	-	-	-	-	-	12	1.24	2.87	10.3	2.58	1.13	1.41	2.52	12.2	4.43	3.51	3.77	44.4	52.5	3.36	19.1	197	551	319	833	18.5	19.8
Tungsten	µg/L	0.2	-	-	-	-	-	<0.20	0.22	<0.2	<0.20	<0.20	<0.20	<0.2	<0.20	0.2	0.27	0.31	0.31	1.58	3.08	12.6	5.09	0.57	0.45	0.58	0.33	<0.20	<0.20
Uranium	µg/L	0.001	-	-	-	-	54.965	20.2	31	26.6	31.9	18.8	20.3	16	19	24.1	29.3	23.8	22.3	35.8	41.4	*164*	*57.9*	1.20	1.72	1.5	2.06	44.3	47.4
Vanadium	µg/L	1	-	-	-	-	-	2.29	2.92	2.3	3.14	2.12	2.51	2.28	3.55	3.13	4.09	5.28	4.98	9.52	12	<10	8.11	14.8	34.2	24.5	54	3.07	4.18
Zinc	µg/L	1	0.829	5.6..341	1,000..5,000	-	4.59	**1.9**	<1.0	**2.1**	**1.2**	**2**	**1.2**	**1.1**	**1.1**	**1.7**	**1**	<1	**1.5**	*7.8*	*8.9*	<10	*19.3*	***72.1***	***116***	***115***	***200***	**2.3**	**2**
Zirconium	µg/L	0.02	-	-	-	-	-	0.532	0.276	0.288	0.699	0.124	0.082	0.056	0.108	0.484	0.535	0.333	0.346	3.09	6.58	10.2	3.38	2.59	4.95	3.97	11.8	0.858	0.675

Notes:
CARO Analytical Reports:
BC WQG - BC Water Quality Guidelines (Approved or Working)
AW - Standards/Guidelines for the protection of Aquatic Ecosystems (Freshwater)
IW - Standards/Guidelines for the protection of Irrigation water
LT - Long-term chronic (i.e., "average") WQG
ST - Short-term acture (i.e., "maximum") WQG
a. The site specific standard background concentration is the caculated 95th percentile using historical data for select parameters from upgradient/background locations Bubna Slough and Slough #2.
b. laboratory detection limit > guideline and/or standard

Bold	Concentration > BCWQG AWf (LT) Guildine
Underline	Concentration > BCWQG AWf (ST) Guildine
Shaded	Concentration > BCWQG IW (LT) Guildine
Shadow	Concentration > BCWQG IW (ST) Guildine
Italics	Concentration > Site Specific Standard

If the concentration exceeds applicable AWf and/or IW guidelines but is less than 95th Percentile, the value is BLACK font, not red.
If the concentration exceeds 95th percentile but is less than applicable AWf and IW guidelines, the value is BLACK font not red.

Table 4: Summary of Water Analytical Results - Surface Water 2025

LOCATION ID			BC Water Quality Guidelines (WQG)				Site Specific Standard[a]	Little Robert Lake		Robert Lake North			
FIELD ID								Little Roberts Lake	Little Robert Lake	Robert Lake North	Robert Lake North	Robert Lake North	Robert Lake North
DATE SAMPLED			AWf - LT	AWf - ST	IW - LT	IW - ST	95th Percentile	23 Sep 2025	06 Nov 2025	12 Mar 2025	16 May 2025	23 Sep 2025	06 Nov 2025
MATRIX								Water	Water	Water	Water	Water	Water
LAB ID								25I3232-03	25K0866-02	25C1509-03	25E2377-01	25I3232-01	25K0866-01
Parameter	Unit	RL	**Bold**	Underline	Shaded	Shadow	*Italics*						
Calculations													
Hardness (as CaCO3)	mg/L	0.125	-	-	-	-	-	2,450	2,030	1,660	2,030	2,690	2,370
Hardness, Diss (as CaCO3)	mg/L	0.125	-	-	-	-	-		1,850	1,440	2,010		2,560
Nitrite + Nitrate as N	mg/L	0.01	-	-	-	-	-	<1.00	0.295	<1.00	<0.100	<10.0	<2.00
Nitrogen (Total)	µg/L	50	-	-	-	-	-	2,610	4,340	6,320	10,100	19,600	17,400
General													
Alkalinity (total) as CaCO3	mg/L	1	-	-	-	-	1213	777	790	*1,290*	*1,720*	*2,180*	*2,250*
Alkalinity (P)	mg/L	1	-	-	-	-	-	102	62	238	276	540	536
Alkalinity (Bicarbonate as	mg/L	1	-	-	-	-	-	573	666	816	1,170	1,100	1,180
Alkalinity (Carbonate as	mg/L	1	-	-	-	-	-	204	124	475	552	1,080	1,070
Alkalinity (Hydroxide) as	mg/L	1	-	-	-	-	-	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Ammonia as N	mg/L	0.05	0.102	0.681	-	-	1.28	0.076	<0.050	0.06	0.083	<0.500	**0.107**
Carbon, Total Organic	mg/L	0.5 - 5	-	-	-	-	-	27.5	29.2	61.4	73.8	87.1	98.6
Carbon, Dissolved Organic	mg/L	0.5 - 5	-	-	-	-	-	26.5	25.4	52.5	67.3	80.9	85.4
Chemical Oxygen Demand	mg/L	20	-	-	-	-	-	81	111	219	273	329	479
Conductivity (Lab)	µS/cm	2	-	-	-	-	-	7,110	6,860	11,800	14,800	18,200	18,500
Conductivity (Field)	µS/cm	1	-	-	-	-	8599.1	7,660	6,644	5,983	*15,198*	*18,561*	*9,626*
Nitrogen, Total Kjeldahl	mg/L	0.05 - 1	-	-	-	-	-	2.61	4.05	6.32	10.1	19.6	17.4
pH (Lab)	-	0.1	6.5-9	6.5-9	5-9.5	5-9.5	-	8.8	8.52	**9.12**	**9.04**	**9.32**	**9.25**
Phosphorus, Total (as P)	mg/L	0.005 - 0.1	-	-	-	-	0.2709	*1.36*	*1.78*	*2.48*	*3.78*	*2.82*	*2.66*
Phosphorus, Dissolved	mg/L	0.005 - 0.025	-	-	-	-	-	1.19	1.12	1.55	1.52	0.573	0.758
Solids, Total Dissolved	mg/L	15 - 150	-	-	-	-	-	6,040	6,010	9,020	12,300	13,300	17,600
Solids, Total Suspended	mg/L	1.8 - 18	-	-	-	-	-	51.8	69.5	-	180	497	392
Anions													
Bromide	mg/L	0.1	-	-	-	-	-	<10.0	<1.00	<10.0	<1.00	<100	<20.0
Chloride	mg/L	1	150	600	100	100	1068	**158**	**158**	30.6	**216**	**560**	**384**
Fluoride	mg/L	0.1	-	0.4..1.876	1	2	1.053	<10.0[b]	0.44	<10.0[b]	<1.00	<100[b]	<20.0[b]
Nitrate (as N)	mg/L	0.01	3	32.8	-	-	-	<1.00	0.295	<1.00	<0.100	<10.0[b]	<2.00
Nitrite (as N)	mg/L	0.01	0.02..0.2	0.06..0.6	-	-	-	<1.00[b]	<0.100	<1.00[b]	<0.100	<10.0[b]	<2.00[b]
Sulphate	mg/L	1	128..429	-	-	-	1965	***3,440***	***3,210***	**522**	***4,100***	***12,300***	***8,100***
Microbiological													
Coliforms, Fecal (Q-Tray)	MPN/100mL	1	-	-	-	-	-	317	579	26	727	2,560	408
Coliforms, Total (Q-Tray)	MPN/100mL	1	-	-	-	-	-	98,000	10,800	976	> 242000	> 242000	242,000
Metals, Total													
Aluminum	µg/L	2	1.85	-	-	5,000	87.97	***325***	***289***	***1,090***	***2,050***	***5,040***	***3,240***
Antimony	µg/L	0.05	74	250	-	-	-	0.735	0.515	0.373	0.549	0.824	0.832
Arsenic	µg/L	0.05	5	5	100	100	6.872	***8.5***	**5.5**	**6.65**	***10.9***	***13.7***	***14.4***
Barium	µg/L	0.1	-	-	-	-	-	72.6	54.7	44	70.4	117	93.4
Beryllium	µg/L	0.01	-	-	-	-	-	<0.020	<0.020	<0.050	0.075	0.174	0.106
Bismuth	µg/L	0.01	-	-	-	-	-	<0.020	<0.020	<0.050	<0.050	0.11	0.083
Boron	µg/L	2	1,200	-	500	-	38.85	27.4	26.6	*43.5*	*75.2*	*77.7*	*80*
Cadmium	µg/L	0.002 - 0.012	0.018..0.457	0.038..2.801	-	-	-	<0.0120	0.0093	<0.0500	<0.0800	0.129	0.105
Calcium	mg/L	0.05	-	-	-	-	-	172	157	26.3	51.1	45.7	29.5
Chromium (III+VI)	µg/L	0.5	-	-	-	-	2.5	<1.00	<1.00	<2.50	*3.68*	*7.69*	*5.5*
Cobalt	µg/L	0.005	0.39..0.9	110	50	-	0.32575	*0.45*	*0.493*	*1.21*	*1.82*	*3.01*	*2.43*
Copper	µg/L	0.2	0.2	0.9	-	200	-	**0.79**	**0.87**	**3.49**	**4.76**	**8.51**	**7.39**
Iron	µg/L	2	-	1,000	-	-	112.8	*361*	*321*	*1,210*	*2,340*	*5,010*	*3,770*
Lead	µg/L	0.05	0.75..16.8	-	-	200	0.3812	0.23	0.153	*0.962*	*1.48*	*3.45*	*2.45*
Lithium	µg/L	0.05	-	-	-	-	-	57.5	60.3	22	30.5	43.7	32.7
Magnesium	µg/L	5	-	-	-	-	-	490,000	397,000	387,000	462,000	626,000	557,000
Manganese	µg/L	0.05	768..2,585	816..3,394	-	-	-	188	362	168	271	252	208
Mercury	µg/L	0.01	0.01	-	-	2	0.005	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010
Molybdenum	µg/L	0.01	7,600	46,000	10	50	15.91	11.1	10.5	*72.5*	*93.1*	*94.8*	*107*
Nickel	µg/L	0.04	-	-	-	-	-	1.89	1.75	4.86	7.56	9.75	9.14
Phosphorus	µg/L	10 - 70	5-15	5-15	-	-	-	**1,750**	**1,680**	**2,390**	**3,640**	**3,110**	**2,750**
Potassium	µg/L	20	-	-	-	-	-	46,500	36,100	60,000	84,700	124,000	114,000
Selenium	µg/L	0.1	1	1	10	10	0.587	0.34	0.38	***1.03***	***1.56***	***1.67***	***2.87***
Silicon	µg/L	100	-	-	-	-	-	6,970	9,530	4,720	9,120	19,500	14,400
Silver	µg/L	0.01	0.12	-	-	-	-	<0.020	<0.020	<0.050	<0.050	<0.050	0.057
Sulfur (As S)	µg/L	1,000	-	-	-	-	-	-	-	1,880,000	-	-	-
Sodium	mg/L	0.02	-	-	-	-	-	1,440	946	2,970	3,880	5,210	3,840
Strontium	µg/L	0.1	-	-	-	-	-	7,570	7,160	3,890	5,590	6,740	6,500
Sulfur	µg/L	1,000	-	-	-	-	-	1,530,000	1,200,000	-	3,150,000	3,710,000	3,470,000
Tellurium	µg/L	0.05	-	-	-	-	-	<0.100	<0.100	<0.250	<0.250	<0.250	<0.250
Thallium	µg/L	0.004	-	-	-	-	-	<0.0080	<0.0080	<0.0200	<0.0200	0.0455	0.0487
Thorium	µg/L	0.01	-	-	-	-	-	0.054	0.04	0.164	0.248	0.622	0.384
Tin	µg/L	0.1	-	-	-	-	-	<0.200	<0.200	<0.500	<0.500	<0.500	<0.500
Titanium	µg/L	0.2	-	-	-	-	-	17.4	13.9	60.4	119	259	176
Tungsten	µg/L	0.2	-	-	-	-	-	<0.40	<0.40	1.31	1.87	1.85	2.02
Uranium	µg/L	0.001	-	-	-	-	54.965	32.6	47.1	*110*	*125*	*169*	*177*
Vanadium	µg/L	1	-	-	-	-	-	3.78	3.58	5.32	5.77	11.4	9.48
Zinc	µg/L	1	0.829	5.6..341	1,000..5,000	-	4.59	**2.2**	**2.1**	***6.2***	***11.1***	***27.4***	***18.8***
Zirconium	µg/L	0.02	-	-	-	-	-	0.515	0.583	3.56	5.49	3.55	3.11

Notes:
CARO Analytical Reports:
BC WQG - BC Water Quality Guidelines (Approved or Working)
AW - Standards/Guidelines for the protection of Aquatic Ecosystems (Freshwater)
IW - Standards/Guidelines for the protection of Irrigation water
LT - Long-term chronic (i.e., "average") WQG
ST - Short-term acture (i.e., "maximum") WQG
a. The site specific standard background concentration is the caculated 95th percentile using historical data for select parameters from upgradient/background locations Bubna Slough and Slough #2.
b. laboratory detection limit > guideline and/or standard

Bold	Concentration > BCWQG AWf (LT) Guildine
Underline	Concentration > BCWQG AWf (ST) Guildine
Shaded	Concentration > BCWQG IW (LT) Guildine
Shadow	Concentration > BCWQG IW (ST) Guildine
Italics	Concentration > Site Specific Standard

If the concentration exceeds applicable AWf and/or IW guidelines but is less than 95th Percentile, the value is BLACK for
If the concentration exceeds 95th percentile but is less than applicable AWf and IW guidelines, the value is BLACK font n

Table 5: Summary of Water Analytical Results - Leachate 2025

QUARTER			Q1				Q2				Q3		
FIELD ID			N Pumphouse MH	P1 Leachate MH - 2	P2 A2 Leachate MH	South Leachate Wet Well (LS#2)	N Pumphouse MH	P1 Leachate MH - 2	P2 A2 Leachate MH	South Leachate Wet Well (LS#2)	Area 3 ((LS #4)	N Pumphouse MH	P1 Leachate MH - 2
DATE SAMPLED			28 Mar 2025	28 Mar 2025	28 Mar 2025	28 Mar 2025	04 Jun 2025	04 Jun 2025	04 Jun 2025	04 Jun 2025	15 Sep 2025	15 Sep 2025	15 Sep 2025
MATRIX			Water	Water	Water	Water	Water	Water	Water	Water	Water	Water	Water
LAB ID			25C3485-02	25C3485-04	25C3485-03	25C3485-01	25F0833-02	25F0833-04	25F0833-03	25F0833-01	25I2111-05	25I2111-02	25I2111-04
Parameter	**Unit**	**RL**	**Analytical Results**										
Hardness, Dissolved (as CaCO3)	mg/L	0.125	1,520	1,780	2,120	2,050	1,150	2,360	2,350	1,680	5,700	1,420	2,230
Alkalinity (total) as CaCO3	mg/L	1.0	3,080	3,950	3,640	4,150	1,490	5,730	3,970	4,130	5,240	4,860	6,430
Alkalinity (P)	mg/L	1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Alkalinity (Bicarbonate as CaCO3)	mg/L	1.0	3,080	3,950	3,640	4,150	1,490	5,730	3,970	4,130	5,240	4,860	6,430
Alkalinity (Carbonate as CaCO3)	mg/L	1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Alkalinity (Hydroxide) as CaCO3	mg/L	1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Ammonia as N	mg/L	0.050	96.8	490	195	173	34.3	665	271	115	398	83	854
Biochemical Oxygen Demand	mg/L	8.0	23.8	613	72	36.3	18.2	154	40.8	27	> 4200	216	62
Carbon, Total Organic	mg/L	0.50	-	-	-	-	-	-	-	-	-	-	-
Carbon, Dissolved Organic	mg/L	0.50	95	373	227	134	58.3	249	164	116	4,860	151	382
Chemical Oxygen Demand	mg/L	20	361	1,380	756	612	202	1,110	722	589	15,900	661	1,200
Conductivity (Lab)	µS/cm	2.0	7,990	9,050	10,100	11,100	4,490	12,400	10,800	10,300	11,500	11,600	13,500
Kjeldahl Nitrogen Total	mg/L	0.050	-	-	-	-	-	-	-	-	-	-	-
pH (Lab)	-	0.10	7.91	7.61	8.06	7.8	7.88	7.55	7.75	7.98	7.24	8.09	7.69
Phosphorus, Total (as P)	mg/L	0.0050	2.82	8.36	0.966	4.52	1.26	10.6	2.02	3.73	19.8	4.65	12
Phosphorus, Dissolved Reactive	mg/L	0.0050	2.16	4.75	0.157	3.04	0.746	2.69	0.0682	2.7	0.0175	4.42	9.55
Solids, Total Dissolved	mg/L	15	5,660	4,300	6,170	8,260	2,810	6,130	6,530	8,210	11,600	7,780	6,110
Sulfide, Total	mg/L	0.020	11.2	6.93	0.04	2.57	1.03	7.07	0.024	25.8	9.23	99	3.58
Anions													
Bromide	mg/L	0.10	2.69	3.17	4.35	4.08	<1.00	<1.00	<1.00	<1.00	89.3	3.45	2.67
Chloride	mg/L	0.10	368	549	1,060	547	338	834	1,320	589	735	602	1,150
Fluoride	mg/L	0.10	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00
Nitrate (as N)	mg/L	0.010	17.5	<0.100	1.08	169	0.144	0.121	0.664	56.3	<0.100	<0.100	<0.100
Nitrite (as N)	mg/L	0.010	<0.100	<0.100	0.527	0.381	<0.100	<0.100	<0.100	<0.100	1.49	<0.100	<0.100
Sulphate	mg/L	1.0	1,050	84.6	219	1,090	510	19.4	173	1,200	<10.0	1,270	10.9
Hydrocarbons													
VH (C6-C10)	µg/L	100	<100	481	174	101	188	673	200	115	2,450	<1,000	4,820
VPH (VH C6-C10 - BTEXS)	µg/L	100	<100	430	174	<100	177	620	200	<100	2,200	<1,000	4,500
EPH C10-C19	µg/L	250	429	1,290	947	509	538	2,280	1,090	483	2,200	<250	801
EPH C19-C32	µg/L	250	<250	1,030	867	<250	634	5,720	971	271	389	280	637
LEPH	µg/L	250	426	1,290	947	504	537	2,280	1,090	479	2,200	<250	800
HEPH	µg/L	250	<250	1,030	867	<250	634	5,720	971	271	389	279	637
Benzene	µg/L	0.5	2.7	1.4	<0.5	2.7	1.1	1.5	<0.5	3.6	0.6	<5.0	12.3
Toluene	µg/L	1.0	<1.0	26.8	<1.0	<1.0	1.9	18.8	<1.0	<1.0	234	<10.0	116
Ethylbenzene	µg/L	1.0	8.5	6.8	<1.0	7.3	4.5	11.1	<1.0	18	2.8	33.7	60
Xylene Total	µg/L	2.0	3.2	15.9	<2.0	6.3	3.8	19.1	<2.0	18	11.9	30.4	130
Styrene	µg/L	1.0	<1.0	<1.0	<1.0	<1.0	<1.0	2.7	<1.0	<1.0	<1.0	<10.0	<11.0
MTBE	µg/L	1.0	<1.0	3	4.2	<1.0	<1.0	3.1	5.4	<1.0	<2.3	<10.0	<21.3
Metals, Dissolved													
Aluminum	µg/L	1.0	27.8	136	17	45.3	16.6	169	18	54.8	1,020	71.8	215
Antimony	µg/L	0.050	5.71	6.44	2.09	6.05	3.75	11.6	2.47	16.7	25.8	29.8	11.7
Arsenic	µg/L	0.050	14.7	16.8	22.8	21.1	13	22.5	44.9	47.7	34.7	73.3	13.7
Barium	µg/L	0.10	205	216	989	196	139	258	1,210	156	672	176	308
Beryllium	µg/L	0.010	0.022	<0.050	<0.050	<0.020	<0.010	<0.050	<0.050	<0.050	0.224	<0.100	<0.100
Bismuth	µg/L	0.010	<0.020	<0.050	<0.050	<0.020	<0.010	<0.050	<0.050	<0.050	<0.100	<0.100	<0.100
Boron	µg/L	2.0	1,680	5,550	6,390	2,760	601	5,610	5,980	2,270	12,000	1,850	7,870
Cadmium	µg/L	0.0020	0.0062	0.0155	0.219	0.0483	0.0135	<0.0100	0.0297	0.0284	0.141	<0.0200	<0.0200
Calcium	mg/L	0.050	150	286	120	332	83.4	330	116	275	1,750	89.1	284
Chromium (III+VI)	µg/L	0.50	12.2	64.1	19.1	17.9	5.27	88.3	21.7	16.6	160	22.5	128
Cobalt	µg/L	0.0050	6.9	14.9	42.3	11.1	2.62	19.1	21.7	6.51	36.4	6.25	27.3
Copper	µg/L	0.10	<0.20	1.05	7.38	0.23	0.37	0.73	1.96	<0.50	4.23	<1.00	<1.00
Iron	µg/L	2.0	123	698	1,860	77	144	989	5,440	30	81,600	73.5	1,580
Lead	µg/L	0.050	<0.100	<0.250	<0.250	<0.100	<0.050	<0.250	<0.250	<0.250	4.29	<0.500	<0.500
Lithium	µg/L	0.050	53.7	111	35.1	84.8	44	117	32.6	83.4	138	89.9	155
Magnesium	µg/L	5.0	279,000	259,000	442,000	296,000	229,000	373,000	501,000	240,000	325,000	290,000	369,000
Manganese	µg/L	0.050	369	2,270	176	334	125	2,050	200	356	26,000	270	1,670
Mercury	µg/L	0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010
Molybdenum	µg/L	0.010	3.46	1.82	32.50	2.39	12.80	1.82	13.80	2.49	3.60	4.48	2.76
Nickel	µg/L	0.040	13.9	91.4	226	18	10.3	123	187	16.7	129	19.3	181
Phosphorus	µg/L	10	2,890	7,440	487	4,390	1,390	11,900	734	3,940	4,230	4,640	12,800
Potassium	µg/L	20	143,000	346,000	267,000	250,000	76,500	463,000	299,000	216,000	584,000	230,000	551,000
Selenium	µg/L	0.10	0.9	1.6	3.99	0.66	2.53	3.94	3.09	0.96	<1.00	<1.00	3.35
Silicon	µg/L	100	15,600	21,200	22,700	15,800	12,200	21,200	26,300	13,500	38,400	14,800	23,100
Silver	µg/L	0.010	<0.020	<0.050	<0.050	<0.020	<0.010	<0.050	<0.050	<0.050	<0.100	<0.100	<0.100
Sodium	mg/L	0.020	1,500	849	1,450	2,130	590	1,030	1,430	2,010	797	2,590	1,310
Strontium	µg/L	0.10	3,470	3,060	7,000	4,320	3,500	3,670	7,920	3,900	9,500	3,250	3,590
Sulfur	µg/L	1,000	367,000	53,200	99,200	330,000	175,000	19,300	74,300	402,000	28,900	646,000	20,900
Tellurium	µg/L	0.050	<0.100	<0.250	<0.250	<0.100	<0.050	<0.250	<0.250	<0.250	<0.500	<0.500	<0.500
Thallium	µg/L	0.0040	<0.0080	<0.0200	<0.0200	<0.0080	<0.0040	<0.0200	<0.0200	<0.0200	<0.0400	<0.0400	<0.0400
Thorium	µg/L	0.010	<0.020	0.052	<0.050	<0.020	<0.010	0.06	<0.050	<0.050	0.633	<0.100	<0.100
Tin	µg/L	0.100	7.83	5.62	2.39	15.8	5.98	5.89	2.32	29.3	3.89	41.3	11.6
Titanium	µg/L	0.20	40.7	60.8	13.3	40.4	9.46	80	20.2	31.4	130	51	123
Tungsten	µg/L	0.20	2.11	4.02	4.22	3.15	0.94	3.33	4.97	3.25	2.83	4.19	5.81
Uranium	µg/L	0.0010	12.7	3.62	17.6	6.23	21.8	2.19	7.77	10.6	1.31	10.7	1.89
Vanadium	µg/L	1.00	12	35.7	30.3	11.6	5.24	48.6	29.7	8.81	34.3	11.5	65.1
Zinc	µg/L	1.0	<2.0	7.4	12.8	<2.0	1.7	5.3	<5.0	<5.0	765	<10.0	<10.0
Zirconium	µg/L	0.020	19.1	22.5	142	22.2	9.29	29.6	127	18.9	32.9	25.4	49
PAH													
Acenaphthene	µg/L	0.050	0.316	0.116	<0.050	0.629	0.171	0.075	<0.050	0.454	0.146	0.598	0.073
Acenaphthylene	µg/L	0.200	<0.200	<0.200	<0.200	<0.200	<0.200	<0.200	<0.200	<0.200	<0.200	<0.200	<0.200
Acridine	µg/L	0.050	<0.050	<0.050	<0.050	<0.050	<0.050	0.177	<0.050	<0.050	0.187	<0.050	0.084
Anthracene	µg/L	0.010	<0.010	<0.010	<0.132	0.02	<0.010	<0.010	<0.010	0.033	<0.026	0.075	<0.010
Benz(a)anthracene	µg/L	0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	0.024	<0.018	<0.010
Benzo(a) pyrene	µg/L	0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.028	<0.010	<0.010
Benzo(b+j)fluoranthene	µg/L	0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050
Benzo(g,h,i)perylene	µg/L	0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050
Benzo(k)fluoranthene	µg/L	0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050
2-chloronaphthalene	µg/L	0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100
Chrysene	µg/L	0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050
Dibenz(a,h)anthracene	µg/L	0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010
Fluoranthene	µg/L	0.030	0.03	<0.030	<0.030	0.04	<0.030	0.038	<0.030	<0.030	<0.086	0.094	<0.030
Fluorene	µg/L	0.050	0.219	0.064	<0.050	0.425	0.094	0.051	<0.050	0.306	<0.050	0.39	<0.050
Indeno(1,2,3-c,d)pyrene	µg/L	0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050
1-Methylnaphthalene	µg/L	0.100	0.534	0.131	<0.100	1.34	0.192	0.121	<0.100	0.691	0.409	1.12	0.108
2-methylnaphthalene	µg/L	0.100	0.13	0.125	<0.100	<0.100	<0.100	0.15	<0.100	<0.100	0.844	0.232	0.126
Naphthalene	µg/L	0.200	2.53	0.655	<0.200	3.64	1.03	0.938	<0.200	2.67	4.18	5.04	0.934
Phenanthrene	µg/L	0.100	0.101	<0.100	<0.100	0.262	<0.100	<0.100	<0.100	0.273	<0.100	0.321	<0.100
Pyrene	µg/L	0.020	<0.020	<0.020	<0.020	<0.020	<0.020	0.049	<0.020	<0.020	<0.044	0.089	<0.020
Quinoline	µg/L	0.050	<0.050	<0.050	<0.430	<0.050	<0.050	0.058	<0.476	<0.050	<0.545	<0.050	<0.110
VFAs													
Acetic Acid	mg/L	3.0	<3.0	256	<3.0	<3.0	<3.0	14.3	<3.0	<3.0	2,080	<3.0	<3.0
Butyric Acid	mg/L	2.0	<2.0	16.6	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	1,080	<2.0	<2.0
Caproic Acid	mg/L	2.0	<2.0	10.8	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	725	<2.0	<2.0
Heptanoic Acid	mg/L	2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	140	<2.0	<2.0
Isobutyric Acid	mg/L	2.0	<2.0	18.5	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	156	<2.0	<2.0
Isocaproic Acid	mg/L	2.0	<2.0	2.5	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	12.6	<2.0	<2.0
Isovaleric Acid	mg/L	2.0	<2.0	9	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	100	<2.0	<2.0
Propanoic acid	mg/L	2.0	<2.0	17.7	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	1,670	2.2	<2.0
Valeric Acid	mg/L	2.0	<2.0	7.1	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	785	<2.0	<2.0
VOCs													
Bromodichloromethane	µg/L	1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<10.0	<10.0
Bromoform	µg/L	1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<10.0	<10.0
Carbon tetrachloride	µg/L	0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<5.0	<5.0
Chlorobenzene	µg/L	1.0	1.3	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<10.0	<10.0
Chloroethane	µg/L	2.0	2.4	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<20.0	<20.0
Chloroform	µg/L	1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<10.0	<10.0
Dibromochloromethane	µg/L	1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<10.0	<10.0
1,2-dibromoethane	µg/L	0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<3.0	<3.0
Dibromomethane	µg/L	1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<10.0	<10.0
1,2-dichlorobenzene	µg/L	0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<5.0	<5.0
1,3-dichlorobenzene	µg/L	1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<10.0	<10.0
1,4-dichlorobenzene	µg/L	1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<10.0	<10.0
1,1-dichloroethane	µg/L	1.0	1.6	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	1	<1.0	<10.0	<10.0
1,2-dichloroethane	µg/L	1.0	<1.0	4.7	<1.0	<1.0	<1.0	5.2	<1.0	<1.0	1.6	<10.0	18.7
1,1-dichloroethene	µg/L	1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<10.0	<10.0
cis-1,2-dichloroethene	µg/L	1.0	<1.0	1.7	<1.0	<1.0	<1.0	2.8	2.5	<1.0	<1.0	<10.0	<10.0
trans-1,2-dichloroethene	µg/L	1.0	<1.0	2.7	<1.0	<1.0	<1.0	2.7	<1.0	<1.0	<1.0	<10.0	17.9
Dichloromethane	µg/L	3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<30.0	<30.0
1,2-dichloropropane	µg/L	1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<4.2	<10.0	<10.0
1,3-Dichloropropene	µg/L	1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<10.0	<10.0
1,1,2,2-tetrachloroethane	µg/L	0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<5.0	<5.0
Tetrachloroethene	µg/L	1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	1.5	<1.0	<1.0	<10.0	<10.0
1,1,1-trichloroethane	µg/L	1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<10.0	<10.0
1,1,2-trichloroethane	µg/L	1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<3.1	<10.0	<10.0
Trichloroethene	µg/L	1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	1.2	<1.0	<1.0	<10.0	<10.0
Trichlorofluoromethane	µg/L	1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<10.0	<10.0
Vinyl chloride	µg/L	1.0	<1.0	2.4	<1.0	<1.0	<1.0	7.5	2.9	<1.0	<1.0	<10.0	<10.0

Analytical Reports: CARO 25C3485, 25F0833, 25I2111, 25J3984

- not analyzed

< less than laboratory detection limit

RL reporting limit

Table 5: Summary of Water Analytical Results - Leachate 2025

QUARTER			Q3		Q4				
FIELD ID			P2 A2 Leachate MH	South Leachate Wet well (LS#2)	LS#4	N Pumphouse MH	P1 Leachate MH - 2	P2 A2 Leachate MH	South Leachate Wet well (LS#2)
DATE SAMPLED			15 Sep 2025	15 Sep 2025	28 Oct 2025	28 Oct 2025	28 Oct 2025	28 Oct 2025	28 Oct 2025
MATRIX			Water	Water	Water	Water	Water	Water	Water
LAB ID			25I2111-03	25I2111-01	25J3984-05	25J3984-02	25J3984-04	25J3984-03	25J3984-01
Parameter	**Unit**	**RL**	**Analytical Results**						
Hardness, Dissolved (as CaCO3)	mg/L	0.125	2,450	1,460	2,060	1,490	1,890	1,290	2,320
Alkalinity (total) as CaCO3	mg/L	1.0	3,910	5,600	4,080	3,730	5,550	2,060	6,570
Alkalinity (P)	mg/L	1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Alkalinity (Bicarbonate as CaCO3)	mg/L	1.0	3,910	5,600	4,080	3,730	5,550	2,060	6,570
Alkalinity (Carbonate as CaCO3)	mg/L	1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Alkalinity (Hydroxide) as CaCO3	mg/L	1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Ammonia as N	mg/L	0.050	293	90.5	420	97.6	987	126	123
Biochemical Oxygen Demand	mg/L	8.0	3,030	321	285	324	57.2	160	458
Carbon, Total Organic	mg/L	0.50	-	-	366	170	417	177	192
Carbon, Dissolved Organic	mg/L	0.50	1,180	179	361	137	394	169	188
Chemical Oxygen Demand	mg/L	20	4,590	798	1,350	952	1,210	1,230	990
Conductivity (Lab)	µS/cm	2.0	9,560	12,500	9,780	9,260	14,200	5,790	15,900
Kjeldahl Nitrogen Total	mg/L	0.050	-	-	504	126	933	137	149
pH (Lab)	-	0.10	7.6	8.05	7.64	8.05	7.69	8.01	7.82
Phosphorus, Total (as P)	mg/L	0.0050	6.71	5.91	11.8	6.05	9.34	1.94	6.85
Phosphorus, Dissolved Reactive	mg/L	0.0050	0.0465	4.91	1.36	3.74	6.42	0.102	3.34
Solids, Total Dissolved	mg/L	15	6,200	9,220	5,080	6,540	6,700	3,180	13,000
Sulfide, Total	mg/L	0.020	1.22	214	0.958	58.7	2.22	0.14	0.236
Anions									
Bromide	mg/L	0.10	77.4	3.91	<1.00	2.8	1.96	<1.00	6.2
Chloride	mg/L	0.10	937	714	805	609	1,490	814	994
Fluoride	mg/L	0.10	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00
Nitrate (as N)	mg/L	0.010	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	73.3
Nitrite (as N)	mg/L	0.010	0.419	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100
Sulphate	mg/L	1.0	125	1,500	14.2	1,440	102	226	3,440
Hydrocarbons									
VH (C6-C10)	µg/L	100	2,270	<1,000	10,300	717	444	365	1,290
VPH (VH C6-C10 - BTEXS)	µg/L	100	2,120	<1,000	336	150	437	208	1,210
EPH C10-C19	µg/L	250	1,250	<250	2,130	566	696	546	438
EPH C19-C32	µg/L	250	332	554	925	1,940	2,420	2,130	1,330
LEPH	µg/L	250	1,250	<250	2,120	560	695	545	428
HEPH	µg/L	250	332	554	925	1,940	2,420	2,130	1,330
Benzene	µg/L	0.5	<5.0	7	1.1	2.7	<0.5	<0.5	5.1
Toluene	µg/L	1.0	148	<10.0	9,910	533	1.8	157	<10.0
Ethylbenzene	µg/L	1.0	<10.0	54.1	8.2	17.3	<1.0	<1.0	35
Xylene Total	µg/L	2.0	<20.0	50.9	15.7	13.4	5.4	<2.0	31.8
Styrene	µg/L	1.0	<10.0	<10.0	<1.0	<1.0	<1.0	<1.0	<10.0
MTBE	µg/L	1.0	<10.0	<10.0	2.1	<1.0	<3.5	<1.0	<10.0
Metals, Dissolved									
Aluminum	µg/L	1.0	63.8	85.7	467	48.4	174	20.8	80.4
Antimony	µg/L	0.050	8.83	37.8	15.7	39.7	11.6	2.59	51.9
Arsenic	µg/L	0.050	28	95.2	25.6	80.2	12.5	12.1	137
Barium	µg/L	0.10	528	176	444	147	223	314	185
Beryllium	µg/L	0.010	<0.100	<0.100	0.118	0.021	<0.050	<0.020	<0.050
Bismuth	µg/L	0.010	<0.100	<0.100	<0.050	<0.020	<0.050	<0.020	<0.050
Boron	µg/L	2.0	6,220	2,210	8,870	1,850	7,040	2,540	2,540
Cadmium	µg/L	0.0020	<0.0200	<0.0200	0.279	0.178	0.0136	0.0298	0.135
Calcium	mg/L	0.050	443	95.7	446	146	222	123	429
Chromium (III+VI)	µg/L	0.50	47.7	26.9	96.8	23.3	132	20.2	32.8
Cobalt	µg/L	0.0050	18	6.58	19.2	6.45	27	7.45	8.7
Copper	µg/L	0.10	<1.00	<1.00	3.98	<0.20	0.88	1.38	<0.50
Iron	µg/L	2.0	6,800	34.2	7,810	61.8	2,150	1,200	48.5
Lead	µg/L	0.050	<0.500	<0.500	3.4	<0.100	<0.250	0.202	<0.250
Lithium	µg/L	0.050	66.7	105	80.9	69.3	148	49.8	82.7
Magnesium	µg/L	5.0	325,000	298,000	228,000	272,000	324,000	240,000	303,000
Manganese	µg/L	0.050	4,800	230	4,590	415	1,350	652	162
Mercury	µg/L	0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010
Molybdenum	µg/L	0.010	6.63	5.38	3.93	4.72	2.79	10.60	4.80
Nickel	µg/L	0.040	108	21.3	198	24.5	192	66.1	24.3
Phosphorus	µg/L	10	519	5,580	9,120	5,120	9,910	577	5,710
Potassium	µg/L	20	363,000	266,000	419,000	201,000	519,000	142,000	288,000
Selenium	µg/L	0.10	<1.00	1.12	1.27	1.03	4.34	1.54	0.99
Silicon	µg/L	100	25,200	15,100	23,500	15,400	19,900	15,000	15,200
Silver	µg/L	0.010	<0.100	<0.100	<0.050	<0.020	<0.050	<0.020	<0.050
Sodium	mg/L	0.020	999	3,010	807	2,300	1,290	617	3,720
Strontium	µg/L	0.10	5,670	3,140	4,980	3,430	3,380	4,180	4,870
Sulfur	µg/L	1,000	58,800	753,000	11,200	635,000	40,200	58,800	833,000
Tellurium	µg/L	0.050	<0.500	<0.500	<0.250	0.202	<0.250	<0.100	<0.250
Thallium	µg/L	0.0040	<0.0400	<0.0400	<0.0200	<0.0080	<0.0200	<0.0080	<0.0200
Thorium	µg/L	0.010	<0.100	<0.100	0.454	<0.020	<0.050	<0.020	<0.050
Tin	µg/L	0.100	1.5	110	3.05	110	14.4	1.06	138
Titanium	µg/L	0.20	24.1	54.1	111	44.2	122	17.2	61.8
Tungsten	µg/L	0.20	2.31	4.95	4.62	3.95	7.33	1.36	6.15
Uranium	µg/L	0.0010	6.92	9.9	1.4	9.82	3.49	23.1	9
Vanadium	µg/L	1.00	22.8	12.5	40.5	11.4	66.9	17.3	12.9
Zinc	µg/L	1.0	29.6	<10.0	732	5	5.3	23.3	<5.0
Zirconium	µg/L	0.020	68.1	28.7	35.1	27	56.8	39	39.8
PAH									
Acenaphthene	µg/L	0.050	<0.050	0.629	<0.060	1.23	<0.050	<0.050	1.08
Acenaphthylene	µg/L	0.200	<0.200	<0.200	<0.200	<0.200	<0.200	<0.200	<0.200
Acridine	µg/L	0.050	0.141	<0.050	0.157	0.081	0.083	<0.058	<0.065
Anthracene	µg/L	0.010	<0.010	0.073	<0.040	0.101	<0.010	<0.010	0.1
Benz(a)anthracene	µg/L	0.010	<0.014	<0.024	<0.010	<0.010	<0.010	<0.010	<0.012
Benzo(a) pyrene	µg/L	0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010
Benzo(b+j)fluoranthene	µg/L	0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050
Benzo(g,h,i)perylene	µg/L	0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050
Benzo(k)fluoranthene	µg/L	0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050
2-chloronaphthalene	µg/L	0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100
Chrysene	µg/L	0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050
Dibenz(a,h)anthracene	µg/L	0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010
Fluoranthene	µg/L	0.030	0.036	0.125	<0.030	0.087	<0.030	<0.030	0.079
Fluorene	µg/L	0.050	<0.050	0.427	<0.120	0.485	<0.050	<0.050	0.511
Indeno(1,2,3-c,d)pyrene	µg/L	0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050
1-Methylnaphthalene	µg/L	0.100	<0.100	1.24	0.205	0.933	<0.100	<0.100	1.35
2-methylnaphthalene	µg/L	0.100	0.149	0.234	0.455	0.247	<0.100	<0.100	0.235
Naphthalene	µg/L	0.200	1.02	5.5	2.41	4.1	0.326	0.234	6.85
Phenanthrene	µg/L	0.100	<0.100	0.427	<0.100	0.675	<0.100	<0.100	0.664
Pyrene	µg/L	0.020	0.031	0.084	<0.020	<0.020	<0.020	<0.020	<0.020
Quinoline	µg/L	0.050	<0.648	<0.050	<0.918	<0.050	0.064	0.265	<0.050
VFAs									
Acetic Acid	mg/L	3.0	451	<3.0	21.3	<3.0	<3.0	29.1	<3.0
Butyric Acid	mg/L	2.0	265	<2.0	<2.0	3.2	<2.0	5.3	<2.0
Caproic Acid	mg/L	2.0	199	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0
Heptanoic Acid	mg/L	2.0	36.5	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0
Isobutyric Acid	mg/L	2.0	30.2	<2.0	2.2	3	<2.0	7.3	<2.0
Isocaproic Acid	mg/L	2.0	3.5	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0
Isovaleric Acid	mg/L	2.0	21.3	<2.0	<2.0	3.1	<2.0	4.9	<2.0
Propanoic acid	mg/L	2.0	469	<2.0	10.8	6.7	<2.0	21.9	<2.0
Valeric Acid	mg/L	2.0	144	<2.0	<2.0	<2.0	<2.0	4	<2.0
VOCs									
Bromodichloromethane	µg/L	1.0	<10.0	<10.0	<1.0	<1.0	<1.0	<1.0	<10.0
Bromoform	µg/L	1.0	<10.0	<10.0	<1.0	<1.0	<1.0	<1.0	<10.0
Carbon tetrachloride	µg/L	0.5	<5.0	<5.0	<0.5	<0.5	<0.5	<0.5	<5.0
Chlorobenzene	µg/L	1.0	<10.0	<10.0	<1.0	<1.0	<1.0	<1.0	<10.0
Chloroethane	µg/L	2.0	<20.0	<20.0	<2.0	<2.0	<2.0	<2.0	<20.0
Chloroform	µg/L	1.0	<10.0	<10.0	<1.0	<1.0	<1.0	<1.0	<10.0
Dibromochloromethane	µg/L	1.0	<10.0	<10.0	<1.0	<1.0	<1.0	<1.0	<10.0
1,2-dibromoethane	µg/L	0.3	<3.0	<3.0	<0.3	<0.3	<0.3	<0.3	<3.0
Dibromomethane	µg/L	1.0	<10.0	<10.0	<1.0	<1.0	<1.0	<1.0	<10.0
1,2-dichlorobenzene	µg/L	0.5	<5.0	<5.0	<0.5	<0.5	<0.5	<0.5	<5.0
1,3-dichlorobenzene	µg/L	1.0	<10.0	<10.0	<1.0	<1.0	<1.0	<1.0	<10.0
1,4-dichlorobenzene	µg/L	1.0	<10.0	<10.0	<1.0	<1.3	<1.0	<1.0	<10.0
1,1-dichloroethane	µg/L	1.0	<10.0	<10.0	<1.0	1.3	<1.0	<1.0	<10.0
1,2-dichloroethane	µg/L	1.0	<10.0	<10.0	<1.0	<1.0	5.1	<1.0	<10.0
1,1-dichloroethene	µg/L	1.0	<10.0	<10.0	<1.0	<1.0	<1.0	<1.0	<10.0
cis-1,2-dichloroethene	µg/L	1.0	<10.0	<10.0	<1.0	<1.0	1.1	<1.0	<10.0
trans-1,2-dichloroethene	µg/L	1.0	<10.0	<10.0	<1.0	<1.0	2.1	<1.0	<10.0
Dichloromethane	µg/L	3.0	<30.0	<30.0	<3.0	<3.0	<3.0	<3.0	<30.0
1,2-dichloropropane	µg/L	1.0	<10.0	<10.0	<1.0	<1.0	<1.0	<1.0	<10.0
1,3-Dichloropropene	µg/L	1.0	<10.0	<10.0	<1.0	<1.0	<1.0	<1.0	<10.0
1,1,2,2-tetrachloroethane	µg/L	0.5	<5.0	<5.0	<0.5	<0.5	<0.5	<0.5	<5.0
Tetrachloroethene	µg/L	1.0	<10.0	<10.0	<1.0	<1.0	<1.0	<1.0	<10.0
1,1,1-trichloroethane	µg/L	1.0	<10.0	<10.0	<1.0	<1.0	<1.0	<1.0	<10.0
1,1,2-trichloroethane	µg/L	1.0	<10.0	<10.0	2	<1.0	<1.0	<1.0	<10.0
Trichloroethene	µg/L	1.0	<10.0	<10.0	<1.0	<1.0	<1.0	<1.0	<10.0
Trichlorofluoromethane	µg/L	1.0	<10.0	<10.0	<1.0	<1.0	<1.0	<1.0	<10.0
Vinyl chloride	µg/L	1.0	<10.0	<10.0	<1.7	<1.0	<4.2	<1.0	<10.0

Analytical Reports: CARO 25C3485, 25F0833, 25I2111, 25J3984

- not analyzed

< less than laboratory detection limit

RL reporting limit

APPENDIX A

OPERATIONAL CERTIFICATION 12218

May 30, 2023

Tracking Number: 384004
Authorization Number: 12218

REGISTERED MAIL

CITY OF KELOWNA
City Hall
1435 Water Street
Kelowna BC V1Y 1J4

Dear Operational Certificate Holder:

Enclosed is Amended Operational Certificate 12218 issued under the provisions of the *Environmental Management Act*. Your attention is respectfully directed to the terms and conditions outlined in the operational certificate. An annual fee will be determined according to the Permit Fees Regulation.

This operational certificate does not authorize entry upon, crossing over, or use for any purpose of private or Crown lands or works, unless and except as authorized by the owner of such lands or works. The responsibility for obtaining such authority rests with the operational certificate holder. It is also the responsibility of the operational certificate holder to ensure that all activities conducted under this authorization are carried out with regard to the rights of third parties, and comply with other applicable legislation that may be in force.

Requirements may also be specified by the *Environmental Management Act* and regulations including, but not limited to, the Contaminated Sites Regulation, Environmental Data Quality Assurance Regulation, Hazardous Waste Regulation, Landfill Gas Management Regulation, Organic Matter Recycling Regulation, Ozone Depleting Substances and Other Halocarbons Regulation, Recycling Regulation, Spill Reporting Regulation, Storage of Recyclable Material Regulation, Waste Discharge Regulation and Codes of Practice.

When a spill occurs, or there is an imminent risk of one occurring, the responsible person must ensure that it is reported in accordance with the Spill Reporting Regulation. Additional information on spill reporting requirements is available at gov.bc.ca/reportaspill.

This decision may be appealed to the Environmental Appeal Board in accordance with Part 8 of the *Environmental Management Act*. An appeal must be delivered within 30 days from the date that notice of this decision is given. For further information, please contact the Environmental Appeal Board at (250) 387-3464.

Ministry of Environment and Climate Change Strategy
Environmental Protection Division
1259 Dalhousie Dr.
Kamloops BC V2C 5Z5
Authorizations - South Region
Telephone: (250) 371-6200
Facsimile: (250) 828-4000

Administration of this operational certificate will be carried out by staff from the Environmental Protection Division's Regional Operations Branch. Documents pertinent to the operational certificate are to be submitted by email or electronic transfer to the director, in accordance with the ministry Data & Report Submissions website at: http://www2.gov.bc.ca/gov/content/environment/waste-management/waste-discharge-authorization/data-and-report-submissions, or as further instructed.

For more information about how the Ministry will assess compliance with your operational certificate please refer to gov.bc.ca/environmentalcompliance.

For more information about how to make changes to your operational certificate and to access waste discharge amendment forms and guidance, please refer to gov.bc.ca/wastedischarge-authorizations.

Yours truly,



Carol Danyluk, P.Eng.
for Director, *Environmental Management Act*
Authorizations - South Region

MINISTRY OF ENVIRONMENT AND CLIMATE CHANGE STRATEGY

OPERATIONAL CERTIFICATE

12218

Under the Provisions of the Environmental Management Act

CITY OF KELOWNA

City Hall
1435 Water Street
Kelowna BC V1Y 1J4

is authorized to manage waste and recyclable material from the Regional District of Central Okanagan and environs (including Reserve Land), and also the Big White area, at the Glenmore Landfill located 9 kilometres north-east of the Kelowna city centre, British Columbia, subject to the conditions listed below. Contravention of any of these conditions is a violation of the *Environmental Management Act* and may result in prosecution.

This Operational Certificate supersedes all previous versions of Operational Certificate 12218 issued under the authority of the *Environmental Management Act.*

Glossary

Capitalized terms referred to in this authorization are defined below. Other terms used in this authorization have the same meaning as those defined in the *Environmental Management Act*, applicable regulations, and the Landfill Criteria;

"Contaminated Soil" means soil in which the concentration of a substance is greater than or equal to the lowest applicable industrial land use standard under the Contaminated Sites Regulation, and below any applicable standards that classify the soil as Hazardous Waste under the Hazardous Waste Regulation;

“Facility” means the Landfill including all facilities and works on the Facility Site including the Landfill, Leachate Management Works, Stormwater Management Works, and Facility Entrance;

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"Facility Entrance" means the authorized works in section 1.4.1 of this operational certificate;

"Facility Site" means the location of the Facility in section 1.5.1 of this operational certificate;

"Facility Site Boundary" means the perimeter boundary of the Facility Site;

"International Waste" means International waste as defined in the latest amended version of the Government of Canada International Waste Directive TAHD-DSAT-IE-2002-17-6, October 15, 2012;

"Landfill" means the authorized works in section 1.1.5 of this operational certificate;

"Landfill Criteria" means the Landfill Criteria for Municipal Solid Waste Second Edition June 2016, as amended or replaced from time to time;

"Leachate Management Works" means the authorized works in section 1.2.3 of this operational certificate;

"Province" means His Majesty the King in right of British Columbia;

"Regulatory Document" means any document that the operational certificate holder is required to cause to be prepared or submit to the director or the Province, pursuant to: (i) this authorization; (ii) any regulation made under the *Environmental Management Act* that regulates the Facility described in this authorization or the discharge of waste from that Facility; or (iii) any order issued under the *Environmental Management Act* directed against the operational certificate holder that is related to the Facility described in this authorization or the discharge of waste from that Facility;

"Significant Works" means the Landfill, Leachate Management Works, Stormwater Management Works;

"Stormwater Management Works" means the authorized works in section 1.3.1 of this operational certificate;

1. AUTHORIZED DISCHARGES AND WORKS

1.1 Landfill

This section applies to the discharge of waste to the Landfill. The site reference number for this discharge is E104956.

1.1.1 The maximum authorized rate of waste discharge is:

(a) 200,000 tonnes per calendar year of municipal solid waste;
(b) 30,000 tonnes per calendar year of Contaminated Soil;
(c) 1,000 tonnes per calendar year of International Waste.

1.1.2 The characteristics of the waste discharge to the Landfill must be:

(a) municipal solid waste;
(b) soil;
(c) other waste as authorized in writing by the director,
(d) waste asbestos as per Section 40 of the Hazardous Waste Regulation(HWR) under the *Environmental Management Act*.

The following types of wastes must not be discharged:

(1) Hazardous wastes, other than those specifically approved for disposal to authorized landfills, as defined in the Hazardous Waste Regulation (HWR) under the *Environmental Management Act*.
(2) Anatomical, pathological, and untreated biomedical wastes as defined in the *Guidelines for the Management of Biomedical Wastes in Canada* (Canadian Council of Ministers of the Environment, February 1992) with exception of the limited biomedical wastes described within the City of Kelowna "Solid Waste Management Regulation Bylaw No. 10106, revised October 25, 2021".
(3) Bulk liquids and semi-solid wastes, which contain free liquids, as determined by US EPA Method 9095A Paint Filter Liquids Test, Test Methods for Evaluating Solid Wastes-Physical/Chemical Methods (EPA Publication No. Sw-846).
(4) Hog fuel, log yard debris and chipped wood waste. The reuse of these materials for temporary roads, dust control or a component of alternative daily cover is permitted.
(5) Recyclable materials, including automobiles, white goods, other large metallic objects and tires

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(6) Animal carcasses, with the exception of those of a domestic nature, those resulting from animal road kills, or those resulting from animal control activities of the Ministry of Environment's Conservation Officer Service (COS).

(7) Mortalities from agricultural operations, with the exception of carcasses that cannot be disposed of in accordance with the Code of Practice for Agricultural Environmental Management under the Environmental Management Act.

1.1.3 Composting of yard waste must be in accordance with the Organic Matter Recycling Regulation under the *Environmental Management Act*.

1.1.4 The discharged waste must originate from within the Regional District of Central Okanagan including Reserve Lands, and the Big White area, subject to the following:

(a) Waste discharged to this landfill must satisfy the requirements of the Regional District of Central Okanagan Solid Waste Management Plan.

(b) Waste discharged to this landfill must not contravene the Regional Solid Waste Management Plan of the Regional District from which the waste originated.

1.1.5 The works authorized are a landfill with an area of 81 ha, and related appurtenances as specified in the most recent Design, Operations, and Closure Plan (DOCP) under Section 3.1.

At a minimum, active landfill cells must include an impermeable base liner.

1.1.6 The waste discharge is authorized to the Landfill approximately located as shown on Site Plan A.

1.1.7 The operational certificate holder must ensure that the authorized works, excluding final cover in active landfilling areas, are complete and fully operational as per the most recent DOCP, under Section 3.1.

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1.2 Leachate Management

This section applies to the management of leachate from the Landfill.

1.2.1 The operational certificate holder must collect and convey the leachate from the Landfill prior to discharge.

1.2.2 The treated leachate effluent is authorized to be discharged to the City of Kelowna municipal sewage collection system.

1.2.3 The authorized works are leachate collection, conveyance, treatment and discharge works, and related appurtenances approximately located as shown on Site Plan A.

1.2.4 The operational certificate holder must ensure that the Leachate Management Works are complete and fully operational as per the most recent DOCP, under Section 3.1.

1.3 Stormwater Management

This section applies to the management of stormwater from the Landfill.

1.3.1 The authorized Stormwater Management works are specified in the most recent DOCP required under Section 3.1. The Stormwater Management works include use of Bredin Pond, Tutt Pond, Northeast Pond, conveyance systems (ditches, pipes, culverts), pump houses, irrigation systems and an overflow to the Slough. Stormwater that has been diverted to the Slough must be managed as leachate.

1.3.2 The operational certificate holder must ensure that the Stormwater Management Works are complete and fully operational as per the most recent DOCP, under Section 3.1.

1.4 Facility Entrance

This section applies to the Facility Entrance.

1.4.1 The authorized works are sign(s), gate, fence, weigh scale, attendant hut, waste and recyclable material drop-off and storage facilities, and related appurtenances approximately located as shown on Site Plan A.

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1.4.2 The operational certificate holder must ensure that the authorized works are complete and fully operational, as per the most recent DOCP, under Section 3.1.

1.5 **Location of Facility**

This section applies to the location of the Facility.

1.5.1 The location of the Facility is: (per Parcel Identification [PID]) PID 024-353-281, Part of PID 024-353-302, PID 024-353-329, PID 024-353-752, PID 011-843-322, PID 011-843-331, PID 011-843-357, PID 011-843-365, PID 011-843-373, PID 011-845-163, PID 011-843-381, Part of PID 029-954-444, PID 029-954-398, PID 011-843-071, PID 011-843-187, PID 011-843-195, PID 011-843-209, PID 011-843-217, and PID 011-843-390

Approximately located as shown on Site Plan A

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2. GENERAL REQUIREMENTS

2.1 General Provisions

Where this Authorization provides that the director may require an action to be carried out, the operational certificate holder must carry out the action in accordance with the requirements of the director.

2.2 Use of Qualified Professional(s)

The operational certificate holder must cause a Qualified Professional to:

(a) Design and inspect the construction of the Significant Works, and,

(b) Certify documents related to the Significant Works including plans, specifications, drawings, construction reports, assessments, reviews, investigations, studies, surveys, programs, reports and as-built record drawings.

(c) Submit a completed Declaration of Competency and a Conflict of Interest Disclosure Statement with each document.

2.3 Regulatory Documents

(a) The operational certificate holder must retain all Regulatory Documents for a period of at least 7 years after they are made.

(b) If requested by a director or an officer, the operational certificate holder must submit the requested Regulatory Documents to the director or officer within 14 days of the request.

2.4 Construction Report(s)

(a) The operational certificate holder must cause a Qualified Professional to:

(i) carry out inspections before and during the construction or modification of Significant Works, and,
(ii) certify construction report(s) and submit them to the director as part of the Annual Report.

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(b) The construction report(s) must demonstrate that the Significant Works have been constructed in accordance with this operational certificate and the most recent DOCP, describe any technical changes that arose from the inspections and testing and how they were addressed, and include as-built record drawings of the constructed Significant Works, all the inspection and testing reports and results including geologic inspection report, quality control and quality assurance testing, soil test data including field and laboratory data, as described in the Landfill Criteria section 10.2 Construction Report(s).

2.5 **Buffer Zone**

The operational certificate holder must ensure that the footprint of the Landfill is located a minimum of 50 m from the Facility Site Boundary.

2.5.1 A berm of suitable material must be maintained to limit visibility of the active waste discharge area where practical for travelers using the Glenmore Road and John Hindle Drive.

2.6 **Additional Requirements**

The director may require the operational certificate holder to:

(a) Cause a Qualified Professional to certify and submit to the director additional, amended or improved documents of the Facility including plans, specifications, drawings, construction reports, assessments, reviews, investigations, studies, surveys, programs, reports and as-built record drawings.

(b) Carry out actions in accordance with the additional, amended or improved documents submitted, and additional actions as specified.

(c) Repair, alter, remove, improve or add to existing facilities and works, or construct new facilities and works, at the Facility.

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3. OPERATING AND PERFORMANCE REQUIREMENTS

3.1 Design, Operations, and Closure Plan (DOCP)

(a) The following DOCP has been certified by a Qualified Professional and submitted by the operational certificate holder to the director on March 26, 2019; 2018 Design, Operations and Closure Plan – Glenmore Landfill – GHD Ltd.

(b) The operational certificate holder must cause a Qualified Professional to certify and submit an updated DOCP to the director, as necessary to keep the DOCP up to date, at least once every five years.

(c) The operational certificate holder must carry out the most recent DOCP and design, construct, operate, inspect, maintain, monitor, and close the Facility, in compliance with most recent DOCP.

(d) The DOCP must comply with the requirements of this operational certificate, include the information specified in all the relevant items listed in the Landfill Criteria Section 10.3 Design, Operations and Closure Plan, and, if a Landfill Criteria Upgrading Plan is required pursuant to Section 3.2 of this operational certificate, conform with the Landfill Criteria Upgrading Plan.

3.2 Hydrogeology and Hydrology Characterization Report (HHCR)

(a) The operational certificate holder must cause a Qualified Professional to certify and submit an up-to-date HHCR, to the director, on or before December 31, 2024.

(b) The HHCR must include the information specified in all the items listed in the Landfill Criteria, Section 10.1 Hydrogeology and Hydrology Characterization Report.

(c) The operational certificate holder must cause a Qualified Professional to certify and submit an updated HHCR to the director, at least once every ten years after the date specified in the preceding (a).

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3.3 Multiple and/or Spare Works and Auxiliary Power Facilities

The operational certificate holder must provide and install multiple and/or spare works and auxiliary power facilities to ensure that the Significant Works are operational as specified in this operational certificate, including during maintenance, breakdowns and electrical power outages.

3.4 Maintenance of the Facility

(a) The operational certificate holder must cause persons that are qualified and trained, to operate, regularly inspect, and maintain the Facility, in good working order.

(b) The operational certificate holder must prepare documents of the qualification and training of the persons operating, inspecting and maintaining the Facility, and of Facility inspections, operation and maintenance.

3.5 Facility Manager and Operator Certification

(a) The operational certificate holder must ensure that at least one person responsible for the management of the Facility is certified, and maintains certification by The Solid Waste Association of North America (SWANA) as a Manager of Landfill Operations, and at least one person responsible for the operation of the Facility is certified, and maintains certification by SWANA as a Landfill Operator.

(b) The operational certificate holder must prepare documents of the SWANA certification and training of the person(s) responsible for the management and operation of the Facility.

3.6 Stormwater Quality

(a) The operational certificate holder must ensure that the Facility does not cause the concentration of any substance in the stormwater flowing from the Facility Site Boundary, to be of worse quality than:

(i) the applicable long-term average, short-term maximum, maximum allowable concentration, maximum acceptable concentration, and/or aesthetic objective, specified in the British Columbia Approved and Working Water Quality Guidelines, for the applicable water use(s), for that substance,

or,

(ii) if the local background concentration of any substance is of worse quality than (i), the local background concentration of that substance.

(b) The operational certificate holder must cause a Qualified Professional to determine the applicable water use(s) and the applicable long-term average, short-term maximum, maximum allowable concentration, maximum acceptable concentration, and/or aesthetic objective, specified in the British Columbia Approved and Working Water Quality Guidelines, for the applicable water use(s), for substances, and, if the preceding (a)(ii) is being used, the local background concentration of substance(s), and include such determinations in the Annual Operations and Monitoring Report.

3.7 Groundwater Quality

(a) The operational certificate holder must ensure that the Facility does not cause the concentration of any substance in groundwater flowing from the Facility Site Boundary to be greater than:

(i) the lowest of the Contaminated Sites Regulation Generic Numerical Water Standards, for the applicable water use(s), for that substance.

or,

(ii) if the local background concentration of any substance is greater than (i), the local background concentration of that substance.

(b) The operational certificate holder must cause a Qualified Professional to determine the applicable water use(s) in accordance with the latest approved version of Protocol 21 for Contaminated Sites, Water Use Determination, and, if the preceding (a)(ii) is being used, the local background concentration of substance(s) in accordance with the latest approved version of Protocol 9 for Contaminated Sites, Determining Background Groundwater Quality or another method recommended by a Qualified Professional, and include such determinations in the Annual Operations and Monitoring Report.

3.8 Complaints

The operational certificate holder must prepare documents of complaints with regard to matters relevant to this operational certificate, including environmental, bear, and nuisance complaints. These documents must include the source and nature of the complaint, actions, responses, and corresponding dates and times.

3.9 Soil

All soil discharged at the Landfill site must be beneficially reused as cover, berms, and/or roads within the waste cells.

Soil containing contaminants in concentrations that are less than the threshold to be characterized as Contaminated Soil does not contribute to the annual discharge limit in Section 1.1.1(b).

Contaminated Soil must not be used as final cover or deposited within 1.2 meters of the seasonal high groundwater level.

4. MONITORING

4.1 Monitoring and Sampling Facilities

The operational certificate holder must maintain measurement, monitoring and sampling facilities for waste, leachate, treated leachate effluent, stormwater, groundwater, and landfill gas, in compliance with, and including at locations specified in, the most recent DOCP under Section 3.1.

4.2 Monitoring and Sampling

The operational certificate holder must carry out measurement, monitoring and sampling of waste, leachate, treated leachate effluent, stormwater, groundwater, and landfill gas, in compliance with, and including at frequencies and for substances specified in, the most recent DOCP under Section 3.1.

4.3 Sampling Procedures

The operational certificate holder must carry out sampling in accordance with the procedures described in the "British Columbia Field Sampling Manual for Continuous Monitoring and the Collection of Air, Air-Emission, Water, Wastewater, Soil, Sediment, and Biological Samples, 2013 Edition (Permittee)" or most recent edition, or by alternative procedures as authorized by the director. A copy of the above manual is available on the Ministry web page at https://www2.gov.bc.ca/gov/content/environment/research-monitoring-reporting/monitoring/laboratory-standards-quality-assurance.

Date issued: December 8, 2000
Date amended: May 30, 2023
(most recent)

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for Director, *Environmental Management Act*
Authorizations - South Region

4.4 Analytical Procedures

The operational certificate holder must carry out analyses in accordance with procedures described in the "British Columbia Laboratory Manual (2015 Permittee Edition)", or the most recent edition or by alternative procedures as authorized by the director. A copy of the above manual is available on the Ministry web page at https://www2.gov.bc.ca/gov/content/environment/research-monitoring-reporting/monitoring/laboratory-standards-quality-assurance.

4.5 Quality Assurance

(a) The operational certificate holder must obtain from the analytical laboratory(ies) their precision, accuracy and blank data for each sample set submitted by the operational certificate holder and an evaluation of the data acceptability, based on criteria set by such laboratory.

(b) The operational certificate holder must collect, prepare and submit for analysis by the analytical laboratory(ies) quality control (QC) samples for each parameter. As a minimum,

-The number of QC samples should be 20% of all samples collected (environmental + QC samples) within 48 hours of each other, and,
-Include duplicate, field and trip blank samples for each parameter.

(c) The operational certificate holder must submit samples to analytical laboratory(ies) that meet the definition of a qualified laboratory under the Environmental Data Quality Assurance Regulation.

4.6 Data Uploading

The operational certificate holder must cause the analytical laboratory(ies) to upload monitoring and analytical data required by this operational certificate, to the Ministry's Environmental Monitoring System (EMS) database, on or before 30 days after the data is available, or as further instructed by the director.

Date issued: December 8, 2000
Date amended: May 30, 2023
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5. REPORTING

5.1 Electronic Reporting

The operational certificate holder must submit all data required to be submitted under this section by email to the Ministry's Routine Environmental Reporting Submission Mailbox (RERSM) at Envauthorizationsreporting@gov.bc.ca or as otherwise instructed by the director. For guidelines on how to properly name the files and email subject lines or for more information visit the Ministry website: https://www2.gov.bc.ca/gov/content/environment/waste-management/waste-discharge-authorization/data-and-report-submissions/routine-environmental-reporting-submission-mailbox.

5.2 Non-compliance Notification

The operational certificate holder must immediately notify the director by email at EnvironmentalCompliance@gov.bc.ca, or as otherwise instructed by the director of any non-compliance with the requirements of this Authorization and must immediately take remedial action to remedy any effects of such non-compliance.

5.3 Non-compliance Reporting

The operational certificate holder must, within 30 days of any non-compliance event, submit to the director a written report that includes, but is not necessarily limited to, the following:

(a) all relevant test results obtained by the operational certificate holder related to the non-compliance,

(b) an explanation of the most probable cause(s) of the non-compliance, and

(c) a description of remedial action planned and/or taken by the operational certificate holder to prevent similar non-compliance(s) in the future.

The operational certificate holder must submit all non-compliance reporting required to be submitted under this section by email to the Ministry's Compliance Reporting Submission Mailbox (CRSM) at

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EnvironmentalCompliance@gov.bc.ca or as otherwise instructed by the director. For guidelines on how to report a non-compliance or for more information visit the Ministry website: http://www2.gov.bc.ca/gov/content/environment/waste-management/waste-discharge-authorization/data-and-report-submissions/non-compliance-reporting-mailbox.

5.4 Annual Operations and Monitoring Report

(a) The operational certificate holder must cause a Qualified Professional to certify and submit an Annual Operations and Monitoring Report, for the preceding calendar year, to the director on or before March 31 of each year.

(b) The Annual Operations and Monitoring Report must include the following information:

Operations Report:

(i) Tonnages and categories of waste and recyclable material received at the Facility, and how they were managed,
(ii) Tonnages and categories of waste discharged to the Landfill,
(iii) Leachate volume collected and conveyed to municipal sewer system, and leachate quality;
(iv) Remaining volume and life of the Landfill;
(v) Summary of DOCP implementation;
(vi) Summary of screening/revegetation efforts;
(vii) Summary of construction report(s);
(viii) Summary of complaints;
(ix) Summary of non-compliance notifications and reporting;
(x) For the next calendar year, summary of planned DOCP implementation and construction of Significant Works,

Environmental Monitoring Plan Report:

(xi) Site plan(s), sampling locations, stormwater and surface water flow paths, groundwater elevations, gradients and flow directions;
(xii) Measurement, monitoring and sampling facilities, locations, frequencies, substances, sampling and analytical procedures, quality assurance and quality control;
(xiii) Data including laboratory analysis and quality assurance and quality control results;
(xiv) Data tabulation, trend analysis, graphs, diagrams, and interpretation;

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(xv) Discussion and determinations required by section 3.5 of this operational certificate,
(xvi) Discussion and determination of compliance with section 3.6 of this operational certificate,
(xvii) Discussion and determination of compliance with section 3.7 of this operational certificate,
(xviii) Results, conclusions, recommendations and changes to the environmental monitoring plan.

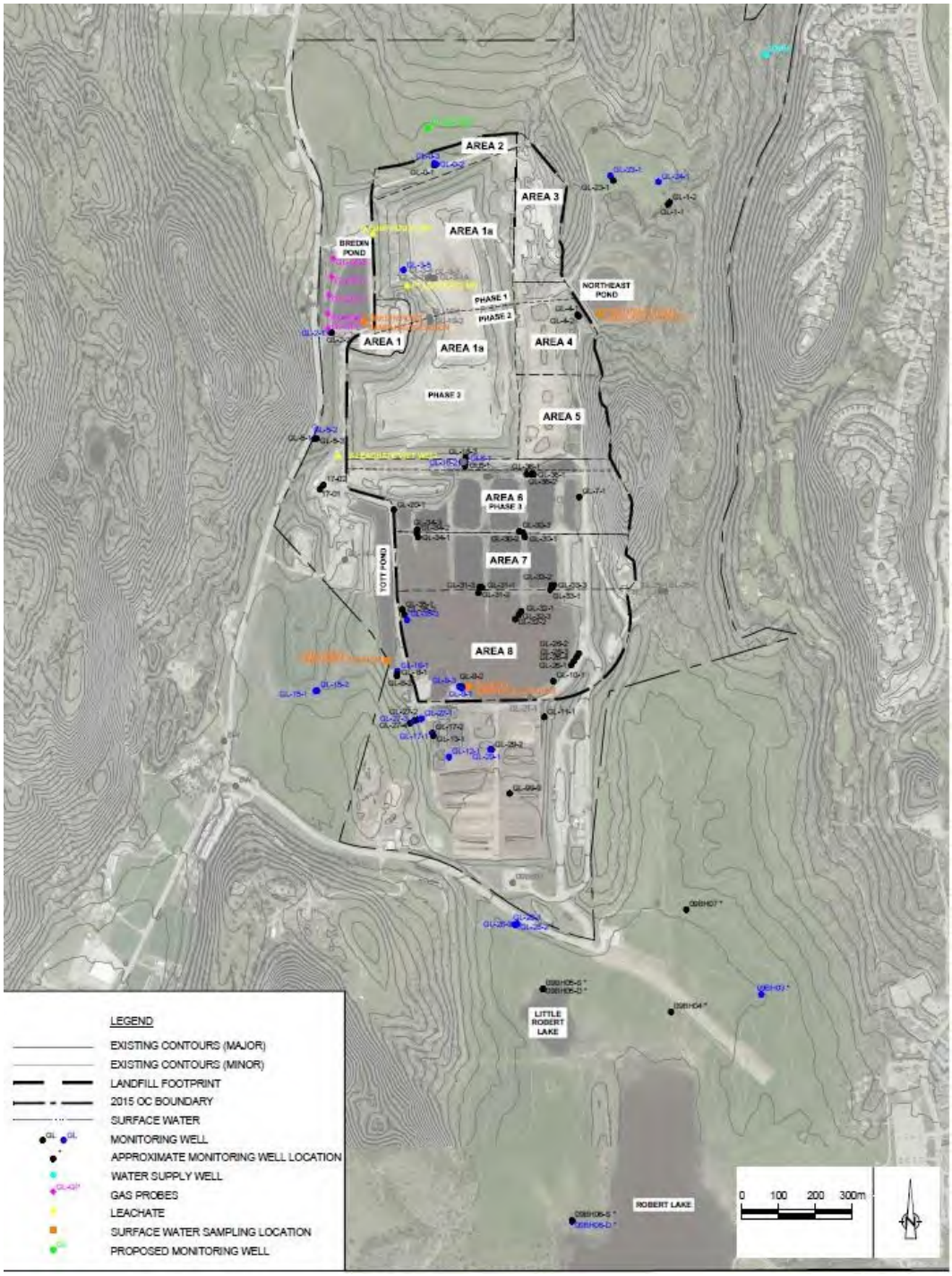
5.5 **Publication of Documents**

The Ministry of Environment and Climate Change Strategy publishes Regulatory Documents on its website for the purpose of research, public education and to provide transparency in the administration of environmental laws. The operational certificate holder acknowledges that the Province may publish any Regulatory Documents submitted by the operational certificate holder, excluding information that would be exempted from disclosure if the document was disclosed pursuant to a request under section 5 of the *Freedom of Information and Protection of Privacy Act*, and the operational certificate holder consents to such publication by the Province.

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Date amended: May 30, 2023
(most recent)

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Authorizations - South Region

SITE PLAN



Date issued: December 8, 2000
Date amended: May 30, 2023
(most recent)

Carol Danyluk, P.Eng.
for Director, *Environmental Management Act*
Authorizations - South Region

APPENDIX B

LEACHATE MANAGEMENT SYSTEM

APPENDIX B – LEACHATE MANAGEMENT SYSTEM

A leachate management plan (LMP) is implemented to provide short-term and long-term solutions for leachate collection, storage, treatment, and disposal at the Site. The objectives of the leachate management plan are to provide methods for Landfill leachate collection, treatment, and disposal, estimate leachate generation rates, forecast leachate quality, and identify the discharge requirements that protect groundwater, surface water, and the receiving environment. The Glenmore Landfill LMP is summarized in the subsections below. The existing Landfill footprint area (Footprint) includes Phase 1, Phase 2 and Phase 3. The existing leachate management system (LMS) includes leachate collection systems in the Footprint that are constructed with a natural control liner system with greater than 2 metres of in-situ native clay with a hydraulic conductivity of between 10^{-6} and 10^{-9} cm/s. The cell located at the far north end of Phase 1 (referred to as the Northern Expansion) is equipped with an engineered geomembrane liner. Vertical groundwater flow throughout the Site is generally noted to be upwards provided the leachate level is maintained at an elevation at or below 437 m above mean sea level (amsl).

Leachate collection within the existing landfilled areas of Phase 1 and Phase 2 consists of gravity drains that convey leachate via a leachate force main located along the west side of the Landfill for eventual discharge to the municipal sanitary sewer system. Three lift stations facilitate the movement of leachate across the Site: Lift Station #1 (LS#1), located in the northwest portion of the Site, Lift Station #2 (LS#2), located in the southwest corner of Phase 2, and combined sewer and leachate Lift Station #3 or McKinley Lift Station (LS#3), located at the leachate pre-treatment system in the northwest portion of the Site. LS#2 pumps leachate collected from Phase 2 into a gravity system that feeds into LS#1 and LS#3. The LS#3 was constructed in 2016 as part of property development in the residential areas northwest of the Landfill and construction of an upgraded sewer line in the Glenmore Road corridor next to the Site.

Collected leachate is pre-treated with Bioxide to control the potentially elevated hydrogen sulphide levels. The combined sewage and leachate are also aerated and treated for odours by a Biorem Multi-Stage Biofilter. The effluent is discharged into the municipal sanitary sewer system at Glenmore Road North and is ultimately treated at the City's wastewater treatment plant. The LMS also includes an emergency backup leachate discharge force main to the Quail Ridge subdivision; however, as of November 2016, leachate is no longer regularly discharged to the sewer force main and on to the Quail Ridge system.

Leachate collection within the existing areas of Phase 1 and Phase 2 consists of the following components:

- A 0.3 m thick leachate collection system and perforated collection piping within the lined Northern Expansion area
- A perforated leachate collection pipe oriented east-west across the central portion of Phase 1 and Phase 2 that drains to the west
- A perforated HDPE leachate collection pipe oriented east-west and installed on the Phase 2 and Phase 3 boundary that drains to LS#2
- Non-perforated leachate force main to convey collected leachate to appropriate lift stations and/or leachate manholes

APPENDIX C

FIELD METHODOLOGY

FIELD METHODOLOGY

1.0 2025 Field Methods

In 2025, water monitoring and sampling events at the Site were completed by City of Kelowna (CoK) staff. Field activities were conducted according to BC ENV regulatory requirements, including

- *BC Field Sampling Manual, Part E Water and Wastewater Sampling, Ambient Freshwater and Effluent Sampling* is available online at: https://www2.gov.bc.ca/assets/gov/environment/research-monitoring-and-reporting/monitoring/emre/manuals/field-sampling-manual/bc_field_sampling_manual_part_e.pdf
- *BC Field Sampling Manual, Part E1 Surface Water* available online at: https://www2.gov.bc.ca/assets/gov/environment/research-monitoring-and-reporting/monitoring/emre/manuals/field-sampling-manual/bc-field-sampling-manual-part-e1-surface-water-2024-03-08.pdf
- *BC Field Sampling Manual, Part E3 Effluent* available online at: https://www2.gov.bc.ca/assets/gov/environment/research-monitoring-and-reporting/monitoring/emre/manuals/field-sampling-manual/bc-field-sampling-manual-part-e3-effluent-2024-03-08-draft.pdf

During the sampling events, the equipment and tools used to collect the samples were washed with laboratory-grade detergent and rinsed with distilled water. Dedicated new nitrile gloves were worn at each sample point for handling the equipment and samples and changed between sample locations. The 2025 methods were consistent with those of previous years and are summarized below.

2.0 Groundwater Monitoring and Sampling

CoK staff conducted groundwater monitoring and sampling semi-annually in spring and fall. Monitoring select wells for depth to water and depth to bottom of the well was completed using a water level probe lowered into the well and measured against the top of the well casing.

Prior to sample collection, groundwater purging from the well was completed, which consisted of removing water from each well using a dedicated bailer and string. Field water quality parameters of temperature, pH, conductivity, redox, and dissolved oxygen were measured at regular intervals using a YSI Pro Multiparameter Meter (YSI). Purging of the well continued until three well volumes were removed, and the field parameters stabilized.

CoK staff obtained sample coolers, bottles, preservatives, and filters from the laboratory. Groundwater samples were collected from select monitoring wells using a dedicated bailer and/or a peristaltic pump with dedicated tubing at each well.

Representative groundwater samples were collected in clean, pre-charged laboratory-supplied sample bottles provided by CARO Analytical Services (CARO). Samples collected for dissolved metals were field-filtered using a 0.45-micron filter. Samples were stored in an ice-chilled cooler in the field, refrigerated as needed, and then submitted to CARO to analyze select parameters. Standard chain of custody procedures were followed, and duplicate samples were not identified in the laboratory. Samples were received and analyzed by the laboratory within the recommended holding time.

Duplicate samples were collected at a rate of two for up to every ten samples. Purged groundwater generated during well development and sampling was disposed of to ground, away from each monitoring well.

Groundwater purging and sampling records are provided in Appendix D.

3.0 Surface Water Sampling

Surface water sampling was conducted by CoK staff quarterly in 2025. Sample coolers, bottles, preservatives, and filters were obtained from CARO by CoK staff. Representative water samples were collected in clean, pre-charged laboratory-supplied sample bottles provided by CARO. Samples collected for dissolved metals were field-filtered using a 0.45-micron filter. Samples were stored in an ice-chilled cooler in the field and refrigerated as needed, then submitted to CARO for analysis of selection.

Standard chain of custody procedures were followed, and duplicate samples were not identified in the laboratory. Samples were received and analyzed by the laboratory within the recommended holding time.

Duplicate samples were collected at a rate of two for up to every ten samples.

4.0 Leachate Sampling

Leachate sampling was conducted by CoK staff quarterly in 2025. Sample coolers, bottles, preservatives, and filters were obtained from CARO by CoK staff. Leachate samples were collected using a dedicated bailer and string and/or a peristaltic pump with dedicated tubing. Representative leachate samples were collected in clean, pre-charged laboratory-supplied sample bottles provided by CARO. Samples collected for dissolved metals were field filtered using a 0.45-micron filter. Samples were stored in an ice-chilled cooler in the field, refrigerated as needed, and then submitted to CARO to analyze select parameters. Standard chain of custody procedures were followed and duplicate samples were not identified to the laboratory. Samples were received and analyzed by the laboratory within the recommended holding time.

5.0 Elevation Survey

In October 2025, CoK conducted an elevation survey of all active monitoring wells and provided a table of the piezometric elevations to Keltech. These updated values were used to determine spring and fall inferred groundwater flow direction beneath the Site.

6.0 Laboratory

CARO provided sampling containers and performed the laboratory analysis of water samples. CARO is accredited by the Canadian Association for Laboratory Accreditation (CALA) for analytical methods used for this program.

APPENDIX D

2025 FIELD DATA RECORDS

City of Kelowna

GROUNDWATER SAMPLING FORM
GLENMORE LANDFILL

Weather: Mostly Cloudy Date: MAY 23, 2025 Well No: GL 1-1
Temperature: 15° Tech: KK Field Dup? ** DUP 6 **

MONITORING WELL INFORMATION

Time of Measurement: _____ One Well Volume: _____
Depth of Water (A): 2.277 Diameter of Well: _____
Bottom of Well (B): _____ (B-A)*2 _____ Litres for 51mm ϕ well
Well Condition: _____ (B-A)*8 _____ Litres for 102mm ϕ well

EQUIPMENT LIST

☐ Waterra
☐ Hydrolift
☐ Bailer
☑ Peristaltic
☐ Bladder
Pump Details: _____

Multi-meter Model: YSI Pro
☐ Field Bump ☑ Field Calibration
pH 4 _____ pH 7 ✓ pH10 ✓
1413µs/cm _____ 5000µs/cm ✓ DO ✓
ORP

WELL DEVELOPMENT

Purge Volume: Well Vol. X _____ = _____ Sample Intake Depth: _____
Average Flow Rate: _____

Time	Vol. Removed (L)	Temp (°C)	pH (Units)	Conductivity (uS/cm)	Redox (mV)	Dissolved O_2 (mg/L)	Water Level (m)	Comments
10:04	✓						2.277	
10:07	.600	9.0	7.74	1819	242	5.56	2.356	
10:10	1.200	10.0	7.82	1813	233.6	6.66	2.363	
10:13	1.800	10.0	7.64	1812	229.2	3.56	2.362	
10:16	2.400	10.0	7.57	1810	225	2.86	2.364	
10:19	3.000	10.1	7.54	1809	216.8	2.14	2.361	
10:22	3.600	10.0	7.56	1804	211.8	2.32	2.359	
10:25	4.200	10.1	7.56	1800	207.5	2.51	2.357	
			SAMPLES					

Odour: ☐ Yes ☑ No If Yes, describe _____
Sheen: ☐ Yes ☑ No If Yes, describe _____
Turbidity: Clear I I I I I I I I I I I I I I I I I I I I I I I I I I I Very Silty

Analysis	Type		Container Size					Filtered	
			40 mL	125 mL	250 mL	500 mL	1 L		
General	X Plastic	☐ Glass					1	☐ Yes	☐ No
Metals	X Plastic	☐ Glass		1				☐ Yes	☐ No
Mercury	☐ Plastic	X Glass	1					☐ Yes	☐ No
COD, nutrient	X Plastic	X Glass		1				☐ Yes	☐ No
Organic C	☐ Plastic	X Glass	2					☐ Yes	☐ No
LEPH/HEPH	☐ Plastic	X Glass						☐ Yes	☐ No
Sulfide	X Plastic	☐ Glass						☐ Yes	☐ No
VOC/BTEX	☐ Plastic	X Glass						☐ Yes	☐ No

City of Kelowna

GROUNDWATER SAMPLING FORM
GLENMORE LANDFILL

Weather: PARTLY CLOUDY Date: MAY 23, 2025 Well No: GL 1-2
Temperature: 18° Tech: KL Field Dup: _____

MONITORING WELL INFORMATION

Time of Measurement: _____ One Well Volume: _____
Depth of Water (A): 2.354 Diameter of Well: _____
Bottom of Well (B): _____ (B-A)*2 _____ Litres for 51mm ϕ well
Well Condition: _____ (B-A)*8 _____ Litres for 102mm ϕ well

EQUIPMENT LIST

☐ Waterra
☐ Hydrolift
☐ Bailer
☑ Peristaltic
☑ Bladder
Pump Details: _____

Multi-meter Model: YSI Pro
☐ Field Bump ☑ Field Calibration
pH 4 _____ pH 7 _____ pH10 _____
1413µs/cm _____ 5000µs/cm _____ DO _____
ORP

WELL DEVELOPMENT

Purge Volume: Well Vol. X _____ = _____ Sample Intake Depth: _____
Average Flow Rate: _____

Time	Vol. Removed (L)	Temp (°C)	pH (Units)	Conductivity (uS/cm)	Redox (mV)	Dissolved O_2 (mg/L)	Water Level (m)	Comments
10:49							2.354	TURBID
10:52	.500	9.6	7.44	1937.5	171.6	2.43	2.357	CLEARING
10:55	1.300	9.9	7.44	1737.5	158.3	2.41	2.359	
10:58	1.800	9.7	7.48	1744	154.9	1.57	2.361	
11:01	2.300	9.7	7.46	1752	150.3	1.22	2.358	
11:04	2.800	9.8	7.45	1752	147.0	1.08		

Odour: ☐ Yes ☑ No If Yes, describe _____
Sheen: ☐ Yes ☐ No If Yes, describe _____
Turbidity: Clear I I I I I I I I I I I I I I I I I I I I I I I I I I I Very Silty

Analysis	Type		Container Size					Filtered	
			40 mL	125 mL	250 mL	500 mL	1 L		
General	X Plastic	☐ Glass					1	☐ Yes	☐ No
Metals	X Plastic	☐ Glass		1				☐ Yes	☐ No
Mercury	☐ Plastic	X Glass	1					☐ Yes	☐ No
COD, nutrient	X Plastic	X Glass		1				☐ Yes	☐ No
Organic C	☐ Plastic	X Glass	2					☐ Yes	☐ No
LEPH/HEPH	☐ Plastic	X Glass						☐ Yes	☐ No
Sulfide	X Plastic	☐ Glass						☐ Yes	☐ No
VOC/BTEX	☐ Plastic	X Glass						☐ Yes	☐ No

City of Kelowna

GROUNDWATER SAMPLING FORM
GLENMORE LANDFILL

Weather: CLOUDY
Temperature: 12°
Date: MAY 22, 2025
Tech: KR
Well No: GL 2-1
Field Dup: _____

MONITORING WELL INFORMATION

Time of Measurement: _____
Depth of Water (A): 0.454
Bottom of Well (B): _____
Well Condition: CORRODED

One Well Volume: _____
Diameter of Well: _____
(B-A)*2 _____ Litres for 51mm ϕ well
(B-A)*8 _____ Litres for 102mm ϕ well

EQUIPMENT LIST

☐ Waterra
☐ Hydrolift
☐ Bailer
☐ Peristaltic
☑ Bladder
Pump Details: _____

Multi-meter Model: YSI Pro
☐ Field Bump ☑ Field Calibration
pH 4 _____ pH 7 ✓ pH10 ✓
1413µs/cm _____ 5000µs/cm ✓ DO ✓
ORP

WELL DEVELOPMENT

Purge Volume: Well Vol. X _____ = _____
Average Flow Rate: _____
Sample Intake Depth: _____

Time	Vol. Removed (L)	Temp (°C)	pH (Units)	Conductivity (uS/cm)	Redox (mV)	Dissolved O_2 (mg/L)	Water Level (m)	Comments
8:48	0						0.454	TURBID
8:51	.500	10.8	7.44	1779	140.5	2.91	0.824	CLEAN
8:54	.950	10.8	7.51	1777	133.1	1.78	1.004	
8:57	1.400	10.8	7.52	1777	124.7	1.33	1.175	
9:00	1.800	10.9	7.66	1772	117.9	1.12	1.328	
9:03	2.200	10.9	7.54	1773	109.8	0.99	1.496	
9:06	2.600	10.9	7.57	1773	101.6	0.89	1.692	
9:09	3.000	10.9	7.57	1778	99.2	0.88	1.740	

Odour: ☐ Yes ☑ No If Yes, describe _____
Sheen: ☐ Yes ☐ No If Yes, describe _____
Turbidity: Clear I I I I I I(1) I I I I I I I I I I I I I I I I I I Very Silty

Analysis	Type		Container Size					Filtered	
			40 mL	125 mL	250 mL	500 mL	1 L		
General	X Plastic	☐ Glass					1	☐ Yes	☐ No
Metals	X Plastic	☐ Glass		1				☐ Yes	☐ No
Mercury	☐ Plastic	X Glass	1					☐ Yes	☐ No
COD, nutrient	X Plastic	X Glass		1				☐ Yes	☐ No
Organic C	☐ Plastic	X Glass	2					☐ Yes	☐ No
LEPH/HEPH	☐ Plastic	X Glass						☐ Yes	☐ No
Sulfide	X Plastic	☐ Glass						☐ Yes	☐ No
VOC/BTEX	☐ Plastic	X Glass						☐ Yes	☐ No

City of Kelowna

GROUNDWATER SAMPLING FORM
GLENMORE LANDFILL

Weather: MOSTLY SUNNY Date: MAY 21, 2025 Well No: GL 2-2
Temperature: 17° Tech: KR Field Dup: _____

MONITORING WELL INFORMATION

Time of Measurement: _____ One Well Volume: _____
Depth of Water (A): 0 Diameter of Well: _____
Bottom of Well (B): _____ (B-A)*2 _____ Litres for 51mm ϕ well
Well Condition: _____ (B-A)*8 _____ Litres for 102mm ϕ well

EQUIPMENT LIST

☐ Waterra
☐ Hydrolift
☐ Bailer
☑ Peristaltic
☐ Bladder
Pump Details: _____

Multi-meter Model: YSI Pro
☐ Field Bump ☑ Field Calibration
pH 4 _____ pH 7 ✓ pH10 ✓
1413µs/cm _____ 5000µs/cm _____ DO _____

WELL DEVELOPMENT

Purge Volume: Well Vol. X _____ = _____ Sample Intake Depth: _____
Average Flow Rate: _____

Time	Vol. Removed (L)	Temp (°C)	pH (Units)	Conductivity (uS/cm)	Redox (mV)	Dissolved O_2 (mg/L)	Water Level (m)	Comments
14:31	0						0	CLEAN
14:34	.800	11.9	7.61	2168	-63.8	2.88	.484	
14:37	1.300	12.1	7.66	2148	-88.5	1.90	.555	
14:40	1.850	12.4	7.64	2124	-99.1	1.48	.604	
14:43	2.350	12.2	7.63	2122	-101.6	1.23	.643	
14:46	2.850	12.0	7.63	2124	-102.6	1.21	.677	
14:49	3.350	12.4	7.63	2121	-103.6	1.09	.689	
~~14:52~~								
			SAMPLE					

Odour: ☐ Yes ☑ No If Yes, describe _____
Sheen: ☐ Yes ☑ No If Yes, describe _____
Turbidity: Clear I I I

City of Kelowna

GROUNDWATER SAMPLING FORM
GLENMORE LANDFILL

Weather: Cloudy
Temperature: 17°
Date: MAY 26, 2025
Tech: KR
Well No: GL 4-1
Field Dup: _____

MONITORING WELL INFORMATION

Time of Measurement: _____
Depth of Water (A): _____
Bottom of Well (B): _____
Well Condition: _____

One Well Volume: _____
Diameter of Well: _____
(B-A)*2 _____ Litres for 51mm ϕ well
(B-A)*8 _____ Litres for 102mm ϕ well

EQUIPMENT LIST

☐ Waterra
☐ Hydrolift
☐ Bailer
☑ Peristaltic
☐ Bladder
Pump Details: _____

Multi-meter Model: YSI Pro
☐ Field Bump ☑ Field Calibration
pH 4 _____ pH 7 _____ pH10 _____
1413µs/cm _____ 5000µs/cm _____ DO _____
9RB

WELL DEVELOPMENT

Purge Volume: Well Vol. X _____ = _____
Average Flow Rate: _____
Sample Intake Depth: _____

Time	Vol. Removed (L)	Temp (°C)	pH (Units)	Conductivity (uS/cm)	Redox (mV)	Dissolved O_2 (mg/L)	Water Level (m)	Comments
1:53	0						1.236	
1:56	.400	11.8	7.93	1958	100.1	5.76	1.359	
1:59	.800	12.0	7.84	1855	75.7	4.03	1.359	
2:02	1.250	12.5	7.79	1852	21.2	2.55	1.357	
2:05	1.700	12.2	7.76	1857	2.4	2.24	1.357	
2:08	2.150	12.1	7.77	1857	-34.6	1.51	1.364	
2:11	2.600	12.0	7.77	1855	-59.3	1.16	1.371	
2:14	3.050	11.9	7.74	1856	-67.4	1.20	1.354	
			SAMPLE					

Odour: ☐ Yes ☑ No If Yes, describe _____
Sheen: ☐ Yes ☑ No If Yes, describe _____
Turbidity: Clear I I I (0) I I I I I I I I I I I I I I I I I I I I Very Silty

Analysis	Type		Container Size					Filtered	
			40 mL	125 mL	250 mL	500 mL	1 L		
General	X Plastic	☐ Glass					1	☐ Yes	☐ No
Metals	X Plastic	☐ Glass		1				☐ Yes	☐ No
Mercury	☐ Plastic	X Glass	1					☐ Yes	☐ No
COD, nutrient	X Plastic	X Glass		1				☐ Yes	☐ No
Organic C	☐ Plastic	X Glass	2					☐ Yes	☐ No
LEPH/HEPH	☐ Plastic	X Glass						☐ Yes	☐ No
Sulfide	X Plastic	☐ Glass						☐ Yes	☐ No
VOC/BTEX	☐ Plastic	X Glass						☐ Yes	☐ No

City of Kelowna

GROUNDWATER SAMPLING FORM
GLENMORE LANDFILL

Weather: Cloudy Date: MAY 29, 2025 Well No: GL 4-2
Temperature: 20° Tech: KL Field Dup: _____

MONITORING WELL INFORMATION

Time of Measurement: _____ One Well Volume: _____
Depth of Water (A): _____ Diameter of Well: _____
Bottom of Well (B): _____ (B-A)*2 _____ Litres for 51mm ϕ well
Well Condition: _____ (B-A)*8 _____ Litres for 102mm ϕ well

EQUIPMENT LIST

☐ Waterra
☐ Hydrolift
☐ Bailer
☑ Peristaltic
☐ Bladder
Pump Details: _____

Multi-meter Model: YSI Pro
☐ Field Bump ☑ Field Calibration
pH 4 _____ pH 7 _____ pH10 ✓
1413µs/cm _____ 5000µs/cm ✓ DO ✓
ORP

WELL DEVELOPMENT

Purge Volume: Well Vol. X _____ = _____ Sample Intake Depth: _____
Average Flow Rate: _____

Time	Vol. Removed (L)	Temp (°C)	pH (Units)	Conductivity (uS/cm)	Redox (mV)	Dissolved O_2 (mg/L)	Water Level (m)	Comments
14:28	✓						2.109	
14:31	.600	11.4	7.60	1981	21.6	2.05	2.437	
14:34	1.050	12.0	7.56	1978	22.9	1.90	2.581	
14:37	1.450	11.8	7.56	1984	24.0	1.28	2.714	
14:40	1.850	11.8	7.56	1980	25.6	1.16	2.846	
14:43	2.250	12.0	7.56	1979	26.8	1.11	2.905	
		SAMPLE						

Odour: ☐ Yes ☑ No If Yes, describe _____
Sheen: ☐ Yes ☑ No If Yes, describe _____
Turbidity: Clear I I I (1) I I I I I I I I I I I I I I I I I I I I Very Silty

Analysis	Type		Container Size					Filtered	
			40 mL	125 mL	250 mL	500 mL	1 L		
General	X Plastic	☐ Glass					1	☐ Yes	☐ No
Metals	X Plastic	☐ Glass		1				☐ Yes	☐ No
Mercury	☐ Plastic	X Glass	1					☐ Yes	☐ No
COD, nutrient	X Plastic	X Glass		1				☐ Yes	☐ No
Organic C	☐ Plastic	X Glass	2					☐ Yes	☐ No
LEPH/HEPH	☐ Plastic	X Glass						☐ Yes	☐ No
Sulfide	X Plastic	☐ Glass						☐ Yes	☐ No
VOC/BTEX	☐ Plastic	X Glass						☐ Yes	☐ No

City of Kelowna

GROUNDWATER SAMPLING FORM
GLENMORE LANDFILL

Weather: SUNNY Date: MAY 28, 2025 Well No: GL 5-2
Temperature: 17° Tech: KL Field Dup: _____

MONITORING WELL INFORMATION

Time of Measurement: _____ One Well Volume: _____
Depth of Water (A): _____ Diameter of Well: _____
Bottom of Well (B): _____ (B-A)*2 _____ Litres for 51mm ϕ well
Well Condition: _____ (B-A)*8 _____ Litres for 102mm ϕ well

EQUIPMENT LIST

☐ Waterra
☐ Hydrolift
☐ Bailer
☑ Peristaltic
☐ Bladder
Pump Details: _____

Multi-meter Model: YSI Pro
☐ Field Bump ☐ Field Calibration
pH 4 _____ pH 7 ✓ pH10 ✓
1413µs/cm _____ 5000µs/cm ✓ DO ✓
ORP

WELL DEVELOPMENT

Purge Volume: Well Vol. X _____ = _____ Sample Intake Depth: _____
Average Flow Rate: _____

Time	Vol. Removed (L)	Temp (°C)	pH (Units)	Conductivity (uS/cm)	Redox (mV)	Dissolved O_2 (mg/L)	Water Level (m)	Comments
8:34	0						1.588	
8:37	.500	11.9	7.38	1730	247.9	1.93	1.565	
8:40	1.000	12.0	7.35	1729	233.1	1.39	1.570	
8:43	1.500	11.9	7.33	1732	225.4	1.16	1.588	
8:46	2.000	11.7	7.33	1730	218.2	1.01	1.588	
8:49	2.500	11.9	7.34	1730	211.4	0.92	1.588	
			SAMPLE					

Odour: ☐ Yes ☑ No If Yes, describe _____
Sheen: ☐ Yes ☑ No If Yes, describe _____
Turbidity: Clear I I I I (1) I I I I I I I I I I I I I I I I I I Very Silty

Analysis	Type		Container Size					Filtered	
			40 mL	125 mL	250 mL	500 mL	1 L		
General	X Plastic	☐ Glass					1	☐ Yes	☐ No
Metals	X Plastic	☐ Glass		1				☐ Yes	☐ No
Mercury	☐ Plastic	X Glass	1					☐ Yes	☐ No
COD, nutrient	X Plastic	X Glass		1				☐ Yes	☐ No
Organic C	☐ Plastic	X Glass	2					☐ Yes	☐ No
LEPH/HEPH	☐ Plastic	X Glass						☐ Yes	☐ No
Sulfide	X Plastic	☐ Glass						☐ Yes	☐ No
VOC/BTEX	☐ Plastic	X Glass						☐ Yes	☐ No

GROUNDWATER SAMPLING FORM
GLENMORE LANDFILL

City of Kelowna

Weather: MOSTLY CLOUDY Date: MAY 13, 2025 Well No: GL 16-1
Temperature: 18° Tech: KR Field Dup: _____

MONITORING WELL INFORMATION

Time of Measurement: 12:23 One Well Volume: _____
Depth of Water (A): 1.056 Diameter of Well: _____
Bottom of Well (B): _____ (B-A)*2 _____ Litres for 51mm ϕ well
Well Condition: _____ (B-A)*8 _____ Litres for 102mm ϕ well

EQUIPMENT LIST

☐ Waterra
☐ Hydrolift
☐ Bailer
☑ Peristaltic
☐ Bladder
Pump Details: _____

Multi-meter Model: YSI Pro
☐ Field Bump ☐ Field Calibration
pH 4 _____ pH 7 ✓ pH10 ✓
1413µs/cm _____ 5000µs/cm ✓ DO ✓
ORP

WELL DEVELOPMENT

Purge Volume: Well Vol. X _____ = _____ Sample Intake Depth: _____
Average Flow Rate: _____

Time	Vol. Removed (L)	Temp (°C)	pH (Units)	Conductivity (uS/cm)	Redox (mV)	Dissolved O_2 (mg/L)	Water Level (m)	Comments
12:23	0						1.056	CLEAR
12:27	.500	11.7	7.09	4198	-15.6	3.66	1.387	
12:30	1.000	11.6	7.14	4133	-19.4	2.86	1.543	
12:33	1.450	11.7	7.11	4082	-23.8	2.49	1.694	
12:36	1.900	11.6	7.10	4046	-30.9	2.19	1.835	
12:39	2.400	11.5	7.09	4020	-41.5	1.76	1.953	
12:42	2.900	11.5	7.13	4004	-42.7	1.68	2.064	
12:45	3.400	11.6	7.10	3999	-43.7	1.59	2.178	
12:48	3.900	11.5	7.14	3997	-44.7	1.52	2.289	
12:~~..~~								
			SAMPLE					

Odour: ☐ Yes ☑ No If Yes, describe _____
Sheen: ☐ Yes ☑ No If Yes, describe _____
Turbidity: Clear I I I

City of Kelowna

GROUNDWATER SAMPLING FORM
GLENMORE LANDFILL

Weather: Mostly Cloudy Date: MAY 21, 2025 Well No: 29-1
Temperature: 16° Tech: _____ Field Dup: _____

MONITORING WELL INFORMATION

Time of Measurement: ~~10:~~
Depth of Water (A): ~~10.877~~ 2.905
Bottom of Well (B): _____
Well Condition: _____

One Well Volume: _____
Diameter of Well: _____
(B-A)*2 _____ Litres for 51mm ϕ well
(B-A)*8 _____ Litres for 102mm ϕ well

EQUIPMENT LIST

☐ Waterra
☐ Hydrolift
☐ Bailer
☑ Peristaltic
☐ Bladder
Pump Details: _____

Multi-meter Model: YSI Pro
☐ Field Bump ☐ Field Calibration
pH 4 _____ pH 7 ✓ pH10 _____ ✓
1413µs/cm _____ 5000µs/cm _____ ✓ DO ✓
ORP

WELL DEVELOPMENT

Purge Volume: Well Vol. X _____ = _____ Sample Intake Depth: _____
Average Flow Rate: _____

Time	Vol. Removed (L)	Temp (°C)	pH (Units)	Conductivity (uS/cm)	Redox (mV)	Dissolved O_2 (mg/L)	Water Level (m)	Comments
1:21	0						2.905	YELLOW MOSTY
1:24	.800	12.5	7.06	6478	-116.6	4.97	3.189	
1:27	1.350	12.7	7.02	6136	-129.9	3.12	3.242	
1:30	1.900	12.7	7.03	5986	-137.6	2.36	3.269	
1:33	1.450	12.6	7.01	5687	-140.8	1.89	3.282	
1:36	2.000	12.8	7.03	5526	-141.9	1.61	3.296	
1:39	2.450	12.5	7.09	5493	-143.1	1.57	3.316	
1:42	3.000	12.5	7.01	5522	-144.9	1.32	3.332	
1:45	3.450							

Odour: ☑ Yes ☐ No If Yes, describe SULFUR
Sheen: ☑ Yes ☐ No If Yes, describe DULL RAINBOW
Turbidity: Clear I I I I I I I I I I I (I) I I I I I I I I I I I Very Silty

Analysis	Type		Container Size					Filtered	
			40 mL	125 mL	250 mL	500 mL	1 L		
General	X Plastic	☐ Glass					1	☐ Yes	☐ No
Metals	X Plastic	☐ Glass		1				☐ Yes	☐ No
Mercury	☐ Plastic	X Glass	1					☐ Yes	☐ No
COD, nutrient	X Plastic	X Glass		1				☐ Yes	☐ No
Organic C	☐ Plastic	X Glass	2					☐ Yes	☐ No
LEPH/HEPH	☐ Plastic	X Glass						☐ Yes	☐ No
Sulfide	X Plastic	☐ Glass						☐ Yes	☐ No
VOC/BTEX	☐ Plastic	X Glass						☐ Yes	☐ No

GROUNDWATER SAMPLING FORM
GLENMORE LANDFILL

City of Kelowna

Weather: Cloudy Date: MAY 23, 2025 Well No: GL 23-1
Temperature: 20° Tech: [illegible] Field Dup: _____

MONITORING WELL INFORMATION

Time of Measurement: _____ One Well Volume: _____
Depth of Water (A): 2.199 Diameter of Well: _____
Bottom of Well (B): _____ (B-A)*2 _____ Litres for 51mm ϕ well
Well Condition: _____ (B-A)*8 _____ Litres for 102mm ϕ well

EQUIPMENT LIST

☐ Waterra
☐ Hydrolift
☐ Bailer
☑ Peristaltic
☐ Bladder
Pump Details: _____

Multi-meter Model: YSI Pro
☐ Field Bump ☑ Field Calibration
pH 4 _____ pH 7 _____ pH10 _____
1413µs/cm _____ 5000µs/cm _____ DO _____
ORP

WELL DEVELOPMENT

Purge Volume: Well Vol. X _____ = _____ Sample Intake Depth: _____
Average Flow Rate: _____

Time	Vol. Removed (L)	Temp (°C)	pH (Units)	Conductivity (uS/cm)	Redox (mV)	Dissolved O_2 (mg/L)	Water Level (m)	Comments
2:29	0						2.199	
2:32	.450	12.5	7.47	2430	121.4	8.22	2.444	
2:35	.850	12.5	7.42	2416	119.3	6.85	2.553	
2:38	1.250	12.3	7.47	2425	117.5	6.41	2.634	
2:41	1.650	12.3	7.47	2429	117.5	6.20	2.699	
2:44	2.150	12.3	7.44	2427	117.1	6.06	2.744	
				SAMPLE				

Odour: ☐ Yes ☑ No If Yes, describe _____
Sheen: ☐ Yes ☑ No If Yes, describe _____
Turbidity: Clear I I I I I I I I I I I I I I I I I I I I I Very Silty

Analysis	Type		Container Size					Filtered	
			40 mL	125 mL	250 mL	500 mL	1 L		
General	X Plastic	☐ Glass					1	☐ Yes	☐ No
Metals	X Plastic	☐ Glass		1				☐ Yes	☐ No
Mercury	☐ Plastic	X Glass	1					☐ Yes	☐ No
COD, nutrient	X Plastic	X Glass		1				☐ Yes	☐ No
Organic C	☐ Plastic	X Glass	2					☐ Yes	☐ No
LEPH/HEPH	☐ Plastic	X Glass						☐ Yes	☐ No
Sulfide	X Plastic	☐ Glass						☐ Yes	☐ No
VOC/BTEX	☐ Plastic	X Glass						☐ Yes	☐ No

GROUNDWATER SAMPLING FORM
GLENMORE LANDFILL

City of Kelowna

Weather: PARTLY CLOUDY
Temperature: 20°
Date: MAY 23, 2025
Tech: KR
Well No: GL 24-1
Field Dup: _____

MONITORING WELL INFORMATION

Time of Measurement: _____
Depth of Water (A): 2.989
Bottom of Well (B): _____
Well Condition: _____

One Well Volume: _____
Diameter of Well: _____
(B-A)*2 _____ Litres for 51mm ϕ well
(B-A)*8 _____ Litres for 102mm ϕ well

EQUIPMENT LIST

☐ Waterra
☐ Hydrolift
☐ Bailer
☑ Peristaltic
☐ Bladder
Pump Details: _____

Multi-meter Model: YSI Pro
☐ Field Bump ☑ Field Calibration
pH 4 _____ pH 7 _____ pH10 _____
1413µs/cm _____ 5000µs/cm _____ DO _____
ORP

WELL DEVELOPMENT

Purge Volume: Well Vol. X _____ = _____
Average Flow Rate: _____
Sample Intake Depth: _____

Time	Vol. Removed (L)	Temp (°C)	pH (Units)	Conductivity (uS/cm)	Redox (mV)	Dissolved O_2 (mg/L)	Water Level (m)	Comments
1:47	0						2.989	
1:50	.550	10.9	7.83	1995	90.6	9.30	3.161	
1:53	1.050	11.0	7.84	1989	92.1	8.52	3.188	
1:56	1.550	11.0	7.82	1989	91.0	8.21	3.199	
1:59	2.150	10.9	7.84	1990	90.7	8.02	3.206	
2:02	2.750	10.7	7.79	1990	91.6	7.70	3.207	
2:05	3.300	10.6	7.77	1987	92.5	7.10		
			SAMPLE					

Odour: ☐ Yes ☑ No If Yes, describe _____
Sheen: ☐ Yes ☑ No If Yes, describe _____
Turbidity: Clear I I I

City of Kelowna

GROUNDWATER SAMPLING FORM
GLENMORE LANDFILL

Weather: MOSTLY CLOUDY Date: MAY 13, 2025 Well No: 27-1
Temperature: 12° Tech: KR Field Dup: DUP 1 ***

MONITORING WELL INFORMATION

Time of Measurement: 8:58 One Well Volume: _____
Depth of Water (A): 1.558 Diameter of Well: _____
Bottom of Well (B): _____ (B-A)*2 _____ Litres for 51mm ϕ well
Well Condition: _____ (B-A)*8 _____ Litres for 102mm ϕ well

EQUIPMENT LIST

☐ Waterra
☐ Hydrolift
☐ Bailer
☑ Peristaltic
☐ Bladder
Pump Details: _____

Multi-meter Model: YSI Pro
☐ Field Bump ☐ Field Calibration
pH 4 _____ pH 7 ✓ pH10 ✓
1413µs/cm _____ 5000µs/cm ✓ DO ✓
ORP

WELL DEVELOPMENT

Purge Volume: Well Vol. X _____ = _____ Sample Intake Depth: _____
Average Flow Rate: _____

Time	Vol. Removed (L)	Temp (°C)	pH (Units)	Conductivity (uS/cm)	Redox (mV)	Dissolved O_2 (mg/L)	Water Level (m)	Comments
8:58	Ø						1.558	BLACK SPECKS
9:01	0.600	11.0	7.57	2577	-73.6	5.71	1.870	
9:04	1.150	11.6	7.62	2530	-96.4	3.29	1.967	CLEARING
9:07	1.500	11.6	7.58	2510	-101.3	2.71	2.014	CLEAR
9:10	1.850	11.6	7.59	2503	-107.7	2.34	2.059	
9:13	2.200	11.5	7.61	2496	-112.6	2.10	2.095	
9:16	2.550	11.9	7.53	2453	-116.4	1.94	2.136	
9:19	2.900	11.6	7.57	2462	-119.2	1.84	2.166	
9:22	3.300	11.4	7.61	2472	-122.3	1.79	2.220	
9:25	3.650	11.8	7.61	2457	-124.4	1.68	2.224	
9:28	4.00	11.8	7.60	2431	-125.9	1.57	2.244	= SAMPLE

Odour: ☐ Yes ☑ No If Yes, describe _____
Sheen: ☐ Yes ☑ No If Yes, describe _____
Turbidity: Clear I I I I I I I I I I I I I I I I I I I I I I I I I Very Silty — SEE COMMENTS

Analysis	Type		Container Size					Filtered	
			40 mL	125 mL	250 mL	500 mL	1 L		
General	X Plastic	☐ Glass					1	☐ Yes	☐ No
Metals	X Plastic	☐ Glass		1				☑ Yes	☐ No
Mercury	☐ Plastic	X Glass	1					☑ Yes	☐ No
COD, nutrient	X Plastic	X Glass		1				☐ Yes	☐ No
Organic C	☐ Plastic	X Glass	2					☑ Yes	☐ No
LEPH/HEPH	☐ Plastic	X Glass						☐ Yes	☐ No
Sulfide	X Plastic	☐ Glass						☐ Yes	☐ No
VOC/BTEX	☐ Plastic	X Glass						☐ Yes	☐ No

City of Kelowna

GROUNDWATER SAMPLING FORM
GLENMORE LANDFILL

Weather: MOSTLY cloudy Date: MAY 13, 2025 Well No: GL 27-3
Temperature: 14° Tech: KR Field Dup: _____

MONITORING WELL INFORMATION

Time of Measurement: _____ One Well Volume: _____
Depth of Water (A): 2.056 Diameter of Well: _____
Bottom of Well (B): _____ (B-A)*2 _____ Litres for 51mm ϕ well
Well Condition: _____ (B-A)*8 _____ Litres for 102mm ϕ well

EQUIPMENT LIST

☐ Waterra
☐ Hydrolift
☐ Bailer
☑ Peristaltic
☐ Bladder
Pump Details: _____

Multi-meter Model: YSI Pro
☐ Field Bump ☐ Field Calibration ✓
pH 4 _____ pH 7 _____ pH10 ✓
1413µs/cm _____ 5000µs/cm ✓ DO ✓
ORP

WELL DEVELOPMENT

Purge Volume: Well Vol. X _____ = _____ Sample Intake Depth: _____
Average Flow Rate: _____

Time	Vol. Removed (L)	Temp (°C)	pH (Units)	Conductivity (uS/cm)	Redox (mV)	Dissolved O_2 (mg/L)	Water Level (m)	Comments
10:18	0						2.056	YELLOW TINT, BROWN SPECKS
10:21	0.500	11.6	7.48	16379	-24.8	2.60	2.331	CLEARING
10:24	0.950	11.7	7.47	16259	-45.5	1.95	2.393	
10:27	1.450	11.7	7.47	16224	-55.5	1.66	2.455	
10:30	1.900	11.6	7.44	16196	-60.2	1.56	2.489	
10:33	2.350	11.5	7.45	16173	-61.1	1.48	2.532	CLEAR
10:36	2.450	11.7	7.47	16193	-61.4	1.44	2.560	
10:39	2.900	11.6	7.48	16187	-61.4	1.40	2583	
10:42	3.350	11.7	7.47	16209	-62.1	1.37	2614	
10:45	3.800	11.6	7.44	16224	-61.9	1.37	2.633	
			SAMPLE					

Odour: ☐ Yes ☑ No If Yes, describe _____
Sheen: ☐ Yes ☑ No If Yes, describe _____
Turbidity: Clear I I I I I I I I I I I I I I I I I I I I I I Very Silty

Analysis	Type		Container Size					Filtered	
			40 mL	125 mL	250 mL	500 mL	1 L		
General	X Plastic	☐ Glass					1	☐ Yes	☐ No
Metals	X Plastic	☐ Glass		1				☐ Yes	☐ No
Mercury	☐ Plastic	X Glass	1					☐ Yes	☐ No
COD, nutrient	X Plastic	X Glass		1				☐ Yes	☐ No
Organic C	☐ Plastic	X Glass	2					☐ Yes	☐ No
LEPH/HEPH	☐ Plastic	X Glass						☐ Yes	☐ No
Sulfide	X Plastic	☐ Glass						☐ Yes	☐ No
VOC/BTEX	☐ Plastic	X Glass						☐ Yes	☐ No

City of Kelowna

GROUNDWATER SAMPLING FORM
GLENMORE LANDFILL

Weather: Cloudy
Temperature: 16°
Date: MAY 26, 2025
Tech: KL
Well No: GL 28-1
Field Dup: ~~XXDUP 7~~ *

MONITORING WELL INFORMATION

Time of Measurement: _____
Depth of Water (A): _____
Bottom of Well (B): _____
Well Condition: _____
One Well Volume: _____
Diameter of Well: _____
(B-A)*2 _____ Litres for 51mm ϕ well
(B-A)*8 _____ Litres for 102mm ϕ well

EQUIPMENT LIST

☐ Waterra
☐ Hydrolift
☐ Bailer
☑ Peristaltic
☐ Bladder
Pump Details: _____

Multi-meter Model: YSI Pro
☐ Field Bump ☐ Field Calibration
pH 4 _____ pH 7 _____ pH10 _____
1413µs/cm _____ 5000µs/cm _____ DO _____

WELL DEVELOPMENT

Purge Volume: Well Vol. X _____ = _____
Average Flow Rate: _____
Sample Intake Depth: _____

Time	Vol. Removed (L)	Temp (°C)	pH (Units)	Conductivity (uS/cm)	Redox (mV)	Dissolved O_2 (mg/L)	Water Level (m)	Comments
10:22	0						5.388	
10:25	.500	12.6	7.05	4005	79.8	2.17	5.425	
10:28	1.000	12.5	7.06	4005	58.0	1.70	5.433	
10:31	1.500	12.5	7.07	3990	42.2	1.44	5.433	
10:34	2.000	12.3	7.08	3998	34.5	1.36	5.430	
10:37	2.500	12.3	7.09	3989	21.9	1.22	5.436	
10:40	3.000	12.3	7.07	3992	17.3	1.19	5.436	
		SAMPLE						

Odour: ☐ Yes ☑ No If Yes, describe _____
Sheen: ☐ Yes ☑ No If Yes, describe _____
Turbidity: Clear I I I (1) I I I I I I I I I I I I I I I I I I I I Very Silty

Analysis	Type		Container Size					Filtered	
			40 mL	125 mL	250 mL	500 mL	1 L		
General	X Plastic	☐ Glass					1	☐ Yes	☐ No
Metals	X Plastic	☐ Glass		1				☐ Yes	☐ No
Mercury	☐ Plastic	X Glass	1					☐ Yes	☐ No
COD, nutrient	X Plastic	X Glass		1				☐ Yes	☐ No
Organic C	☐ Plastic	X Glass	2					☐ Yes	☐ No
LEPH/HEPH	☐ Plastic	X Glass						☐ Yes	☐ No
Sulfide	X Plastic	☐ Glass						☐ Yes	☐ No
VOC/BTEX	☐ Plastic	X Glass						☐ Yes	☐ No

City of Kelowna

GROUNDWATER SAMPLING FORM
GLENMORE LANDFILL

Weather: cloudy | Date: MAY 26, 2025 | Well No: GL-28-2
Temperature: 16° | Tech: KL | Field Dup: _____

MONITORING WELL INFORMATION

Time of Measurement: _____ | One Well Volume: _____
Depth of Water (A): _____ | Diameter of Well: _____
Bottom of Well (B): _____ | (B-A)*2 _____ Litres for 51mm ϕ well
Well Condition: _____ | (B-A)*8 _____ Litres for 102mm ϕ well

EQUIPMENT LIST

☐ Waterra
☐ Hydrolift
☐ Bailer
☑ Peristaltic
☐ Bladder
Pump Details: _____

Multi-meter Model: YSI Pro
☐ Field Bump ☑ Field Calibration ✓
pH 4 _____ pH 7 ✓ pH10 _____
1413µs/cm _____ 5000µs/cm ✓ DO ✓
orp

WELL DEVELOPMENT

Purge Volume: Well Vol. X _____ = _____ | Sample Intake Depth: _____
Average Flow Rate: _____

Time	Vol. Removed (L)	Temp (°C)	pH (Units)	Conductivity (uS/cm)	Redox (mV)	Dissolved O_2 (mg/L)	Water Level (m)	Comments
11:09	0						4.967	SOME SILT
11:12	.650	12.4	6.96	✓871	✓3.5	3.04	5.026	CLEAR
11:15	1.250	12.4	6.95	5862	✓7.2	1.95	✓.025	
11:18	1.700	12.4	6.95	5872	✓6.4	1.69	✓018	
11:21	2.150	12.3	6.94	✓860	✓7.9	1.38	✓.017	
~~11:24~~	2.750	12.3	6.94	5843	5.98	1.10	✓.017	
			SAMPLE					

Odour: ☐ Yes ☑ No If Yes, describe _____
Sheen: ☐ Yes ☑ No If Yes, describe _____
Turbidity: Clear I I I (I) I I I I I I I I I I I I I I I I I I Very Silty

Analysis	Type		Container Size					Filtered	
			40 mL	125 mL	250 mL	500 mL	1 L		
General	X Plastic	☐ Glass					1	☐ Yes	☐ No
Metals	X Plastic	☐ Glass		1				☐ Yes	☐ No
Mercury	☐ Plastic	X Glass	1					☐ Yes	☐ No
COD, nutrient	X Plastic	X Glass		1				☐ Yes	☐ No
Organic C	☐ Plastic	X Glass	2					☐ Yes	☐ No
LEPH/HEPH	☐ Plastic	X Glass						☐ Yes	☐ No
Sulfide	X Plastic	☐ Glass						☐ Yes	☐ No
VOC/BTEX	☐ Plastic	X Glass						☐ Yes	☐ No

GROUNDWATER SAMPLING FORM
GLENMORE LANDFILL

City of Kelowna

Weather: Cloudy Date: MAY 26, 2025 Well No: GL 28-3
Temperature: 17° Tech: KW Field Dup: _____

MONITORING WELL INFORMATION

Time of Measurement: _____ One Well Volume: _____
Depth of Water (A): _____ Diameter of Well: _____
Bottom of Well (B): _____ (B-A)*2 _____ Litres for 51mm ϕ well
Well Condition: _____ (B-A)*8 _____ Litres for 102mm ϕ well

EQUIPMENT LIST

☐ Waterra
☐ Hydrolift
☐ Bailer
☑ Peristaltic
☐ Bladder
Pump Details: _____

Multi-meter Model: YSI Pro
☐ Field Bump ☑ Field Calibration
pH 4 _____ pH 7 ~ pH10 ~
1413µs/cm _____ 5000µs/cm ~ DO ~
ORP

WELL DEVELOPMENT

Purge Volume: Well Vol. X _____ = _____ Sample Intake Depth: _____
Average Flow Rate: _____

Time	Vol. Removed (L)	Temp (°C)	pH (Units)	Conductivity (uS/cm)	Redox (mV)	Dissolved O_2 (mg/L)	Water Level (m)	Comments
11:42	0						4.980	TURBID
11:45	400	13.6	7.17	7707	99.9	4.80	5.112	CLEAR
11:48	700	13.7	7.16	7712	96.4	4.74	5.156	
12:01	1.000	13.3	7.17	7729	97.5	4.56	5.196	
12:04	1.300	13.5	7.15	7781	98.7	3.91	5.204	
				SAMPLE				

Odour: ☐ Yes ☑ No If Yes, describe _____
Sheen: ☐ Yes ☑ No If Yes, describe _____
Turbidity: Clear I I I I I I I I I I I I I I I I I I I I I I I I I Very Silty

Analysis	Type		Container Size					Filtered	
			40 mL	125 mL	250 mL	500 mL	1 L		
General	X Plastic	☐ Glass					1	☐ Yes	☐ No
Metals	X Plastic	☐ Glass		1				☐ Yes	☐ No
Mercury	☐ Plastic	X Glass	1					☐ Yes	☐ No
COD, nutrient	X Plastic	X Glass		1				☐ Yes	☐ No
Organic C	☐ Plastic	X Glass	2					☐ Yes	☐ No
LEPH/HEPH	☐ Plastic	X Glass						☐ Yes	☐ No
Sulfide	X Plastic	☐ Glass						☐ Yes	☐ No
VOC/BTEX	☐ Plastic	X Glass						☐ Yes	☐ No

City of Kelowna

GROUNDWATER SAMPLING FORM
GLENMORE LANDFILL

Weather: MOSTLY CLOUDY Date: MAY 13, 2025 Well No: GL 29-1
Temperature: 20° Tech: KR Field Dup: _____

MONITORING WELL INFORMATION

Time of Measurement: _____ One Well Volume: _____
Depth of Water (A): 4.374 Diameter of Well: _____
Bottom of Well (B): _____ (B-A)*2 _____ Litres for 51mm ϕ well
Well Condition: _____ (B-A)*8 _____ Litres for 102mm ϕ well

EQUIPMENT LIST

☐ Waterra
☐ Hydrolift
☐ Bailer
☐ Peristaltic
☑ Bladder
Pump Details: _____

Multi-meter Model: YSI Pro
☐ Field Bump ☑ Field Calibration
pH 4 _____ pH 7 ✓ pH10 ✓
1413µs/cm _____ 5000µs/cm ✓ DO ✓
ORP

WELL DEVELOPMENT

Purge Volume: Well Vol. X _____ = _____ Sample Intake Depth: _____
Average Flow Rate: _____

Time	Vol. Removed (L)	Temp (°C)	pH (Units)	Conductivity (uS/cm)	Redox (mV)	Dissolved O_2 (mg/L)	Water Level (m)	Comments
14:50	0						4.374	YELLOWISH TINT
14:53	.400	16.3	7.51	2074	9.9	0.84	4.649	
14:56	.800	16.3	7.40	2122	14.0	0.74	4.756	CLEARING SOMEWHAT
14:59	1.200	16.2	7.40	2145	21.1	0.69	4.834	
15:02	1.600	16.1	7.40	2166	41.9	0.62	4.927	
15:05	1.950	16.0	7.40	2194	50.5	0.64	4.989	
15:08	2.500	15.4	7.42	2178	51.5	0.61	5.062	
15:11	2.900	15.4	7.41	2178	53.5	0.60	5.177	
15:14	3.300	15.3	7.42	2177	54.1	0.60	5.305	
					SAMPLE			

Odour: ☐ Yes ☑ No If Yes, describe _____
Sheen: ☐ Yes ☑ No If Yes, describe _____
Turbidity: Clear I I I

GROUNDWATER SAMPLING FORM
GLENMORE LANDFILL

City of Kelowna

Weather: MOSTLY CLOUDY Date: MAY 13, 2025 Well No: GC 29-2
Temperature: 19° Tech: KR Field Dup: _____

MONITORING WELL INFORMATION

Time of Measurement: _____ One Well Volume: _____
Depth of Water (A): 3.515 Diameter of Well: _____
Bottom of Well (B): _____ (B-A)*2 _____ Litres for 51mm ϕ well
Well Condition: _____ (B-A)*8 _____ Litres for 102mm ϕ well

EQUIPMENT LIST

☐ Waterra
☐ Hydrolift
☐ Bailer
☑ Peristaltic
☐ Bladder
Pump Details: _____

Multi-meter Model: ✓ YSI Pro
☐ Field Bump ☐ Field Calibration ✓
pH 4 _____ pH 7 ✓ pH10 _____
1413µs/cm _____ 5000µs/cm ✓ DO ✓
ORP

WELL DEVELOPMENT

Purge Volume: Well Vol. X _____ = _____ Sample Intake Depth: _____
Average Flow Rate: _____

Time	Vol. Removed (L)	Temp (°C)	pH (Units)	Conductivity (uS/cm)	Redox (mV)	Dissolved O_2 (mg/L)	Water Level (m)	Comments
14:08	0					3.515	3.515	
14:11	.550	16.4	7.34	7406	-17.0	2.11	3.857	
14:14	.900	16.6	7.38	7422	-23.2	1.77	3.973	
14:17	1.300	16.4	7.32	7397	-26.3	1.39	4.095	
14:20	1.700	16.1	7.32	7341	-24.7	1.30	4.196	
14:23	2.100	16.7	7.26	7331	-21.4	1.28	4.332	
14:25	2.500	16.8	7.28	7287	-17.5	1.24	4.401	
14:28	2.900	16.0	7.31	7297	-12.2	1.23	4.479	
					SAMPLE			

Odour: ☐ Yes ☑ No If Yes, describe _____
Sheen: ☐ Yes ☑ No If Yes, describe _____
Turbidity: Clear I I I I I I I I I I I I I I I I I I I I I I I I I Very Silty

Analysis	Type		Container Size					Filtered	
			40 mL	125 mL	250 mL	500 mL	1 L		
General	X Plastic	☐ Glass					1	☐ Yes	☐ No
Metals	X Plastic	☐ Glass		1				✓ Yes	☐ No
Mercury	☐ Plastic	X Glass	1					✓ Yes	☐ No
COD, nutrient	X Plastic	X Glass		1				☐ Yes	☐ No
Organic C	☐ Plastic	X Glass	2					✓ Yes	☐ No
LEPH/HEPH	☐ Plastic	X Glass						☐ Yes	☐ No
Sulfide	X Plastic	☐ Glass						☐ Yes	☐ No
VOC/BTEX	☐ Plastic	X Glass						☐ Yes	☐ No

City of Kelowna

GROUNDWATER SAMPLING FORM
GLENMORE LANDFILL

Weather: Mostly Cloudy Date: MAY 22, 2025 Well No: GL 35-3
Temperature: 15° Tech: KL Field Dup: _____

MONITORING WELL INFORMATION

Time of Measurement: _____ One Well Volume: _____
Depth of Water (A): 0.815 Diameter of Well: _____
Bottom of Well (B): _____ (B-A)*2 _____ Litres for 51mm ϕ well
Well Condition: _____ (B-A)*8 _____ Litres for 102mm ϕ well

EQUIPMENT LIST

☐ Waterra
☐ Hydrolift
☐ Bailer
☐ Peristaltic
☐ Bladder
Pump Details: _____

Multi-meter Model: YSI Pro
☐ Field Bump ☐ Field Calibration ✓
pH 4 _____ pH 7 ✓ pH10 ✓
1413µs/cm _____ 5000µs/cm ✓ DO ✓
ORP

WELL DEVELOPMENT

Purge Volume: Well Vol. X _____ = _____ Sample Intake Depth: _____
Average Flow Rate: _____

Time	Vol. Removed (L)	Temp (°C)	pH (Units)	Conductivity (uS/cm)	Redox (mV)	Dissolved O_2 (mg/L)	Water Level (m)	Comments
10:49	0						0.815	
10:52	.600	12.5	6.95	10435	-72.5	3.35	0.933	
10:55	1.100	12.7	6.92	10087	-89.0	2.44	0.937	
10:58	1.900	12.0	6.86	8827	-86.5	1.87	1.046	
11:01	2.500	12.1	6.91	8732	-83.0	1.65	1.007	
11:04	3.100	12.1	6.83	8666	-82.4	1.40	0.998	
								WATER REACTS WITH PRESERVATIVE
				SAMPLE				

Odour: ☐ Yes ☑ No If Yes, describe _____
Sheen: ☐ Yes ☑ No If Yes, describe _____
Turbidity: Clear I I I I I I I I I I I I I I I I I I I I I I I I I Very Silty

Analysis	Type		Container Size					Filtered	
			40 mL	125 mL	250 mL	500 mL	1 L		
General	X Plastic	☐ Glass					1	☐ Yes	☐ No
Metals	X Plastic	☐ Glass		1				☐ Yes	☐ No
Mercury	☐ Plastic	X Glass	1					☐ Yes	☐ No
COD, nutrient	X Plastic	X Glass		1				☐ Yes	☐ No
Organic C	☐ Plastic	X Glass	2					☐ Yes	☐ No
LEPH/HEPH	☐ Plastic	X Glass						☐ Yes	☐ No
Sulfide	X Plastic	☐ Glass						☐ Yes	☐ No
VOC/BTEX	☐ Plastic	X Glass						☐ Yes	☐ No

City of Kelowna

GROUNDWATER SAMPLING FORM
GLENMORE LANDFILL

Weather: MOSTLY CLOUDY Date: MAY 21, 2025 Well No: GL 39-1
Temperature: 10° Tech: KL Field Dup: DUP 4 ***

MONITORING WELL INFORMATION

Time of Measurement: _____ One Well Volume: _____
Depth of Water (A): 3.524 Diameter of Well: _____
Bottom of Well (B): _____ (B-A)*2 _____ Litres for 51mm ϕ well
Well Condition: _____ (B-A)*8 _____ Litres for 102mm ϕ well

EQUIPMENT LIST

☐ Waterra
☐ Hydrolift
☐ Bailer
☑ Peristaltic
☐ Bladder
Pump Details: _____

Multi-meter Model: YSI Pro
☐ Field Bump ☑ Field Calibration
pH 4 _____ pH 7 ✓ pH10 ✓
1413µs/cm _____ 5000µs/cm ✓ DO ✓

ORP

WELL DEVELOPMENT

Purge Volume: Well Vol. X _____ = _____ Sample Intake Depth: _____
Average Flow Rate: _____

Time	Vol. Removed (L)	Temp (°C)	pH (Units)	Conductivity (uS/cm)	Redox (mV)	Dissolved O_2 (mg/L)	Water Level (m)	Comments
8:50	0						3.524	CLEAR
8:53	.400	11.0	7.07	4522	210.3	4.12	3.536	
8:56	.800	11.0	7.05	4527	216.5	3.35	3.542	
8:59	1.300	10.9	7.07	4537	205.9	2.53	3.561	
9:02	1.800	10.9	7.07	4537	200.1	1.95	3.560	
9:05		10.9	7.09	4534	195.4	1.62	3.559	
			SAMPLE					

Odour: ☐ Yes ☑ No If Yes, describe _____
Sheen: ☐ Yes ☑ No If Yes, describe _____
Turbidity: Clear I I I (1) I I I I I I I I I I I I I I I I I I I I Very Silty

Analysis	Type		Container Size					Filtered	
			40 mL	125 mL	250 mL	500 mL	1 L		
General	X Plastic	☐ Glass					1	☐ Yes	☐ No
Metals	X Plastic	☐ Glass		1				☐ Yes	☐ No
Mercury	☐ Plastic	X Glass	1					☐ Yes	☐ No
COD, nutrient	X Plastic	X Glass		1				☐ Yes	☐ No
Organic C	☐ Plastic	X Glass	2					☐ Yes	☐ No
LEPH/HEPH	☐ Plastic	X Glass						☐ Yes	☐ No
Sulfide	X Plastic	☐ Glass						☐ Yes	☐ No
VOC/BTEX	☐ Plastic	X Glass						☐ Yes	☐ No

City of Kelowna

GROUNDWATER SAMPLING FORM
GLENMORE LANDFILL

Weather: MOSTLY CLOUDY Date: MAY 21, 2025 Well No: GL 39-2
Temperature: 11° Tech: KR Field Dup: _____

MONITORING WELL INFORMATION

Time of Measurement: _____ One Well Volume: _____
Depth of Water (A): 3.503 Diameter of Well: _____
Bottom of Well (B): _____ (B-A)*2 _____ Litres for 51mm ϕ well
Well Condition: _____ (B-A)*8 _____ Litres for 102mm ϕ well

EQUIPMENT LIST

☐ Waterra
☐ Hydrolift
☐ Bailer
☑ Peristaltic
☐ Bladder
Pump Details: _____

Multi-meter Model: YSI Pro
☐ Field Bump ☑ Field Calibration
pH 4 _____ pH 7 ✓ pH10 ✓
1413µs/cm _____ 5000µs/cm ✓ DO ✓
ORP

WELL DEVELOPMENT

Purge Volume: Well Vol. X _____ = _____ Sample Intake Depth: _____
Average Flow Rate: _____

Time	Vol. Removed (L)	Temp (°C)	pH (Units)	Conductivity (uS/cm)	Redox (mV)	Dissolved O_2 (mg/L)	Water Level (m)	Comments
9:28	0						3.503	CLEAN
9:31	1.800	9.9	7.67	1894	165.5	1.20	3.570	
9:34	1.300	10.2	7.69	1896	163.7	1.14	3.551	
9:37	1.800	10.1	7.67	1903	161.0	1.21	3.559	
9:40	2.300	10.1	7.67	1923	160.4	1.03	3.560	
9:43	2.800	10.2	7.65	1936	159.4	0.90	3.560	
			—	SAMPLE		9:45	—	

Odour: ☐ Yes ☑ No If Yes, describe _____
Sheen: ☐ Yes ☐ No If Yes, describe _____
Turbidity: Clear I I I (1) I I I I I I I I I I I I I I I I I I I I Very Silty

Analysis	Type		Container Size					Filtered	
			40 mL	125 mL	250 mL	500 mL	1 L		
General	X Plastic	☐ Glass					1	☐ Yes	☐ No
Metals	X Plastic	☐ Glass		1				☐ Yes	☐ No
Mercury	☐ Plastic	X Glass	1					☐ Yes	☐ No
COD, nutrient	X Plastic	X Glass		1				☐ Yes	☐ No
Organic C	☐ Plastic	X Glass	2					☐ Yes	☐ No
LEPH/HEPH	☐ Plastic	X Glass						☐ Yes	☐ No
Sulfide	X Plastic	☐ Glass						☐ Yes	☐ No
VOC/BTEX	☐ Plastic	X Glass						☐ Yes	☐ No

GROUNDWATER SAMPLING FORM
GLENMORE LANDFILL

City of Kelowna

Weather: SUNNY Date: MAY 28, 2025 Well No: GL 41-1
Temperature: 21° Tech: ER Field Dup: _____

MONITORING WELL INFORMATION

Time of Measurement: _____ One Well Volume: _____
Depth of Water (A): _____ Diameter of Well: _____
Bottom of Well (B): _____ (B-A)*2 _____ Litres for 51mm ϕ well
Well Condition: _____ (B-A)*8 _____ Litres for 102mm ϕ well

EQUIPMENT LIST

☐ Waterra
☐ Hydrolift
☐ Bailer
☑ Peristaltic
☐ Bladder
Pump Details: _____

Multi-meter Model: YSI Pro
☐ Field Bump ☐ Field Calibration ✓
pH 4 _____ pH 7 ✓ pH10 _____
1413µs/cm _____ 5000µs/cm ✓ DO ✓
ORP

WELL DEVELOPMENT

Purge Volume: Well Vol. X _____ = _____ Sample Intake Depth: _____
Average Flow Rate: _____

Time	Vol. Removed (L)	Temp (°C)	pH (Units)	Conductivity (uS/cm)	Redox (mV)	Dissolved O_2 (mg/L)	Water Level (m)	Comments
10:27	0						2.717	
10:30	0.480	14.4	7.71	1462	145.6	8.50	3.029	
10:33	0.800	13.9	7.78	1507	141.7	5.71	3.188	
10:36	1.150	13.3	7.71	1346	137.9	4.59	3.324	
10:39	1.500	13.1	7.81	1272	136.6	4.74	3.476	
10:42	1.850	13.7	7.71	1236	136.0	5.13	3.603	
10:45	2.200	13.6	7.73	1235	134.0	5.17	3.692	
10:48	2.550	13.6	7.72	1222	132.4	5.11	3.784	
				SAMPLE				

Odour: ☐ Yes ☑ No If Yes, describe _____
Sheen: ☐ Yes ☐ No If Yes, describe _____
Turbidity: Clear I I I I I I I I I I I I I I I I I I I I I I I I I Very Silty

Analysis	Type		Container Size					Filtered	
			40 mL	125 mL	250 mL	500 mL	1 L		
General	X Plastic	☐ Glass					1	☐ Yes	☐ No
Metals	X Plastic	☐ Glass		1				☐ Yes	☐ No
Mercury	☐ Plastic	X Glass	1					☐ Yes	☐ No
COD, nutrient	X Plastic	X Glass		1				☐ Yes	☐ No
Organic C	☐ Plastic	X Glass	2					☐ Yes	☐ No
LEPH/HEPH	☐ Plastic	X Glass						☐ Yes	☐ No
Sulfide	X Plastic	☐ Glass						☐ Yes	☐ No
VOC/BTEX	☐ Plastic	X Glass						☐ Yes	☐ No

City of Kelowna

GROUNDWATER SAMPLING FORM
GLENMORE LANDFILL

Weather: SUNNY
Temperature: 23°
Date: MAY 28, 2025
Tech: KR
Well No: GL 41-2
Field Dup: _____

MONITORING WELL INFORMATION

Time of Measurement: _____
Depth of Water (A): _____
Bottom of Well (B): _____
Well Condition: _____

One Well Volume: _____
Diameter of Well: _____
(B-A)*2 _____ Litres for 51mm ϕ well
(B-A)*8 _____ Litres for 102mm ϕ well

EQUIPMENT LIST

☐ Waterra
☐ Hydrolift
☐ Bailer
☑ Peristaltic
☐ Bladder
Pump Details: _____

Multi-meter Model: YSI Pro
☐ Field Bump ☑ Field Calibration
pH 4 _____ pH 7 ✓ pH10 ✓
1413µs/cm _____ 5000µs/cm ✓ DO ✓
GAP

WELL DEVELOPMENT

Purge Volume: Well Vol. X _____ = _____
Average Flow Rate: _____
Sample Intake Depth: _____

Time	Vol. Removed (L)	Temp (°C)	pH (Units)	Conductivity (uS/cm)	Redox (mV)	Dissolved O_2 (mg/L)	Water Level (m)	Comments
11:11	~~0~~	~~15.0~~					2.760	AIR BUBBLES
11:14	.500	14.2	7.87	1150	128.9	13.69	2.760	
11:17	.900	14.1	7.66	1169	124.0	10.39	2.761	
11:20	1.200	15.0	8.00	1179	122.0	10.02	2.760	
11:23	1.650	14.4	7.89	1177	123.5	9.88	2.758	
11:26	1.950	15.0	8.00	1180	121.0	9.60	2.770	
11:29	2.500	13.9	7.83	1186	123.7	9.39	2.770	
				SAMPLE				

Odour: ☐ Yes ☑ No If Yes, describe _____
Sheen: ☐ Yes ☑ No If Yes, describe _____
Turbidity: Clear I I I

City of Kelowna

GROUNDWATER SAMPLING FORM
GLENMORE LANDFILL

Weather: SUNNY
Temperature: 24°
Date: MAY 28, 2025
Tech: KL
Well No: GL 94-B
Field Dup: DUP 8

MONITORING WELL INFORMATION

Time of Measurement: _____
Depth of Water (A): _____
Bottom of Well (B): _____
Well Condition: _____

One Well Volume: _____
Diameter of Well: _____
(B-A)*2 _____ Litres for 51mm ϕ well
(B-A)*8 _____ Litres for 102mm ϕ well

EQUIPMENT LIST

☐ Waterra
☐ Hydrolift
☐ Bailer
☑ Peristaltic
☐ Bladder
Pump Details: _____

Multi-meter Model: YSI Pro
☐ Field Bump ☑ Field Calibration ✓
pH 4 _____ pH 7 ✓ pH10 ✓
1413µs/cm _____ 5000µs/cm ✓ DO ✓
9KP

WELL DEVELOPMENT

Purge Volume: Well Vol. X _____ = _____ Sample Intake Depth: _____
Average Flow Rate: _____

Time	Vol. Removed (L)	Temp (°C)	pH (Units)	Conductivity (uS/cm)	Redox (mV)	Dissolved O_2 (mg/L)	Water Level (m)	Comments
11:51	0						2.697	
11:54	.500	12.4	7.39	1236	127.8	4.87	2.699	
11:57	1.100	12.7	7.43	1230	128.3	4.28	2.690	
12:00	1.700	12.6	7.56	1224	128.8	4.20	2.690	
12:03	2.300	12.5	7.53	1231	127.3	3.64	2.690	
12:06	2.900	12.4	7.51	1234	124.0	3.65	2.690	

Odour: ☐ Yes ☑ No If Yes, describe _____
Sheen: ☐ Yes ☑ No If Yes, describe _____
Turbidity: Clear I I I I I I I I I I I I I I I I I I I I I I I I I Very Silty

Analysis	Type		Container Size					Filtered	
			40 mL	125 mL	250 mL	500 mL	1 L		
General	X Plastic	☐ Glass					1	☐ Yes	☐ No
Metals	X Plastic	☐ Glass		1				☐ Yes	☐ No
Mercury	☐ Plastic	X Glass	1					☐ Yes	☐ No
COD, nutrient	X Plastic	X Glass		1				☐ Yes	☐ No
Organic C	☐ Plastic	X Glass	2					☐ Yes	☐ No
LEPH/HEPH	☐ Plastic	X Glass						☐ Yes	☐ No
Sulfide	X Plastic	☐ Glass						☐ Yes	☐ No
VOC/BTEX	☐ Plastic	X Glass						☐ Yes	☐ No

GROUNDWATER SAMPLING FORM
GLENMORE LANDFILL

City of Kelowna

Weather: MOSTLY CLOUDY Date: MAY 22, 2025 Well No: GL 42-1
Temperature: 17° Tech: KP Field Dup: _____

MONITORING WELL INFORMATION

Time of Measurement: _____ One Well Volume: _____
Depth of Water (A): 10.865 Diameter of Well: _____
Bottom of Well (B): _____ (B-A)*2 _____ Litres for 51mm ϕ well
Well Condition: _____ (B-A)*8 _____ Litres for 102mm ϕ well

EQUIPMENT LIST

☐ Waterra
☐ Hydrolift
☐ Bailer
☐ Peristaltic
☑ Bladder
Pump Details: _____

Multi-meter Model: YSI Pro
☐ Field Bump ☑ Field Calibration
pH 4 _____ pH 7 ✓ pH10 ✓
1413µs/cm _____ 5000µs/cm ✓ DO ✓
grp

WELL DEVELOPMENT

Purge Volume: Well Vol. X _____ = _____ Sample Intake Depth: _____
Average Flow Rate: _____

Time	Vol. Removed (L)	Temp (°C)	pH (Units)	Conductivity (uS/cm)	Redox (mV)	Dissolved O_2 (mg/L)	Water Level (m)	Comments
~~2:30~~	~~0~~						~~10.865~~ 11.199	
2:30	.750	13.3	7.11	11597	90.9	7.31	11.523	AIR BUBBLES
2:33	1.500	13.5	7.11	11586	88.8	6.71	11.696	
2:36	2.100	13.4	7.18	11597	82.3	5.97	11.784	
2:39	2.700	13.4	7.11	11596	71.2	5.58	11.872	
2:42	3.300	13.6	7.04	11579	56.0	5.11	11.969	
2:45	3.900	13.4	7.04	11536	47.4	4.86	12.035	
				- SAMPLE	-			

Odour: ☐ Yes ☑ No If Yes, describe _____
Sheen: ☐ Yes ☑ No If Yes, describe _____
Turbidity: Clear I I I

GROUNDWATER SAMPLING FORM
GLENMORE LANDFILL

City of Kelowna

Weather: _____ Date: MAY 20, 2025 Well No: 42-2
Temperature: _____ Tech: KL Field Dup: PURGING ***

MONITORING WELL INFORMATION

Time of Measurement: 14:30 One Well Volume: _____
Depth of Water (A): 11.117 Diameter of Well: _____
Bottom of Well (B): _____ (B-A)*2 _____ Litres for 51mm ϕ well 7 sec
Well Condition: _____ (B-A)*8 _____ Litres for 102mm ϕ well 7 sec
20 psi

EQUIPMENT LIST

☐ Waterra
☐ Hydrolift
☐ Bailer
☐ Peristaltic
☑ Bladder
Pump Details: _____

Multi-meter Model: YSI Pro
☐ Field Bump ☐ Field Calibration
pH 4 _____ pH 7 ✓ pH10 ✓
1413µs/cm _____ 5000µs/cm ✓ DO ✓
GRAB

WELL DEVELOPMENT

Purge Volume: Well Vol. X _____ = _____ Sample Intake Depth: _____
Average Flow Rate: _____

Time	Vol. Removed (L)	Temp (°C)	pH (Units)	Conductivity (uS/cm)	Redox (mV)	Dissolved O_2 (mg/L)	Water Level (m)	Comments
2:31	Ø						11.117	TURBID
2:34	.400	13.4	7.33	6884	206.0	7.43	11.204	
2:37	1.150	13.2	7.29	6902	200.1	5.63	11.267	CLEARING
2:40	1.700	13.4	7.29	6906	192.6	4.43	11.333	CLEAR
2:43	2.250	13.9	7.28	6908	184.5	3.75	11.386	
2:46	2.800	14.3	7.26	6896	179.1	3.30	11:420	DRY
	MAY 22 SAMPLE							
11:41	Ø						10.986	
11:44	.750	12.7	7.26	6803	90.0	4.93	11.019	
			SAMPLE					

Odour: ☐ Yes ☐ No If Yes, describe _____
Sheen: ☐ Yes ☐ No If Yes, describe _____
Turbidity: Clear I I I I I I I I I I I I I I I I I I I I I I I I I Very Silty

Analysis	Type		Container Size					Filtered	
			40 mL	125 mL	250 mL	500 mL	1 L		
General	X Plastic	☐ Glass					1	☐ Yes	☐ No
Metals	X Plastic	☐ Glass		1				☐ Yes	☐ No
Mercury	☐ Plastic	X Glass	1					☐ Yes	☐ No
COD, nutrient	X Plastic	X Glass		1				☐ Yes	☐ No
Organic C	☐ Plastic	X Glass	2					☐ Yes	☐ No
LEPH/HEPH	☐ Plastic	X Glass						☐ Yes	☐ No
Sulfide	X Plastic	☐ Glass						☐ Yes	☐ No
VOC/BTEX	☐ Plastic	X Glass						☐ Yes	☐ No

City of Kelowna

GROUNDWATER SAMPLING FORM
GLENMORE LANDFILL

Weather: PARTLY CLOUDY Date: MAY 23, 2025 Well No: 43-1
Temperature: 17° Tech: KH Field Dup: _____

MONITORING WELL INFORMATION

Time of Measurement: _____ One Well Volume: _____
Depth of Water (A): 2.949 Diameter of Well: _____
Bottom of Well (B): _____ (B-A)*2 _____ Litres for 51mm ϕ well
Well Condition: _____ (B-A)*8 _____ Litres for 102mm ϕ well

EQUIPMENT LIST

☐ Waterra
☐ Hydrolift
☐ Bailer
☑ Peristaltic
☐ Bladder
Pump Details: _____

Multi-meter Model: YSI Pro
☐ Field Bump ☐ Field Calibration
pH 4 _____ pH 7 _____ pH10 _____
1413µs/cm _____ 5000µs/cm _____ DO _____
ORP

WELL DEVELOPMENT

Purge Volume: Well Vol. X _____ = _____ Sample Intake Depth: _____
Average Flow Rate: _____

Time	Vol. Removed (L)	Temp (°C)	pH (Units)	Conductivity (uS/cm)	Redox (mV)	Dissolved O_2 (mg/L)	Water Level (m)	Comments
11:50	0						2.949	
11:53	.450	10.5	7.52	3527	154.9	3.62	3.309	
11:56	.900	10.8	7.54	3529	152.8	3.15	3.347	
			SAMPLE					

Odour: ☐ Yes ☐ No If Yes, describe _____
Sheen: ☐ Yes ☐ No If Yes, describe _____
Turbidity: Clear I I I I I I I I I I I I I I I I I I I I I I I I I I I Very Silty

Analysis	Type		Container Size					Filtered	
			40 mL	125 mL	250 mL	500 mL	1 L		
General	X Plastic	☐ Glass					1	☐ Yes	☐ No
Metals	X Plastic	☐ Glass		1				☐ Yes	☐ No
Mercury	☐ Plastic	X Glass	1					☐ Yes	☐ No
COD, nutrient	X Plastic	X Glass		1				☐ Yes	☐ No
Organic C	☐ Plastic	X Glass	2					☐ Yes	☐ No
LEPH/HEPH	☐ Plastic	X Glass						☐ Yes	☐ No
Sulfide	X Plastic	☐ Glass						☐ Yes	☐ No
VOC/BTEX	☐ Plastic	X Glass						☐ Yes	☐ No

City of Kelowna

GROUNDWATER SAMPLING FORM
GLENMORE LANDFILL

Weather: PARTLY CLOUDY Date: MAY 20, 2025 Well No: GW 43-1
Temperature: 10° Tech: KR Field Dup: PURGING ~~X X X~~

MONITORING WELL INFORMATION

Time of Measurement: 13:20 One Well Volume: _____
Depth of Water (A): 2.950 Diameter of Well: _____
Bottom of Well (B): _____ (B-A)*2 _____ Litres for 51mm ϕ well
Well Condition: _____ (B-A)*8 _____ Litres for 102mm ϕ well

EQUIPMENT LIST

☐ Waterra Multi-meter Model: YSI Pro
☐ Hydrolift ☐ Field Bump ☑ Field Calibration
☐ Bailer pH 4 _____ pH 7 ✓ pH10 ✓
☑ Peristaltic 1413µs/cm _____ 5000µs/cm ✓ DO ✓
☐ Bladder ORP
Pump Details: _____

WELL DEVELOPMENT

Purge Volume: Well Vol. X _____ = _____ Sample Intake Depth: _____
Average Flow Rate: _____

Time	Vol. Removed (L)	Temp (°C)	pH (Units)	Conductivity (uS/cm)	Redox (mV)	Dissolved O_2 (mg/L)	Water Level (m)	Comments
1:26	0						2.950	CLEAN
1:29	0.600	9.7	7.40	3560	208.2	3.21	3.388	
1:32	1.000	10.4	7.46	3541	197.8	2.79	3.426	
1:35	1.400	10.7	7.46	3534	192.9	2.99	3.544	
1:38	1800	10.6	7.52	3517	185.8	3.55	3.656	
1:41	2.200	10.8	7.52	3527	182.6	3.57	3.776	
1:44	2.600	10.8	7.51	3538	179.9	2.98	3.860	
1:47	3000	10.8	7.55	3525	177.1	3.17	3.962	
1:50	3.350	10.9	7.58	3.305	174.8	5.15	DRY	

Odour: ☐ Yes ☐ No If Yes, describe _____
Sheen: ☐ Yes ☐ No If Yes, describe _____
Turbidity: Clear I I I (I) I I I I I I I I I I I I I I I I I I I I Very Silty

Analysis	Type		Container Size					Filtered	
			40 mL	125 mL	250 mL	500 mL	1 L		
General	X Plastic	☐ Glass					1	☐ Yes	☐ No
Metals	X Plastic	☐ Glass		1				☐ Yes	☐ No
Mercury	☐ Plastic	X Glass	1					☐ Yes	☐ No
COD, nutrient	X Plastic	X Glass		1				☐ Yes	☐ No
Organic C	☐ Plastic	X Glass	2					☐ Yes	☐ No
LEPH/HEPH	☐ Plastic	X Glass						☐ Yes	☐ No
Sulfide	X Plastic	☐ Glass						☐ Yes	☐ No
VOC/BTEX	☐ Plastic	X Glass						☐ Yes	☐ No

City of Kelowna

GROUNDWATER SAMPLING FORM
GLENMORE LANDFILL

Weather: CLOUDY
Temperature: 16°
Date: MAY 9, 2025
Tech: KR
Well No: 43-1
Field Dup: ~~* PURGING *~~

MONITORING WELL INFORMATION

Time of Measurement: 2.9 10:40
Depth of Water (A): 2.970
Bottom of Well (B):
Well Condition:
One Well Volume:
Diameter of Well:
(B-A)*2 _____ Litres for 51mm ϕ well
(B-A)*8 _____ Litres for 102mm ϕ well

EQUIPMENT LIST

☐ Waterra
☐ Hydrolift
☐ Bailer
☑ Peristaltic
☐ Bladder
Pump Details:

Multi-meter Model: YSI Pro
☐ Field Bump ☐ Field Calibration
pH 4 _____ pH 7 ✓ pH10 ✓
1413µs/cm _____ 5000µs/cm ✓ DO ✓
ORP

WELL DEVELOPMENT

Purge Volume: Well Vol. X _____ = _____
Average Flow Rate: _____
Sample Intake Depth: _____

Time	Vol. Removed (L)	Temp (°C)	pH (Units)	Conductivity (uS/cm)	Redox (mV)	Dissolved O_2 (mg/L)	Water Level (m)	Comments
10:42	∅						2.970	SOME TURBIDITY
10:45	0.750	9.2	7.55	3514	229	5.71	3.425	
10:48	1.350	9.3	7.67	3509	216.4	5.05	3.631	CLEARED
10:51	1.950	9.1	7.72	3514	205.3	4.92	3.855	TURBID AGAIN
10:54	2.310	9.4	7.76	3504	195.8	5.45	3.960	
					DRY -		SAMPLE ON THE 12TH	

Odour: ☐ Yes ☑ No If Yes, describe _____
Sheen: ☐ Yes ☑ No If Yes, describe _____
Turbidity: Clear I I I

City of Kelowna

GROUNDWATER SAMPLING FORM
GLENMORE LANDFILL

Weather: MOSTLY CLOUDY Date: MAY 22, 2015 Well No: GL 96-1
Temperature: 18° Tech: KL Field Dup: ** DUP 5 **

MONITORING WELL INFORMATION

Time of Measurement: _____ One Well Volume: _____
Depth of Water (A): 11.209 Diameter of Well: _____
Bottom of Well (B): _____ (B-A)*2 _____ Litres for 51mm ϕ well
Well Condition: _____ (B-A)*8 _____ Litres for 102mm ϕ well

106
106
30p81

EQUIPMENT LIST

☐ Waterra Multi-meter Model: YSI Pro
☐ Hydrolift ☐ Field Bump ☐ Field Calibration
☐ Bailer pH 4 _____ pH 7 ✓ pH10 ✓
☐ Peristaltic 1413µs/cm _____ 5000µs/cm ✓ DO ✓
☑ Bladder ORP
Pump Details: _____

WELL DEVELOPMENT

Purge Volume: Well Vol. X _____ = _____ Sample Intake Depth: _____
Average Flow Rate: _____

Time	Vol. Removed (L)	Temp (°C)	pH (Units)	Conductivity (uS/cm)	Redox (mV)	Dissolved O_2 (mg/L)	Water Level (m)	Comments
1:30	0						11.209	
1:33	.800	12.9	7.46	6570	29.3	2.55	11.507	
1:36	1.600	12.9	7.47	6557	29.2	1.69	11.698	
1:39	2.400	12.9	7.46	6454	30.0	1.60	11.738	
1:42	2.900	13.3	7.43	6542	31.0	1.52	11.725	
1:45	3.400	13.2	7.46	6535	320	1.46	11.709	

Odour: ☐ Yes ☑ No If Yes, describe _____
Sheen: ☐ Yes ☑ No If Yes, describe _____
Turbidity: Clear I I I I(I)I I I I I I I I I I I I I I I I I I Very Silty

Analysis	Type		Container Size					Filtered	
			40 mL	125 mL	250 mL	500 mL	1 L		
General	X Plastic	☐ Glass					1	☐ Yes	☐ No
Metals	X Plastic	☐ Glass		1				☐ Yes	☐ No
Mercury	☐ Plastic	X Glass	1					☐ Yes	☐ No
COD, nutrient	X Plastic	X Glass		1				☐ Yes	☐ No
Organic C	☐ Plastic	X Glass	2					☐ Yes	☐ No
LEPH/HEPH	☐ Plastic	X Glass						☐ Yes	☐ No
Sulfide	X Plastic	☐ Glass						☐ Yes	☐ No
VOC/BTEX	☐ Plastic	X Glass						☐ Yes	☐ No

City of Kelowna

GROUNDWATER SAMPLING FORM
GLENMORE LANDFILL

Weather: MOSTLY SUNNY
Temperature: 17°
Date: JUNE 02, 2025
Tech: KR
Well No: GL 44-1
Field Dup: DUP 9

MONITORING WELL INFORMATION

Time of Measurement: _____
Depth of Water (A): _____
Bottom of Well (B): _____
Well Condition: _____

One Well Volume: _____
Diameter of Well: _____
(B-A)*2 _____ Litres for 51mm ϕ well
(B-A)*8 _____ Litres for 102mm ϕ well

EQUIPMENT LIST

☐ Waterra
☐ Hydrolift
☐ Bailer
☑ Peristaltic
☐ Bladder
Pump Details: _____

Multi-meter Model: YSI Pro
☐ Field Bump ☐ Field Calibration
pH 4 _____ pH 7 ✓ pH10 ✓
1413µs/cm _____ 5000µs/cm ✓ DO ✓
ORP

WELL DEVELOPMENT

Purge Volume: Well Vol. X _____ = _____
Average Flow Rate: _____
Sample Intake Depth: _____

Time	Vol. Removed (L)	Temp (°C)	pH (Units)	Conductivity (uS/cm)	Redox (mV)	Dissolved O_2 (mg/L)	Water Level (m)	Comments
10:32	0						0.89	
10:35	0.800	13.5	7.11	5939	11.7	1.95	0.912	
10:38	1.800	13.8	7.15	5959	-6.9	1.13	0.911	
10:41	1.5000	13.8	7.10	5922	-20.6	0.75	0.911	
10:44	1.900	13.9	7.01	5938	-25.5	0.69	0.926	
10:47	2.400	13.6	7.15	5927	-30.0	0.60	0.936	
10:50	2.900	13.5	7.04	5932	-32.2	0.56	0.937	
10:53	3.400	13.9	7.11	5919	-34.5	0.51	0.932	
10:56	3.900	13.7	7.09	5921	-36.5	0.49	0.932	
10:59	4.400	13.8	7.11	5936	-37.9	0.47	0.929	
			SAMPLE					

Odour: ☐ Yes ☐ No If Yes, describe _____
Sheen: ☐ Yes ☐ No If Yes, describe _____
Turbidity: Clear I I I I I I I I I I I I I I I I I I I I I I I I I I I Very Silty

Analysis	Type		Container Size					Filtered	
			40 mL	125 mL	250 mL	500 mL	1 L		
General	X Plastic	☐ Glass					1	☐ Yes	☐ No
Metals	X Plastic	☐ Glass		1				☐ Yes	☐ No
Mercury	☐ Plastic	X Glass	1					☐ Yes	☐ No
COD, nutrient	X Plastic	X Glass		1				☐ Yes	☐ No
Organic C	☐ Plastic	X Glass	2					☐ Yes	☐ No
LEPH/HEPH	☐ Plastic	X Glass						☐ Yes	☐ No
Sulfide	X Plastic	☐ Glass						☐ Yes	☐ No
VOC/BTEX	☐ Plastic	X Glass						☐ Yes	☐ No

City of Kelowna

GROUNDWATER SAMPLING FORM
GLENMORE LANDFILL

Weather: MOSTLY SUNNY Date: JUNE 2, 2025 Well No: GL 44-2
Temperature: 15° Tech: KK Field Dup: _____

MONITORING WELL INFORMATION

Time of Measurement: _____ One Well Volume: _____
Depth of Water (A): _____ Diameter of Well: _____
Bottom of Well (B): _____ (B-A)*2 _____ Litres for 51mm ϕ well
Well Condition: _____ (B-A)*8 _____ Litres for 102mm ϕ well

EQUIPMENT LIST

☐ Waterra
☐ Hydrolift
☐ Bailer
☑ Peristaltic
☐ Bladder
Pump Details: _____

Multi-meter Model: YSI Pro
☐ Field Bump ☐ Field Calibration
pH 4 _____ pH 7 ✓ pH10 ✓
1413µs/cm _____ 5000µs/cm ✓ DO ✓ ONLY

WELL DEVELOPMENT

Purge Volume: Well Vol. X _____ = _____ Sample Intake Depth: _____
Average Flow Rate: _____

Time	Vol. Removed (L)	Temp (°C)	pH (Units)	Conductivity (uS/cm)	Redox (mV)	Dissolved O_2 (mg/L)	Water Level (m)	Comments
9:51	0						0.991	
9:54	0.600	12.9	7.23	5174	110.4	6.09	1.210	
9:57	1.200	12.9	7.26	5181	59.2	1.99	1.394	
10:00	1.800	13.0	7.26	5170	23.3	1.29	1.547	
10:03	2.400	12.8	7.24	5169	-1.7	0.99	1.671	
10:06	2.800	13.6	7.26	5169	-16.8	0.84	1.710	
10:09	3.200	13.6	7.23	5200	-36.2	0.76	1.742	
10:12	3.600	13.8	7.26	5239	-48.6	0.68	1.772	
10:15	4.000	13.8	7.25	5266	-55.2	0.63	1.796	
10:18	4.400	13.6	7.25	5303	-58.5	0.61		
			SAMPLE					

Odour: ☐ Yes ☑ No If Yes, describe _____
Sheen: ☐ Yes ☑ No If Yes, describe _____
Turbidity: Clear I I I I I I I I I I I I I I I I I I I I I I I I I Very Silty

Analysis	Type		Container Size					Filtered	
			40 mL	125 mL	250 mL	500 mL	1 L		
General	X Plastic	☐ Glass					1	☐ Yes	☐ No
Metals	X Plastic	☐ Glass		1				☐ Yes	☐ No
Mercury	☐ Plastic	X Glass	1					☐ Yes	☐ No
COD, nutrient	X Plastic	X Glass		1				☐ Yes	☐ No
Organic C	☐ Plastic	X Glass	2					☐ Yes	☐ No
LEPH/HEPH	☐ Plastic	X Glass						☐ Yes	☐ No
Sulfide	X Plastic	☐ Glass						☐ Yes	☐ No
VOC/BTEX	☐ Plastic	X Glass						☐ Yes	☐ No

City of Kelowna

GROUNDWATER SAMPLING FORM
GLENMORE LANDFILL

Weather: Mostly cloudy Date: June 2, 2025 Well No: GL 45-1
Temperature: 21° Tech: KR Field Dup: _____

MONITORING WELL INFORMATION

Time of Measurement: _____ One Well Volume: _____
Depth of Water (A): _____ Diameter of Well: _____
Bottom of Well (B): _____ (B-A)*2 _____ Litres for 51mm ϕ well
Well Condition: _____ (B-A)*8 _____ Litres for 102mm ϕ well

EQUIPMENT LIST

☐ Waterra Multi-meter Model: YSI Pro
☐ Hydrolift ☐ Field Bump ☐ Field Calibration
☐ Bailer pH 4 _____ pH 7 ✓ pH10 _____
☐ Peristaltic 1413µs/cm _____ 5000µs/cm _____ ✓ DO ✓
☐ Bladder ORP
Pump Details: _____

WELL DEVELOPMENT

Purge Volume: Well Vol. X _____ = _____ Sample Intake Depth: _____
Average Flow Rate: _____

Time	Vol. Removed (L)	Temp (°C)	pH (Units)	Conductivity (uS/cm)	Redox (mV)	Dissolved O_2 (mg/L)	Water Level (m)	Comments
2:42	0						0.809	
2:45	.400	15.2	6.58	5723	-53.1	1.14	0.833	
2:48	.800	15.2	6.49	5755	-57.4	1.01	0.835	
2:51	1.200	15.6	6.45	5769	-61.2	0.78	0.822	
2:54	1.600	15.7	6.54	5836	-62.2	0.74	0.819	
2:57	2.000	16.0	6.50	5783	-64.8	0.61	0.820	
3:00	2.400	16.1	6.52	5780	-66.7	0.58	0.820	
		SAMPLE						

Odour: ☐ Yes ☒ No If Yes, describe _____
Sheen: ☐ Yes ☒ No If Yes, describe _____
Turbidity: Clear I I I I I I I I I I I I I I I I I I I I I I I I I I I Very Silty

Analysis	Type		Container Size					Filtered	
			40 mL	125 mL	250 mL	500 mL	1 L		
General	X Plastic	☐ Glass					1	☐ Yes	☐ No
Metals	X Plastic	☐ Glass		1				☐ Yes	☐ No
Mercury	☐ Plastic	X Glass	1					☐ Yes	☐ No
COD, nutrient	X Plastic	X Glass		1				☐ Yes	☐ No
Organic C	☐ Plastic	X Glass	2					☐ Yes	☐ No
LEPH/HEPH	☐ Plastic	X Glass						☐ Yes	☐ No
Sulfide	X Plastic	☐ Glass						☐ Yes	☐ No
VOC/BTEX	☐ Plastic	X Glass						☐ Yes	☐ No

City of Kelowna

GROUNDWATER SAMPLING FORM
GLENMORE LANDFILL

Weather: MOSTLY CLOUDY Date: JUNE 2, 2025 Well No: GL 45-2
Temperature: 21° Tech: KB Field Dup: _____

MONITORING WELL INFORMATION

Time of Measurement: _____ One Well Volume: _____
Depth of Water (A): _____ Diameter of Well: _____
Bottom of Well (B): _____ (B-A)*2 _____ Litres for 51mm ϕ well
Well Condition: _____ (B-A)*8 _____ Litres for 102mm ϕ well

EQUIPMENT LIST

☐ Waterra
☐ Hydrolift
☐ Bailer
☑ Peristaltic
☐ Bladder
Pump Details: _____

Multi-meter Model: YSI Pro
☐ Field Bump ☑ Field Calibration
pH 4 _____ pH 7 ✓ pH10 _____
1413µs/cm _____ 5000µs/cm ✓ DO ✓
ORP

WELL DEVELOPMENT

Purge Volume: Well Vol. X _____ = _____ Sample Intake Depth: _____
Average Flow Rate: _____

Time	Vol. Removed (L)	Temp (°C)	pH (Units)	Conductivity (uS/cm)	Redox (mV)	Dissolved O_2 (mg/L)	Water Level (m)	Comments
2:08	0						1.019	
2:11	1.500	14.9	7.45	2913	108.3	2.10	1.233	
2:14	1.000	15.0	7.51	2923	109.8	1.57	1.251	
2:17	1.000	15.3	7.41	2930	95.0	1.27	1.264	
2:20	1.800	15.3	7.45	2973	83.2	1.14	1.271	
2:23	2.200	14.8	7.44	3006	64.4	1.05	1.287	
2:26	2.700	14.7	7.43	3011	53.4	0.93	1.285	
2:29	3.200	14.5	7.40	3001	28.7	0.91	1.287	
				SAMPLE				

Odour: ☐ Yes ☑ No If Yes, describe _____
Sheen: ☐ Yes ☑ No If Yes, describe _____
Turbidity: Clear I I I I I I I I I I I I I I I I I I I I I I I I I Very Silty

Analysis	Type		Container Size					Filtered	
			40 mL	125 mL	250 mL	500 mL	1 L		
General	X Plastic	☐ Glass					1	☐ Yes	☐ No
Metals	X Plastic	☐ Glass		1				☐ Yes	☐ No
Mercury	☐ Plastic	X Glass	1					☐ Yes	☐ No
COD, nutrient	X Plastic	X Glass		1				☐ Yes	☐ No
Organic C	☐ Plastic	X Glass	2					☐ Yes	☐ No
LEPH/HEPH	☐ Plastic	X Glass						☐ Yes	☐ No
Sulfide	X Plastic	☐ Glass						☐ Yes	☐ No
VOC/BTEX	☐ Plastic	X Glass						☐ Yes	☐ No

City of Kelowna

GROUNDWATER SAMPLING FORM
GLENMORE LANDFILL

Weather: MOSTLY SUNNY Date: JUNE 02, 2025 Well No: 09BH06 - D
Temperature: 19° Tech: KP Field Dup: _____

MONITORING WELL INFORMATION

Time of Measurement: _____ One Well Volume: _____
Depth of Water (A): _____ Diameter of Well: _____
Bottom of Well (B): _____ (B-A)*2 _____ Litres for 51mm ϕ well
Well Condition: _____ (B-A)*8 _____ Litres for 102mm ϕ well

EQUIPMENT LIST

☐ Waterra
☐ Hydrolift
☐ Bailer
☑ Peristaltic
☐ Bladder
Pump Details: _____

Multi-meter Model: YSI Pro
☐ Field Bump ☑ Field Calibration
pH 4 _____ pH 7 ✓ pH10 ✓
1413µs/cm _____ 5000µs/cm ✓ DO ✓
ORP

WELL DEVELOPMENT

Purge Volume: Well Vol. X _____ = _____ Sample Intake Depth: _____
Average Flow Rate: _____

Time	Vol. Removed (L)	Temp (°C)	pH (Units)	Conductivity (uS/cm)	Redox (mV)	Dissolved O_2 (mg/L)	Water Level (m)	Comments
12:05	0						0.436	ORANGE COATING
12:08	.500	14.0	7.54	1603	10.5	2.66	0.433	ON TUBING
12:11	1.000	14.0	7.52	1572	-20.5	1.37	0.433	
12:14	1.500	13.5	7.53	1582	-32.8	1.18	0.437	
12:17	2.000	13.5	7.51	1580	-45.2	0.89	0.436	
12:20	2.500	13.5	7.50	1576	-56.9	0.75	0.435	
12:23	3.000	13.5	7.50	1572	-540	0.63	0.433	
			SAMPLE					

Odour: ☐ Yes ☑ No If Yes, describe _____
Sheen: ☐ Yes ☑ No If Yes, describe _____
Turbidity: Clear I I I I I I I I I I I I I I I I I I I I I I I I I Very Silty

Analysis	Type		Container Size					Filtered	
			40 mL	125 mL	250 mL	500 mL	1 L		
General	X Plastic	☐ Glass					1	☐ Yes	☐ No
Metals	X Plastic	☐ Glass		1				☐ Yes	☐ No
Mercury	☐ Plastic	X Glass	1					☐ Yes	☐ No
COD, nutrient	X Plastic	X Glass		1				☐ Yes	☐ No
Organic C	☐ Plastic	X Glass	2					☐ Yes	☐ No
LEPH/HEPH	☐ Plastic	X Glass						☐ Yes	☐ No
Sulfide	X Plastic	☐ Glass						☐ Yes	☐ No
VOC/BTEX	☐ Plastic	X Glass						☐ Yes	☐ No

GROUNDWATER SAMPLING FORM
GLENMORE LANDFILL

City of Kelowna

Weather: cloudy Date: AUG. 29, 2025 Well No: GL 2-1
Temperature: 22° Tech: KL Field Dup: Dup 6 ~~***~~

MONITORING WELL INFORMATION

Time of Measurement: _____ One Well Volume: _____
Depth of Water (A): 0.498 Diameter of Well: _____
Bottom of Well (B): _____ (B-A)*2 _____ Litres for 51mm ϕ well
Well Condition: _____ (B-A)*8 _____ Litres for 102mm ϕ well

EQUIPMENT LIST

☐ Waterra
☐ Hydrolift
☐ Bailer
☑ Peristaltic
☐ Bladder
Pump Details: _____

Multi-meter Model: YSI Pro
☐ Field Bump ☐ Field Calibration
pH 4 _____ pH 7 _____ ✓ pH10 J
1413µs/cm _____ 5000µs/cm _____ ✓ DO J
ORP

WELL DEVELOPMENT

Purge Volume: Well Vol. X _____ = _____ Sample Intake Depth: _____
Average Flow Rate: _____

Time	Vol. Removed (L)	Temp (°C)	pH (Units)	Conductivity (uS/cm)	Redox (mV)	Dissolved O_2 (mg/L)	Water Level (m)	Comments
9:11	Ø						0.498	RUSTY COATING ON
9:14	.700	15.4	7.33	2032	-92.8	3.29	0.806	TUBING - -
9:17	1.200	15.5	7.41	2054	-111.0	0.79	.864	WATER ALSO RUSTY
9:20	1.700	15.7	7.44	2049	-120.4	0.49	922	TINGED
9:23	2.200	15.9	7.46	2047	-124.7	0.39	0.962	
9:26	2.700	15.7	7.47	2052	-127.1	0.33	1.001	- CLEARING
9:29	3.150	15.6	7.50	2052	-130.7	0.29	1.023	
9:32	3.650	15.7	7.50	2045	-135.2	0.26	1.039	
			SAMPLE					

Odour: ☐ Yes ☑ No If Yes, describe _____
Sheen: ☐ Yes ☐ No If Yes, describe _____
Turbidity: Clear I I I I I (1) I I I I I I I I I I I I I I I I I I I Very Silty

Analysis	Type		Container Size					Filtered	
			40 mL	125 mL	250 mL	500 mL	1 L		
General	X Plastic	☐ Glass					1	☐ Yes	☐ No
Metals	X Plastic	☐ Glass		1				☐ Yes	☐ No
Mercury	☐ Plastic	X Glass	1					☐ Yes	☐ No
COD, nutrient	X Plastic	X Glass		1				☐ Yes	☐ No
Organic C	☐ Plastic	X Glass	2					☐ Yes	☐ No
LEPH/HEPH	☐ Plastic	X Glass						☐ Yes	☐ No
Sulfide	X Plastic	☐ Glass						☐ Yes	☐ No
VOC/BTEX	☐ Plastic	X Glass						☐ Yes	☐ No

City of Kelowna

GROUNDWATER SAMPLING FORM
GLENMORE LANDFILL

Weather: SUNNY Date: Sept 9, 2025 Well No: 2-2
Temperature: 18° Tech: KL Field Dup: DUP8 ***

MONITORING WELL INFORMATION

Time of Measurement: _____ One Well Volume: _____
Depth of Water (A): 0.726 Diameter of Well: _____
Bottom of Well (B): _____ (B-A)*2 _____ Litres for 51mm ϕ well
Well Condition: _____ (B-A)*8 _____ Litres for 102mm ϕ well

EQUIPMENT LIST

☐ Waterra
☐ Hydrolift
☐ Bailer
☑ Peristaltic
☐ Bladder
Pump Details: _____

Multi-meter Model: YSI Pro
☐ Field Bump ☐ Field Calibration
pH 4 _____ pH 7 ✓ pH10 ✓
1413µs/cm _____ 5000µs/cm ✓ DO ✓
orp

WELL DEVELOPMENT

Purge Volume: Well Vol. X _____ = _____ Sample Intake Depth: _____
Average Flow Rate: _____

Time	Vol. Removed (L)	Temp (°C)	pH (Units)	Conductivity (uS/cm)	Redox (mV)	Dissolved O_2 (mg/L)	Water Level (m)	Comments
8:49	0						726	
8:52	.500	13.9	7.35	1719	223.9	0.76	1.115	
8:55	.950	14.0	7.41	1714	216.9	0.67	1.288	
8:58	1.400	14.2	7.36	1712	206.2	0.43	1.454	
9:01	1.800	14.5	7.45	1716	192.7	0.36	1.596	
9:04	2.200	14.6	7.44	1713	189.7	0.33	1.755	
						SAMPLE		9:05

Odour: ☐ Yes ☑ No If Yes, describe _____
Sheen: ☐ Yes ☑ No If Yes, describe _____
Turbidity: Clear I I I I I I I I I I I I I I I I I I I I I I I I I Very Silty

PURGED AUG 29

Analysis	Type		Container Size					Filtered	
			40 mL	125 mL	250 mL	500 mL	1 L		
General	X Plastic	☐ Glass					1	☐ Yes	☐ No
Metals	X Plastic	☐ Glass		1				☐ Yes	☐ No
Mercury	☐ Plastic	X Glass	1					☐ Yes	☐ No
COD, nutrient	X Plastic	X Glass		1				☐ Yes	☐ No
Organic C	☐ Plastic	X Glass	2					☐ Yes	☐ No
LEPH/HEPH	☐ Plastic	X Glass						☐ Yes	☐ No
Sulfide	X Plastic	☐ Glass						☐ Yes	☐ No
VOC/BTEX	☐ Plastic	X Glass						☐ Yes	☐ No

GROUNDWATER SAMPLING FORM
GLENMORE LANDFILL

City of Kelowna

Weather: Cloudy Date: AUG 29, 2028 Well No: GL 4-1
Temperature: 26° Tech: KP Field Dup: _____

MONITORING WELL INFORMATION

Time of Measurement: _____ One Well Volume: _____
Depth of Water (A): 1.448 Diameter of Well: _____
Bottom of Well (B): _____ (B-A)*2 _____ Litres for 51mm ϕ well
Well Condition: _____ (B-A)*8 _____ Litres for 102mm ϕ well

EQUIPMENT LIST

☐ Waterra
☐ Hydrolift
☐ Bailer
☑ Peristaltic
☐ Bladder
Pump Details: _____

Multi-meter Model: YSI Pro
☐ Field Bump ☐ Field Calibration
pH 4 _____ pH 7 ✓ pH10 ✓
1413µs/cm _____ 5000µs/cm ✓ DO ✓
ORP

WELL DEVELOPMENT

Purge Volume: Well Vol. X _____ = _____ Sample Intake Depth: _____
Average Flow Rate: _____

Time	Vol. Removed (L)	Temp (°C)	pH (Units)	Conductivity (uS/cm)	Redox (mV)	Dissolved O_2 (mg/L)	Water Level (m)	Comments
11:24	0						1.448	
11:27	.700	14.3	7.78	1900	-89.9	2.83	1.569	
11:30	1.400	13.5	7.77	1869	-120.6	0.99	1.622	
11:33	2.100	13.6	7.75	1858	-130.2	0.63	1.594	
11:39	3.500	13.4	7.70	1870	-135.5	0.52	1.622	
11:42	3.500	13.6	7.73	1857	-139.5	0.43	1.622	
11:45	4.20	13.2	7.73	1859	-141.3	0.43	1.629	

Odour: ☐ Yes ☑ No If Yes, describe _____
Sheen: ☐ Yes ☑ No If Yes, describe _____
Turbidity: Clear I I I I I I I I I I I I I I I I I I I I I I I I I Very Silty

Analysis	Type		Container Size					Filtered	
			40 mL	125 mL	250 mL	500 mL	1 L		
General	X Plastic	☐ Glass					1	☐ Yes	☐ No
Metals	X Plastic	☐ Glass		1				☐ Yes	☐ No
Mercury	☐ Plastic	X Glass	1					☐ Yes	☐ No
COD, nutrient	X Plastic	X Glass		1				☐ Yes	☐ No
Organic C	☐ Plastic	X Glass	2					☐ Yes	☐ No
LEPH/HEPH	☐ Plastic	X Glass						☐ Yes	☐ No
Sulfide	X Plastic	☐ Glass						☐ Yes	☐ No
VOC/BTEX	☐ Plastic	X Glass						☐ Yes	☐ No

City of Kelowna

GROUNDWATER SAMPLING FORM
GLENMORE LANDFILL

Weather: Cloudy
Temperature: 27°
Date: AUG. 29, 2025
Tech: KR
Well No: GL 4-2
Field Dup: _____

MONITORING WELL INFORMATION

Time of Measurement: _____
Depth of Water (A): 2.202
Bottom of Well (B): _____
Well Condition: _____

One Well Volume: _____
Diameter of Well: _____
(B-A)*2 _____ Litres for 51mm ϕ well
(B-A)*8 _____ Litres for 102mm ϕ well

EQUIPMENT LIST

☐ Waterra
☐ Hydrolift
☐ Bailer
☑ Peristaltic
☐ Bladder
Pump Details: _____

Multi-meter Model: YSI Pro
☐ Field Bump ☐ Field Calibration
pH 4 _____ pH 7 ✓ pH10 ✓
1413µs/cm _____ 5000µs/cm ✓ DO ✓
ORP

WELL DEVELOPMENT

Purge Volume: Well Vol. X _____ = _____
Average Flow Rate: _____
Sample Intake Depth: _____

Time	Vol. Removed (L)	Temp (°C)	pH (Units)	Conductivity (uS/cm)	Redox (mV)	Dissolved O_2 (mg/L)	Water Level (m)	Comments
11:57	0						2.202	
12:00	.700	13.3	7.48	2006	-64.9	0.35	2.515	
12:03	1.400	13.2	7.61	1996	-69.4	0.27	2.745	
12:06	1.800	13.8	7.49	1984	-75.4	0.25	2.921	
12:09	2.400	13.6	7.52	1989	-76.1	0.25	3.090	
12:12	3.100	13.5	7.53	1987	-77.4	0.25	3.244	
12:15								
~								
				SAMPLE				

Odour: ☐ Yes ☐ No If Yes, describe _____
Sheen: ☐ Yes ☐ No If Yes, describe _____
Turbidity: Clear I I I I I I I I I I I I I I I I I I I I I I I I I Very Silty

Analysis	Type		Container Size					Filtered	
			40 mL	125 mL	250 mL	500 mL	1 L		
General	X Plastic	☐ Glass					1	☐ Yes	☐ No
Metals	X Plastic	☐ Glass		1				☐ Yes	☐ No
Mercury	☐ Plastic	X Glass	1					☐ Yes	☐ No
COD, nutrient	X Plastic	X Glass		1				☐ Yes	☐ No
Organic C	☐ Plastic	X Glass	2					☐ Yes	☐ No
LEPH/HEPH	☐ Plastic	X Glass						☐ Yes	☐ No
Sulfide	X Plastic	☐ Glass						☐ Yes	☐ No
VOC/BTEX	☐ Plastic	X Glass						☐ Yes	☐ No

City of Kelowna

GROUNDWATER SAMPLING FORM
GLENMORE LANDFILL

Weather: cloudy Date: AUG 21, 2025 Well No: 15-1
Temperature: 25° Tech: KL Field Dup: DUP 2

MONITORING WELL INFORMATION

Time of Measurement: _____ One Well Volume: _____
Depth of Water (A): 6.550 Diameter of Well: _____
Bottom of Well (B): _____ (B-A)*2 _____ Litres for 51mm ϕ well
Well Condition: _____ (B-A)*8 _____ Litres for 102mm ϕ well

EQUIPMENT LIST

☐ Waterra
☐ Hydrolift
☐ Bailer
☑ Peristaltic
☐ Bladder
Pump Details: _____

Multi-meter Model: YSI Pro
☐ Field Bump ☐ Field Calibration
pH 4 _____ pH 7 ✓ pH10 ✓
1413µs/cm _____ 5000µs/cm ✓ DO ✓
ORP

WELL DEVELOPMENT

Purge Volume: Well Vol. X _____ = _____ Sample Intake Depth: _____
Average Flow Rate: _____

Time	Vol. Removed (L)	Temp (°C)	pH (Units)	Conductivity (uS/cm)	Redox (mV)	Dissolved O_2 (mg/L)	Water Level (m)	Comments
1:57	0						6.550	
2:00	1.000	13.9	7.53	1478	105.7	0.71	7.090	
2:03	1.100	13.6	7.65	1479	100.3	0.56	7.242	
2:06	1.550	13.6	7.67	1477	97.7	0.50	7.433	
2:09	2.000	13.5	7.67	1469	96.3	0.46	7.622	
2:12	2.450	14.0	7.67	1469	95.6	0.43	7.771	
2:15								
				SAMPLE		2:15		

Odour: ☐ Yes ☐ No If Yes, describe _____
Sheen: ☐ Yes ☐ No If Yes, describe _____
Turbidity: Clear I I I I I I I I I I I I I I I I I I I I I I I I I Very Silty

Analysis	Type		Container Size					Filtered	
			40 mL	125 mL	250 mL	500 mL	1 L		
General	X Plastic	☐ Glass					1	☐ Yes	☐ No
Metals	X Plastic	☐ Glass		1				☐ Yes	☐ No
Mercury	☐ Plastic	X Glass	1					☐ Yes	☐ No
COD, nutrient	X Plastic	X Glass		1				☐ Yes	☐ No
Organic C	☐ Plastic	X Glass	2					☐ Yes	☐ No
LEPH/HEPH	☐ Plastic	X Glass						☐ Yes	☐ No
Sulfide	X Plastic	☐ Glass						☐ Yes	☐ No
VOC/BTEX	☐ Plastic	X Glass						☐ Yes	☐ No

City of Kelowna

GROUNDWATER SAMPLING FORM
GLENMORE LANDFILL

Weather: SUNNY Date: Sept 02, 2025 Well No: 15-2
Temperature: 21° Tech: LR Field Dup: PURGING

MONITORING WELL INFORMATION

Time of Measurement: _____ One Well Volume: _____
Depth of Water (A): 5.764 Diameter of Well: _____
Bottom of Well (B): _____ (B-A)*2 _____ Litres for 51mm ϕ well
Well Condition: _____ (B-A)*8 _____ Litres for 102mm ϕ well

EQUIPMENT LIST

☐ Waterra
☐ Hydrolift
☐ Bailer
☑ Peristaltic
☐ Bladder
Pump Details: _____

Multi-meter Model: YSI Pro
☐ Field Bump ☐ Field Calibration
pH 4 _____ pH 7 ~ pH10 ~
1413µs/cm ~ 5000µs/cm ~ DO ~
ORP

WELL DEVELOPMENT

Purge Volume: Well Vol. X _____ = _____ Sample Intake Depth: _____
Average Flow Rate: _____

Time	Vol. Removed (L)	Temp (°C)	pH (Units)	Conductivity (uS/cm)	Redox (mV)	Dissolved O_2 (mg/L)	Water Level (m)	Comments
1:21	0						5.764	
1:24	500	14.5	6.94	4692	232.9	2.60	5.900	
1:27	1,100	13.0	7.07	4659	222.2	3.43	5.870	
1:30							DRY	
1:33								
1:36					SAMPLED		SEPT 16	

Odour: ☐ Yes ☑ No If Yes, describe _____
Sheen: ☐ Yes ☑ No If Yes, describe _____
Turbidity: Clear I I I I I I I I I I I I I I I I I I I I I I I I I Very Silty

Analysis	Type		Container Size					Filtered	
			40 mL	125 mL	250 mL	500 mL	1 L		
General	X Plastic	☐ Glass					1	☐ Yes	☐ No
Metals	X Plastic	☐ Glass		1				☐ Yes	☐ No
Mercury	☐ Plastic	X Glass	1					☐ Yes	☐ No
COD, nutrient	X Plastic	X Glass		1				☐ Yes	☐ No
Organic C	☐ Plastic	X Glass	2					☐ Yes	☐ No
LEPH/HEPH	☐ Plastic	X Glass						☐ Yes	☐ No
Sulfide	X Plastic	☐ Glass						☐ Yes	☐ No
VOC/BTEX	☐ Plastic	X Glass						☐ Yes	☐ No

GROUNDWATER SAMPLING FORM
GLENMORE LANDFILL

City of Kelowna

Weather: PARTLY CLOUDY Date: AUG 26, 2025 Well No: GL 20-1
Temperature: 18° Tech: KR Field Dup:

MONITORING WELL INFORMATION

Time of Measurement: One Well Volume:
Depth of Water (A): 3.109 Diameter of Well:
Bottom of Well (B): (B-A)*2 _____ Litres for 51mm ϕ well
Well Condition: (B-A)*8 _____ Litres for 102mm ϕ well

EQUIPMENT LIST

☐ Waterra
☐ Hydrolift
☐ Bailer
☑ Peristaltic
☐ Bladder
Pump Details:

Multi-meter Model: YSI Pro
☐ Field Bump ☐ Field Calibration
pH 4 _____ pH 7 ✓ pH10 ✓
1413µs/cm _____ 5000µs/cm ✓ DO ✓
ORP

WELL DEVELOPMENT

Purge Volume: Well Vol. X _____ = _____ Sample Intake Depth:
Average Flow Rate:

Time	Vol. Removed (L)	Temp (°C)	pH (Units)	Conductivity (uS/cm)	Redox (mV)	Dissolved O_2 (mg/L)	Water Level (m)	Comments
7:52	Ø						3.109	DARK YELLOW TINGE
7:55	0.600	15.3	7.01	8204	-110.4	1.49	3.261	
7:58	1.000	15.7	7.05	7583	-138.7	1.02	3.295	
8:01	1.550	15.8	7.03	7082	-156.3	0.80	3.319	
8:03	2.050	16.1	6.99	6782	-168.7	0.63	3.402	CLEARING TO
8:06	2.450	16.2	6.97	6437	-174.5	0.57	3.441	PALE YELLOW
8:09	2.980	16.3	6.94	6214	-178.7	0.53	3.489	
8:12	3.450	16.6	6.94	6060	-179.0	0.49	3.509	
8:15	3.950	16.7	6.94	6037	-179.1	0.47	3.533	
			- SAMPLE		-			

Odour: ☑ Yes ☐ No If Yes, describe SULFUR
Sheen: ☐ Yes ☐ No If Yes, describe
Turbidity: Clear I I I I I I I I (I) I I I I I I I I I I I I I I I I Very Silty

Analysis	Type		Container Size					Filtered	
			40 mL	125 mL	250 mL	500 mL	1 L		
General	X Plastic	☐ Glass					1	☐ Yes	☐ No
Metals	X Plastic	☐ Glass		1				☐ Yes	☐ No
Mercury	☐ Plastic	X Glass	1					☐ Yes	☐ No
COD, nutrient	X Plastic	X Glass		1				☐ Yes	☐ No
Organic C	☐ Plastic	X Glass	2					☐ Yes	☐ No
LEPH/HEPH	☐ Plastic	X Glass						☐ Yes	☐ No
Sulfide	X Plastic	☐ Glass						☐ Yes	☐ No
VOC/BTEX	☐ Plastic	X Glass						☐ Yes	☐ No

City of Kelowna

GROUNDWATER SAMPLING FORM
GLENMORE LANDFILL

Weather: Cloudy Date: AUG. 27, 2025 Well No: GL 27-1
Temperature: 25° Tech: KR Field Dup: _____

MONITORING WELL INFORMATION

Time of Measurement: _____ One Well Volume: _____
Depth of Water (A): 1.618 Diameter of Well: _____
Bottom of Well (B): _____ (B-A)*2 _____ Litres for 51mm ϕ well
Well Condition: _____ (B-A)*8 _____ Litres for 102mm ϕ well

EQUIPMENT LIST

☐ Waterra
☐ Hydrolift
☐ Bailer
☑ Peristaltic
☐ Bladder
Pump Details: _____

Multi-meter Model: YSI Pro
☐ Field Bump ☐ Field Calibration
pH 4 _____ pH 7 ✓ pH10 ✓
1413µs/cm _____ 5000µs/cm ✓ DO ✓ orp

WELL DEVELOPMENT

Purge Volume: Well Vol. X _____ = _____ Sample Intake Depth: _____
Average Flow Rate: _____

Time	Vol. Removed (L)	Temp (°C)	pH (Units)	Conductivity (uS/cm)	Redox (mV)	Dissolved O_2 (mg/L)	Water Level (m)	Comments
10:16	0						1.618	
10:19	0.750	14.6	7.45	2516	-177.4	0.86	1.965	
10:22	1.350	14.5	7.56	2504	-186.6	0.47	2.162	
10:25	2.000	14.5	7.70	2506	-190.4	0.38	2.318	
10:28	2.700	14.6	7.62	2509	-193.7	0.32	2.441	
10:31	3.400	14.5	7.63	2511	-196.4	0.29	2.552	
10:34	4.150	14.4	7.63	2515	-198.0	0.28	2.661	
10:37	4.650	15.2	7.64	2505	-198.5	0.23	2.723	
10:40	5.300	15.3	7.62	2537	-199.0	0.22	2.775	

— SAMPLE —

Odour: ☐ Yes ☐ No If Yes, describe _____
Sheen: ☐ Yes ☐ No If Yes, describe _____
Turbidity: Clear I I I I I I I I I I I I I I I I I I I I I I I I I I I Very Silty

Analysis	Type		Container Size					Filtered	
			40 mL	125 mL	250 mL	500 mL	1 L		
General	X Plastic	☐ Glass					1	☐ Yes	☐ No
Metals	X Plastic	☐ Glass		1				☐ Yes	☐ No
Mercury	☐ Plastic	X Glass	1					☐ Yes	☐ No
COD, nutrient	X Plastic	X Glass		1				☐ Yes	☐ No
Organic C	☐ Plastic	X Glass	2					☐ Yes	☐ No
LEPH/HEPH	☐ Plastic	X Glass						☐ Yes	☐ No
Sulfide	X Plastic	☐ Glass						☐ Yes	☐ No
VOC/BTEX	☐ Plastic	X Glass						☐ Yes	☐ No

City of Kelowna

GROUNDWATER SAMPLING FORM
GLENMORE LANDFILL

Weather: Cloudy Date: Aug 27, 2025 Well No: GL 27-3
Temperature: 27° Tech: KR Field Dup: _____

MONITORING WELL INFORMATION

Time of Measurement: _____ One Well Volume: _____
Depth of Water (A): 2.342 Diameter of Well: _____
Bottom of Well (B): _____ (B-A)*2 _____ Litres for 51mm ϕ well
Well Condition: _____ (B-A)*8 _____ Litres for 102mm ϕ well

EQUIPMENT LIST

☐ Waterra
☐ Hydrolift
☐ Bailer
☑ Peristaltic
☐ Bladder
Pump Details: _____

Multi-meter Model: YSI Pro
☐ Field Bump ☐ Field Calibration
pH 4 _____ pH 7 ~ pH10 ~
1413µs/cm _____ 5000µs/cm ~ DO ~
ORP

WELL DEVELOPMENT

Purge Volume: Well Vol. X _____ = _____ Sample Intake Depth: _____
Average Flow Rate: _____

Time	Vol. Removed (L)	Temp (°C)	pH (Units)	Conductivity (uS/cm)	Redox (mV)	Dissolved O_2 (mg/L)	Water Level (m)	Comments
11:01	0						2.342	
11:04	0.700	14.0	7.42	16071	-82.4	0.57	2.601	
11:07	1.300	14.0	7.46	16120	-86.6	0.30	2.699	
11:10	1.900	13.9	7.47	16147	-90.9	0.26	2.771	
11:13	2.500	13.8	7.46	16174	-91.8	0.24	2.823	
11:16	3.100	13.7	7.48	16202	-93.7	0.23	2.871	
11:19	3.700	14.1	7.49	16213	-95.1	0.22	2.910	
						SAMPLE		

Odour: ☐ Yes ☐ No If Yes, describe _____
Sheen: ☐ Yes ☐ No If Yes, describe _____
Turbidity: Clear I I I I I I I I I I I I I I I I I I I I I I I I I Very Silty

Analysis	Type		Container Size					Filtered	
			40 mL	125 mL	250 mL	500 mL	1 L		
General	X Plastic	☐ Glass					1	☐ Yes	☐ No
Metals	X Plastic	☐ Glass		1				☐ Yes	☐ No
Mercury	☐ Plastic	X Glass	1					☐ Yes	☐ No
COD, nutrient	X Plastic	X Glass		1				☐ Yes	☐ No
Organic C	☐ Plastic	X Glass	2					☐ Yes	☐ No
LEPH/HEPH	☐ Plastic	X Glass						☐ Yes	☐ No
Sulfide	X Plastic	☐ Glass						☐ Yes	☐ No
VOC/BTEX	☐ Plastic	X Glass						☐ Yes	☐ No

GROUNDWATER SAMPLING FORM
GLENMORE LANDFILL

City of Kelowna

Weather: 21° SUNNY Date: SEPT 2, 2025 Well No: GL 28-1
Temperature: 8 20° Tech: KR Field Dup: DUP 7 ***

MONITORING WELL INFORMATION

Time of Measurement: _____ One Well Volume: _____
Depth of Water (A): 5.214 Diameter of Well: _____
Bottom of Well (B): 5 (B-A)*2 _____ Litres for 51mm ϕ well
Well Condition: _____ (B-A)*8 _____ Litres for 102mm ϕ well

EQUIPMENT LIST

☐ Waterra
☐ Hydrolift
☐ Bailer
☑ Peristaltic
☐ Bladder
Pump Details: _____

Multi-meter Model: YSI Pro
☐ Field Bump ☐ Field Calibration ✓
pH 4 _____ pH 7 ✓ pH10 _____
1413µs/cm _____ 5000µs/cm ✓ DO ✓
ORP

WELL DEVELOPMENT

Purge Volume: Well Vol. X _____ = _____ Sample Intake Depth: _____
Average Flow Rate: _____

Time	Vol. Removed (L)	Temp (°C)	pH (Units)	Conductivity (uS/cm)	Redox (mV)	Dissolved O_2 (mg/L)	Water Level (m)	Comments
8:48	∅						5.214	AIR BUBBLES
8:51	.500	14.4	7.10	3961	-14.6	6.99	5.249	
8:54	.900	14.2	7.16	3954	-20.3	6.36	5.248	
8:57	1.300	14.2	7.19	3943	-21.7	6.16	5.248	
9:00	1.700	13.7	7.19	3944	-21.5	4.80	5.244	
9:03	2.200	13.5	7.17	3949	-21.1	4.71	5.263	
9:06	2.700	13.4	7.22	3945	-21.1	4.54		

Odour: ☐ Yes ☑ No If Yes, describe _____
Sheen: ☐ Yes ☑ No If Yes, describe _____
Turbidity: Clear I I I (I) I I I I I I I I I I I I I I I I I I I Very Silty

Analysis	Type		Container Size					Filtered	
			40 mL	125 mL	250 mL	500 mL	1 L		
General	X Plastic	☐ Glass					1	☐ Yes	☐ No
Metals	X Plastic	☐ Glass		1				☐ Yes	☐ No
Mercury	☐ Plastic	X Glass	1					☐ Yes	☐ No
COD, nutrient	X Plastic	X Glass		1				☐ Yes	☐ No
Organic C	☐ Plastic	X Glass	2					☐ Yes	☐ No
LEPH/HEPH	☐ Plastic	X Glass						☐ Yes	☐ No
Sulfide	X Plastic	☐ Glass						☐ Yes	☐ No
VOC/BTEX	☐ Plastic	X Glass						☐ Yes	☐ No

City of Kelowna

GROUNDWATER SAMPLING FORM
GLENMORE LANDFILL

Weather: SONNY Date: SEPT 2, 2025 Well No: 28-2
Temperature: 23° Tech: KL Field Dup: _____

MONITORING WELL INFORMATION

Time of Measurement: _____ One Well Volume: _____
Depth of Water (A): _____ Diameter of Well: _____
Bottom of Well (B): 4.923 (B-A)*2 _____ Litres for 51mm ϕ well
Well Condition: _____ (B-A)*8 _____ Litres for 102mm ϕ well

EQUIPMENT LIST

☐ Waterra
☐ Hydrolift
☐ Bailer
☑ Peristaltic
☐ Bladder
Pump Details: _____

Multi-meter Model: YSI Pro
☐ Field Bump ☐ Field Calibration ✓
pH 4 _____ pH 7 _____ pH10 _____ ✓
1413µs/cm _____ 5000µs/cm _____ DO _____ ✓
ORP

WELL DEVELOPMENT

Purge Volume: Well Vol. X _____ = _____ Sample Intake Depth: _____
Average Flow Rate: _____

Time	Vol. Removed (L)	Temp (°C)	pH (Units)	Conductivity (uS/cm)	Redox (mV)	Dissolved O_2 (mg/L)	Water Level (m)	Comments
10:10	0						4.923	
10:13	1.000	13.8	6.98	5919	121.2	3.09	5.002	TURBID
10:16	1.400	14.4	7.05	5911	121.0	3.94	4.995	CLEARING
10:19	2.050	14.0	7.06	5790	122.0	1.47	4.992	
10:22	2.650	14.2	7.01	5875	117.9	0.47	4.988	
10:25	3.200	14.1	7.01	5851	114.4	0.54	4.985	
10:28	3.750	14.2	7.03	5856	111.3	0.49	4.985	
10:31		13.6	7.01	5860	110.0	0.44		

Odour: ☐ Yes ☑ No If Yes, describe _____
Sheen: ☐ Yes ☑ No If Yes, describe _____
Turbidity: Clear I I I

City of Kelowna

GROUNDWATER SAMPLING FORM
GLENMORE LANDFILL

Weather: 80NN4 Date: Sept 2, 2025 Well No: 28-3
Temperature: 23° Tech: KL Field Dup: _____

MONITORING WELL INFORMATION

Time of Measurement: _____ One Well Volume: _____
Depth of Water (A): 4.866 Diameter of Well: _____
Bottom of Well (B): _____ (B-A)*2 _____ Litres for 51mm ϕ well
Well Condition: _____ (B-A)*8 _____ Litres for 102mm ϕ well

EQUIPMENT LIST

☐ Waterra
☐ Hydrolift
☐ Bailer
☑ Peristaltic
☐ Bladder
Pump Details: _____

Multi-meter Model: YSI Pro
☐ Field Bump ☐ Field Calibration
pH 4 _____ pH 7 ✓ pH10 ✓
1413µs/cm _____ 5000µs/cm ~ DO ✓
ORP

WELL DEVELOPMENT

Purge Volume: Well Vol. X _____ = _____ Sample Intake Depth: _____
Average Flow Rate: _____

Time	Vol. Removed (L)	Temp (°C)	pH (Units)	Conductivity (uS/cm)	Redox (mV)	Dissolved O_2 (mg/L)	Water Level (m)	Comments
9:35	0						4.866	
9:38	.600	13.7	7.04	7724	115.3	0.41	5.156	
9:41	1.150	13.6	7.11	7097	111.7	0.39	5.257	
9:44	1.700	13.8	7.02	7623	108.9	0.41	5.317	
9:47	2.250	13.5	7.02	7678	107.6	0.48	5.371	
9:50	2.800	13.5	7.07	7529	106.1	0.52		

Odour: ☐ Yes ☑ No If Yes, describe _____
Sheen: ☐ Yes ☑ No If Yes, describe _____
Turbidity: Clear I I I I I I I I I I I I I I I I I I I I I Very Silty

Analysis	Type		Container Size					Filtered	
			40 mL	125 mL	250 mL	500 mL	1 L		
General	X Plastic	☐ Glass					1	☐ Yes	☐ No
Metals	X Plastic	☐ Glass		1				☐ Yes	☐ No
Mercury	☐ Plastic	X Glass	1					☐ Yes	☐ No
COD, nutrient	X Plastic	X Glass		1				☐ Yes	☐ No
Organic C	☐ Plastic	X Glass	2					☐ Yes	☐ No
LEPH/HEPH	☐ Plastic	X Glass						☐ Yes	☐ No
Sulfide	X Plastic	☐ Glass						☐ Yes	☐ No
VOC/BTEX	☐ Plastic	X Glass						☐ Yes	☐ No

City of Kelowna

GROUNDWATER SAMPLING FORM
GLENMORE LANDFILL

Weather: CLOUDY Date: AUG 27, 2025 Well No: 29-1
Temperature: 19° Tech: KR Field Dup: _____

MONITORING WELL INFORMATION

Time of Measurement: _____ One Well Volume: _____
Depth of Water (A): 4.411 Diameter of Well: _____
Bottom of Well (B): _____ (B-A)*2 _____ Litres for 51mm ϕ well
Well Condition: _____ (B-A)*8 _____ Litres for 102mm ϕ well

EQUIPMENT LIST

☐ Waterra
☐ Hydrolift
☐ Bailer
☑ Peristaltic
☐ Bladder
Pump Details: _____

Multi-meter Model: YSI Pro
☐ Field Bump ☐ Field Calibration ✓
pH 4 _____ pH 7 ✓ pH10 _____
1413µs/cm _____ 5000µs/cm ✓ DO ✓
ORP

WELL DEVELOPMENT

Purge Volume: Well Vol. X _____ = _____ Sample Intake Depth: _____
Average Flow Rate: _____

Time	Vol. Removed (L)	Temp (°C)	pH (Units)	Conductivity (uS/cm)	Redox (mV)	Dissolved O_2 (mg/L)	Water Level (m)	Comments
8:07	∅						4.411	YELLOW TINGE
8:10	.800	16.2	7.31	2229	40.1	2.24	4.909	
8:13	1.400	16.1	7.29	2240	55.7	0.61	5.103	
8:16	1.950	16.5	7.33	2233	72.2	0.44	5.199	
8:19	2.500	16.5	7.31	2235	79.4	0.39	5.294	
8:22	3.050	16.5	7.37	2235	84.8	0.34	5.364	
8:25	3.600	16.6	7.29	2239	87.8	0.31	5.421	
8:28	4.150	16.6	7.33	2237	89.6	0.30	5.495	
			- SAMPLE T					

Odour: ☐ Yes ☑ No If Yes, describe _____
Sheen: ☐ Yes ☑ No If Yes, describe _____
Turbidity: Clear I I I I I I I I I (V) I I I I I I I I I I I I I I I I Very Silty

Analysis	Type		Container Size					Filtered	
			40 mL	125 mL	250 mL	500 mL	1 L		
General	X Plastic	☐ Glass					1	☐ Yes	☐ No
Metals	X Plastic	☐ Glass		1				☐ Yes	☐ No
Mercury	☐ Plastic	X Glass	1					☐ Yes	☐ No
COD, nutrient	X Plastic	X Glass		1				☐ Yes	☐ No
Organic C	☐ Plastic	X Glass	2					☐ Yes	☐ No
LEPH/HEPH	☐ Plastic	X Glass						☐ Yes	☐ No
Sulfide	X Plastic	☐ Glass						☐ Yes	☐ No
VOC/BTEX	☐ Plastic	X Glass						☐ Yes	☐ No

City of Kelowna

GROUNDWATER SAMPLING FORM
GLENMORE LANDFILL

Weather: Cloudy Date: AUG 27, 2025 Well No: GL 89-2
Temperature: 21° Tech: KL Field Dup: Dup 4

MONITORING WELL INFORMATION

Time of Measurement: _____ One Well Volume: _____
Depth of Water (A): 3.572 Diameter of Well: _____
Bottom of Well (B): _____ (B-A)*2 _____ Litres for 51mm ϕ well
Well Condition: _____ (B-A)*8 _____ Litres for 102mm ϕ well

EQUIPMENT LIST

☐ Waterra
☐ Hydrolift
☐ Bailer
☑ Peristaltic
☐ Bladder
Pump Details: _____

Multi-meter Model: YSI Pro
☐ Field Bump ☐ Field Calibration
pH 4 _____ pH 7 ✓ pH10 ✓
1413µs/cm _____ 5000µs/cm ✓ DO ✓
orp

WELL DEVELOPMENT

Purge Volume: Well Vol. X _____ = _____ Sample Intake Depth: _____
Average Flow Rate: _____

Time	Vol. Removed (L)	Temp (°C)	pH (Units)	Conductivity (uS/cm)	Redox (mV)	Dissolved O_2 (mg/L)	Water Level (m)	Comments
8:51	0						3.572	
8:54	.700	17.8	7.30	7414	-16.8	0.56	4.013	
8:57	1.490	17.8	7.31	7383	-38.7	0.42	4.249	
9:00	1.950	18.1	7.30	7266	-24.9	0.34	4.462	
9:03	2.500	18.1	7.28	7137	-4.8	0.28	4.662	
9:06	3.050	18.0	7.24	7086	-28.6	0.26	4.758	
9:09	3.600	18.0	7.24	7033	-115.0	0.25	5.408	
9:12	4.150	17.9	7.20	6997	-118.1	0.24	5.249	
9:15	4.700	17.9	7.21	6982	703.7	0.22	5.432	
					SAMPLE			

Odour: ☐ Yes ☑ No If Yes, describe _____
Sheen: ☐ Yes ☐ No If Yes, describe _____
Turbidity: Clear I I I I I I I I I I I I I I I I I I I I I I I I I Very Silty

Analysis	Type		Container Size					Filtered	
			40 mL	125 mL	250 mL	500 mL	1 L		
General	X Plastic	☐ Glass					1	☐ Yes	☐ No
Metals	X Plastic	☐ Glass		1				☐ Yes	☐ No
Mercury	☐ Plastic	X Glass	1					☐ Yes	☐ No
COD, nutrient	X Plastic	X Glass		1				☐ Yes	☐ No
Organic C	☐ Plastic	X Glass	2					☐ Yes	☐ No
LEPH/HEPH	☐ Plastic	X Glass						☐ Yes	☐ No
Sulfide	X Plastic	☐ Glass						☐ Yes	☐ No
VOC/BTEX	☐ Plastic	X Glass						☐ Yes	☐ No

City of Kelowna

GROUNDWATER SAMPLING FORM
GLENMORE LANDFILL

Weather: SUNNY Date: AUG 26, 2025 Well No: 3G-1
Temperature: 26° Tech: KL Field Dup: _____

MONITORING WELL INFORMATION

Time of Measurement: _____ One Well Volume: _____
Depth of Water (A): 3.339 Diameter of Well: _____
Bottom of Well (B): _____ (B-A)*2 _____ Litres for 51mm ϕ well
Well Condition: _____ (B-A)*8 _____ Litres for 102mm ϕ well

EQUIPMENT LIST

☐ Waterra
☐ Hydrolift
☐ Bailer
☑ Peristaltic
☐ Bladder
Pump Details: _____

Multi-meter Model: YSI Pro
☐ Field Bump ☐ Field Calibration
pH 4 _____ pH 7 ✓ pH10 ✓
1413µs/cm _____ 5000µs/cm ✓ DO ✓
ORP

WELL DEVELOPMENT

Purge Volume: Well Vol. X _____ = _____ Sample Intake Depth: _____
Average Flow Rate: _____

Time	Vol. Removed (L)	Temp (°C)	pH (Units)	Conductivity (uS/cm)	Redox (mV)	Dissolved O_2 (mg/L)	Water Level (m)	Comments
11:29	Ø						3.339	
11:32	.800	13.9	7.03	4576	114.3	1.49	3.440	
11:35	1.400	13.7	7.06	4607	111.2	0.63	3.439	
11:38	2.000	13.5	7.06	4592	109.1	0.45	3.439	
11:41	2.550	13.8	7.05	4598	107.6	0.40	3.440	
11:44	3.100	13.7	7.07	4601	102.1	0.42		
				SAMPLE				

Odour: ☐ Yes ☑ No If Yes, describe _____
Sheen: ☐ Yes ☑ No If Yes, describe _____
Turbidity: Clear I I I I I I I I I I I I I I I I I I I I I I I I I Very Silty

Analysis	Type		Container Size					Filtered	
			40 mL	125 mL	250 mL	500 mL	1 L		
General	X Plastic	☐ Glass					1	☐ Yes	☐ No
Metals	X Plastic	☐ Glass		1				☐ Yes	☐ No
Mercury	☐ Plastic	X Glass	1					☐ Yes	☐ No
COD, nutrient	X Plastic	X Glass		1				☐ Yes	☐ No
Organic C	☐ Plastic	X Glass	2					☐ Yes	☐ No
LEPH/HEPH	☐ Plastic	X Glass						☐ Yes	☐ No
Sulfide	X Plastic	☐ Glass						☐ Yes	☐ No
VOC/BTEX	☐ Plastic	X Glass						☐ Yes	☐ No

GROUNDWATER SAMPLING FORM
GLENMORE LANDFILL

City of Kelowna

Weather: MOSTLY SUNNY Date: AUG 26, 2025 Well No: GL 39-2
Temperature: 26° Tech: KR Field Dup: ~~DUP 3 ***~~

MONITORING WELL INFORMATION

Time of Measurement: _____ One Well Volume: _____
Depth of Water (A): 3.418 Diameter of Well: _____
Bottom of Well (B): _____ (B-A)*2 _____ Litres for 51mm ϕ well
Well Condition: _____ (B-A)*8 _____ Litres for 102mm ϕ well

EQUIPMENT LIST

☐ Waterra
☐ Hydrolift
☐ Bailer
☑ Peristaltic
☐ Bladder
Pump Details: _____

Multi-meter Model: YSI Pro
☐ Field Bump ☐ Field Calibration ✓
pH 4 _____ pH 7 _____ pH10 _____
1413µs/cm _____ 5000µs/cm _____ ✓ DO ✓
ORP

WELL DEVELOPMENT

Purge Volume: Well Vol. X _____ = _____ Sample Intake Depth: _____
Average Flow Rate: _____

Time	Vol. Removed (L)	Temp (°C)	pH (Units)	Conductivity (uS/cm)	Redox (mV)	Dissolved O_2 (mg/L)	Water Level (m)	Comments
10:49	0						3.418	
10:52	.700	13.0	7.72	1719	17.7	0.80	3.464	
10:55	1.100	13.9	7.69	1689	52.1	0.56	3.467	
10:58	1.700	13.8	7.69	1673	49.8	0.49	3.470	
11:01	2.200	14.1	7.67	1673	48.1	0.42	3.467	
11:04	2.700	13.8	7.69	1671	45.9	0.35	3.464	
11:07	3.300	14.2	7.73	1670	46.0	0.34	3.463	
11:10	3.900	14.0	7.65	1673	45.9	0.31	3.467	

Odour: ☐ Yes ☑ No If Yes, describe _____
Sheen: ☐ Yes ☑ No If Yes, describe _____
Turbidity: Clear I I I I I I I I I I I I I I I I I I I I I I I I I Very Silty

Analysis	Type		Container Size					Filtered	
			40 mL	125 mL	250 mL	500 mL	1 L		
General	X Plastic	☐ Glass					1	☐ Yes	☐ No
Metals	X Plastic	☐ Glass		1				☐ Yes	☐ No
Mercury	☐ Plastic	X Glass	1					☐ Yes	☐ No
COD, nutrient	X Plastic	X Glass		1				☐ Yes	☐ No
Organic C	☐ Plastic	X Glass	2					☐ Yes	☐ No
LEPH/HEPH	☐ Plastic	X Glass						☐ Yes	☐ No
Sulfide	X Plastic	☐ Glass						☐ Yes	☐ No
VOC/BTEX	☐ Plastic	X Glass						☐ Yes	☐ No

City of Kelowna

GROUNDWATER SAMPLING FORM
GLENMORE LANDFILL

Weather: SUNNY Date: AUG 20, 2025 Well No: 41-1
Temperature: 20° Tech: KP Field Dup: _____

MONITORING WELL INFORMATION

Time of Measurement: _____ One Well Volume: _____
Depth of Water (A): 2.646 Diameter of Well: _____
Bottom of Well (B): _____ (B-A)*2 _____ Litres for 51mm ϕ well
Well Condition: _____ (B-A)*8 _____ Litres for 102mm ϕ well

EQUIPMENT LIST

☐ Waterra
☐ Hydrolift
☐ Bailer
☑ Peristaltic
☑ Bladder
Pump Details: _____

Multi-meter Model: YSI Pro
☐ Field Bump ☐ Field Calibration ✓
pH 4 _____ pH 7 _____ pH10 _____
1413µs/cm _____ 5000µs/cm ✓ DO ✓

WELL DEVELOPMENT

Purge Volume: Well Vol. X _____ = _____ Sample Intake Depth: _____
Average Flow Rate: _____

Time	Vol. Removed (L)	Temp (°C)	pH (Units)	Conductivity (uS/cm)	Redox (mV)	Dissolved O_2 (mg/L)	Water Level (m)	Comments
10:18	✓						2.696	SOME SILT
10:21	0.800	13.9	7.49	1415	190.0	2.19	3.178	CLEARED
10:24	1.200	14.2	7.54	1299	189.0	2.69	3.969	
10:27	1.550	13.7	7.59	1244	186.0	2.58	3.688	
10:30	1.850	14.1	7.57	1231	184.6	2.52	3.877	
10:33	2.150	14.8	7.56	1226	183.2	2.44	4.031	
10:36		15.0	7.56	1227	182.3	2.41		
			—	SAMPLE 10:40			—	

Odour: ☐ Yes ☑ No If Yes, describe _____
Sheen: ☐ Yes ☐ No If Yes, describe _____
Turbidity: Clear I I I I I I I I I I I I I I I I I I I I I I I I I Very Silty

Analysis	Type		Container Size					Filtered	
			40 mL	125 mL	250 mL	500 mL	1 L		
General	X Plastic	☐ Glass					1	☐ Yes	☐ No
Metals	X Plastic	☐ Glass		1				☐ Yes	☐ No
Mercury	☐ Plastic	X Glass	1					☐ Yes	☐ No
COD, nutrient	X Plastic	X Glass		1				☐ Yes	☐ No
Organic C	☐ Plastic	X Glass	2					☐ Yes	☐ No
LEPH/HEPH	☐ Plastic	X Glass						☐ Yes	☐ No
Sulfide	X Plastic	☐ Glass						☐ Yes	☐ No
VOC/BTEX	☐ Plastic	X Glass						☐ Yes	☐ No

REFILL 6SEC
PUMP 8 SEC
18 PSI

City of Kelowna

GROUNDWATER SAMPLING FORM
GLENMORE LANDFILL

Weather: MOSTLY SUNNY Date: AUG 20, 2025 Well No: 41-2
Temperature: 21° Tech: _____ Field Dup: DUP 1

MONITORING WELL INFORMATION

Time of Measurement: _____ One Well Volume: _____
Depth of Water (A): 2.644 Diameter of Well: _____
Bottom of Well (B): _____ (B-A)*2 _____ Litres for 51mm ϕ well
Well Condition: _____ (B-A)*8 _____ Litres for 102mm ϕ well

EQUIPMENT LIST

☐ Waterra
☐ Hydrolift
☐ Bailer
☒ Peristaltic
☐ Bladder
Pump Details: _____

Multi-meter Model: YSI Pro
☐ Field Bump ☐ Field Calibration ✓
pH 4 _____ pH 7 _____ pH10 _____
1413µs/cm _____ 5000µs/cm _____ DO ✓
ORP

WELL DEVELOPMENT

Purge Volume: Well Vol. X _____ = _____ Sample Intake Depth: _____
Average Flow Rate: _____

Time	Vol. Removed (L)	Temp (°C)	pH (Units)	Conductivity (uS/cm)	Redox (mV)	Dissolved O_2 (mg/L)	Water Level (m)	Comments
11:00	0						2.644	SOME SILT
11:03	1.200	11.7	7.49	1217	176.0	3.49	2.655	CLEAR
11:06	2.600	11.8	7.49	1222	174.1	3.42	2.666	
11:09	3.900	11.6	7.48	1220	172.9	3.25	2.666	
			—	SAMPLE	11:10	—		

Odour: ☐ Yes ☐ No If Yes, describe _____
Sheen: ☐ Yes ☐ No If Yes, describe _____
Turbidity: Clear IIIIIIIIIIIIIIIIIIIIIIIIIIIIIII Very Silty

Analysis	Type		Container Size					Filtered	
			40 mL	125 mL	250 mL	500 mL	1 L		
General	X Plastic	☐ Glass					1	☐ Yes	☐ No
Metals	X Plastic	☐ Glass		1				☐ Yes	☐ No
Mercury	☐ Plastic	X Glass	1					☐ Yes	☐ No
COD, nutrient	X Plastic	X Glass		1				☐ Yes	☐ No
Organic C	☐ Plastic	X Glass	2					☐ Yes	☐ No
LEPH/HEPH	☐ Plastic	X Glass						☐ Yes	☐ No
Sulfide	X Plastic	☐ Glass						☐ Yes	☐ No
VOC/BTEX	☐ Plastic	X Glass						☐ Yes	☐ No

4-4 SEC 10 psi

City of Kelowna

GROUNDWATER SAMPLING FORM
GLENMORE LANDFILL

Weather: MOSTLY SUNNY Date: AUG 20, 2025 Well No: GL 41-3
Temperature: 22° Tech: KA Field Dup: _____

MONITORING WELL INFORMATION

Time of Measurement: _____ One Well Volume: _____
Depth of Water (A): 2.629 Diameter of Well: _____
Bottom of Well (B): _____ (B-A)*2 _____ Litres for 51mm ϕ well
Well Condition: _____ (B-A)*8 _____ Litres for 102mm ϕ well

EQUIPMENT LIST

☐ Waterra
☐ Hydrolift
☐ Bailer
☐ Peristaltic
☑ Bladder
Pump Details: _____

Multi-meter Model: YSI Pro
☐ Field Bump ☐ Field Calibration ✓
pH 4 _____ pH 7 ✓ pH10 _____
1413µs/cm _____ 5000µs/cm ✓ DO _____ ✓
ORP

WELL DEVELOPMENT

Purge Volume: Well Vol. X _____ = _____ Sample Intake Depth: _____
Average Flow Rate: _____

Time	Vol. Removed (L)	Temp (°C)	pH (Units)	Conductivity (uS/cm)	Redox (mV)	Dissolved O_2 (mg/L)	Water Level (m)	Comments
11:36	0						2.629	
11:40	1.800	12.3	7.54	1215	175.8	3.69	2.767	
11:43	3.600	12.4	7.54	1214	174.1	3.44	2.741	
11:46	5.400	12.4	7.53	1218	171.3	3.40	2.745	
11:49	7.200	12.5	7.59	1214	170.3	3.07	2.637	
				— SAMPLE		11:50	—	

Odour: ☐ Yes ☐ No If Yes, describe _____
Sheen: ☐ Yes ☐ No If Yes, describe _____
Turbidity: Clear IIIIIIIIIIIIIIIIIIIIIIIIIIIIIII Very Silty

Analysis	Type		Container Size					Filtered	
			40 mL	125 mL	250 mL	500 mL	1 L		
General	X Plastic	☐ Glass					1	☐ Yes	☐ No
Metals	X Plastic	☐ Glass		1				☐ Yes	☐ No
Mercury	☐ Plastic	X Glass	1					☐ Yes	☐ No
COD, nutrient	X Plastic	X Glass		1				☐ Yes	☐ No
Organic C	☐ Plastic	X Glass	2					☐ Yes	☐ No
LEPH/HEPH	☐ Plastic	X Glass						☐ Yes	☐ No
Sulfide	X Plastic	☐ Glass						☐ Yes	☐ No
VOC/BTEX	☐ Plastic	X Glass						☐ Yes	☐ No

City of Kelowna

GROUNDWATER SAMPLING FORM
GLENMORE LANDFILL

Weather: CLOUDY
Temperature: 26°
Date: AUG 19, 2025
Tech: RR
Well No: 43-1
Field Dup: PURGING ***

MONITORING WELL INFORMATION

Time of Measurement: _____
Depth of Water (A): 3.298
Bottom of Well (B): _____
Well Condition: _____

One Well Volume: _____
Diameter of Well: _____
(B-A)*2 _____ Litres for 51mm ϕ well
(B-A)*8 _____ Litres for 102mm ϕ well

EQUIPMENT LIST

☐ Waterra
☐ Hydrolift
☐ Bailer
☑ Peristaltic
☐ Bladder
Pump Details: _____

Multi-meter Model: YSI Pro
☐ Field Bump ☐ Field Calibration
pH 4 _____ pH 7 ✓ pH10 ✓
1413µs/cm _____ 5000µs/cm ✓ DO ✓
grp

WELL DEVELOPMENT

Purge Volume: Well Vol. X _____ = _____
Average Flow Rate: _____
Sample Intake Depth: _____

Time	Vol. Removed (L)	Temp (°C)	pH (Units)	Conductivity (uS/cm)	Redox (mV)	Dissolved O_2 (mg/L)	Water Level (m)	Comments
3:21	0						3.298	
3:24	.400	13.6	7.46	3520	170.9	1.70	3.652	
3:27	.800	13.8	7.52	3511	165.1	2.20	3.812	
3:30	1.200	13.7	7.53	3512	163.7	2.29	3.965	
3:33	1.600	13.9	7.58	3510	162.5	2.23		
3:36	2.0						DRY	

Odour: ☐ Yes ☑ No If Yes, describe _____
Sheen: ☐ Yes ☑ No If Yes, describe _____
Turbidity: Clear I I I I I I I I I I I I I I I I I I I I I I I I I Very Silty

Analysis	Type		Container Size					Filtered	
			40 mL	125 mL	250 mL	500 mL	1 L		
General	X Plastic	☐ Glass					1	☐ Yes	☐ No
Metals	X Plastic	☐ Glass		1				☐ Yes	☐ No
Mercury	☐ Plastic	X Glass	1					☐ Yes	☐ No
COD, nutrient	X Plastic	X Glass		1				☐ Yes	☐ No
Organic C	☐ Plastic	X Glass	2					☐ Yes	☐ No
LEPH/HEPH	☐ Plastic	X Glass						☐ Yes	☐ No
Sulfide	X Plastic	☐ Glass						☐ Yes	☐ No
VOC/BTEX	☐ Plastic	X Glass						☐ Yes	☐ No

City of Kelowna

GROUNDWATER SAMPLING FORM
GLENMORE LANDFILL

Weather: Cloudy
Temperature: 24°
Date: AUG 21, 2025
Tech: KR
Well No: 43-1
Field Dup: _____

MONITORING WELL INFORMATION

Time of Measurement: _____
Depth of Water (A): 3.300
Bottom of Well (B): _____
Well Condition: _____

One Well Volume: _____
Diameter of Well: _____
(B-A)*2 _____ Litres for 51mm ϕ well
(B-A)*8 _____ Litres for 102mm ϕ well

EQUIPMENT LIST

☐ Waterra
☐ Hydrolift
☐ Bailer
☑ Peristaltic
☐ Bladder
Pump Details: _____

Multi-meter Model: YSI Pro
☐ Field Bump ☐ Field Calibration
pH 4 _____ pH 7 _____ pH10 _____
1413µs/cm _____ 5000µs/cm _____ DO _____
ORP

WELL DEVELOPMENT

Purge Volume: Well Vol. X _____ = _____
Average Flow Rate: _____
Sample Intake Depth: _____

Time	Vol. Removed (L)	Temp (°C)	pH (Units)	Conductivity (uS/cm)	Redox (mV)	Dissolved O_2 (mg/L)	Water Level (m)	Comments
12:52	0					3	3.300	
13:05	.400	16.4	7.65	3491	220.8	8.03	3.584	AIR BUBBLES
				13:30 SAMPLE				

Odour: ☐ Yes ☑ No If Yes, describe _____
Sheen: ☐ Yes ☐ No If Yes, describe _____
Turbidity: Clear I I I

City of Kelowna

GROUNDWATER SAMPLING FORM
GLENMORE LANDFILL

Weather: Cloudy Date: _____ Well No: GL 44-1
Temperature: 23° Tech: _____ Field Dup: DUP 5 **

MONITORING WELL INFORMATION

Time of Measurement: _____ One Well Volume: _____
Depth of Water (A): 0.514 Diameter of Well: _____
Bottom of Well (B): _____ (B-A)*2 _____ Litres for 51mm ϕ well
Well Condition: _____ (B-A)*8 _____ Litres for 102mm ϕ well

EQUIPMENT LIST

☐ Waterra Multi-meter Model: YSI Pro
☐ Hydrolift ☐ Field Bump ☐ Field Calibration ✓
☐ Bailer pH 4 _____ pH 7 _____ pH10 _____
☑ Peristaltic 1413µs/cm _____ 5000µs/cm _____ ✓ DO _____ ✓
☐ Bladder ORP
Pump Details: _____

WELL DEVELOPMENT

Purge Volume: Well Vol. X _____ = _____ Sample Intake Depth: _____
Average Flow Rate: _____

Time	Vol. Removed (L)	Temp (°C)	pH (Units)	Conductivity (uS/cm)	Redox (mV)	Dissolved O_2 (mg/L)	Water Level (m)	Comments
9:21	Ø						0.514	SALT CRYSTALS ON TUBING
9:24	.650	15.7	7.10	5991	-36.3	0.28	0.661	
9:27	1.300	16.0	6.99	6002	-41.7	0.25	0.671	
9:30	1.900	16.9	7.08	5997	-48.9	0.30	0.671	
9:33	2.500	17.1	7.09	6005	-51.4	0.27	0.689	
9:36	3.100	16.5	7.02	5997	-53.0	0.24	0688	
9:39	3.700	16.7	7.12	5991	-54.0	0.23	0.671	
		SAMPLE						

Odour: ☐ Yes ☑ No If Yes, describe _____
Sheen: ☐ Yes ☐ No If Yes, describe _____
Turbidity: Clear I I I (D) I I I I I I I I I I I I I I I I I I I I Very Silty

Analysis	Type		Container Size					Filtered	
			40 mL	125 mL	250 mL	500 mL	1 L		
General	X Plastic	☐ Glass					1	☐ Yes	☐ No
Metals	X Plastic	☐ Glass		1				☐ Yes	☐ No
Mercury	☐ Plastic	X Glass	1					☐ Yes	☐ No
COD, nutrient	X Plastic	X Glass		1				☐ Yes	☐ No
Organic C	☐ Plastic	X Glass	2					☐ Yes	☐ No
LEPH/HEPH	☐ Plastic	X Glass						☐ Yes	☐ No
Sulfide	X Plastic	☐ Glass						☐ Yes	☐ No
VOC/BTEX	☐ Plastic	X Glass						☐ Yes	☐ No

City of Kelowna

GROUNDWATER SAMPLING FORM
GLENMORE LANDFILL

Weather: Cloudy
Temperature: 21°
Date: AUG 28, 2025
Tech: KL
Well No: GL 44-2
Field Dup: _____

MONITORING WELL INFORMATION

Time of Measurement: _____
Depth of Water (A): 0.612
Bottom of Well (B): _____
Well Condition: _____

One Well Volume: _____
Diameter of Well: _____
(B-A)*2 _____ Litres for 51mm ϕ well
(B-A)*8 _____ Litres for 102mm ϕ well

EQUIPMENT LIST

☐ Waterra
☐ Hydrolift
☐ Bailer
☑ Peristaltic
☐ Bladder
Pump Details: _____

Multi-meter Model: YSI Pro
☐ Field Bump ☐ Field Calibration
pH 4 _____ pH 7 ~ pH10 _____
1413µs/cm _____ 5000µs/cm _____ ✓ DO _____ ✓
ORP

WELL DEVELOPMENT

Purge Volume: Well Vol. X _____ = _____
Average Flow Rate: _____
Sample Intake Depth: _____

Time	Vol. Removed (L)	Temp (°C)	pH (Units)	Conductivity (uS/cm)	Redox (mV)	Dissolved O_2 (mg/L)	Water Level (m)	Comments
8:35	0						0.612	
8:38	.450	15.4	7.11	5641	-54.4	3.40	0.872	
8:41	.850	15.5	7.17	5624	-67.6	0.89	0.985	
8:44	1.250	15.7	7.16	5626	-72.8	0.60	1.063	
8:47	1.650	15.7	7.19	5625	-76.5	0.47	1.147	
8:50	2.050	15.9	7.19	5618	-79.5	0.39	1.218	
8:53	2.500	15.7	7.18	5617	-81.9	0.34	1.293	
8:56	2.950	15.6	7.18	5611	-84.3	0.31	1.367	
8:59	3.400	15.7	7.18	5614	-86.6	0.29	1.427	
			SAMPLE					

Odour: ☐ Yes ☑ No If Yes, describe _____
Sheen: ☐ Yes ☐ No If Yes, describe _____
Turbidity: Clear I I I (I) I I I I I I I I I I I I I I I I I I I I Very Silty

Analysis	Type		Container Size					Filtered	
			40 mL	125 mL	250 mL	500 mL	1 L		
General	X Plastic	☐ Glass					1	☐ Yes	☐ No
Metals	X Plastic	☐ Glass		1				☐ Yes	☐ No
Mercury	☐ Plastic	X Glass	1					☐ Yes	☐ No
COD, nutrient	X Plastic	X Glass		1				☐ Yes	☐ No
Organic C	☐ Plastic	X Glass	2					☐ Yes	☐ No
LEPH/HEPH	☐ Plastic	X Glass						☐ Yes	☐ No
Sulfide	X Plastic	☐ Glass						☐ Yes	☐ No
VOC/BTEX	☐ Plastic	X Glass						☐ Yes	☐ No

City of Kelowna

GROUNDWATER SAMPLING FORM
GLENMORE LANDFILL

Weather: CLOUDY Date: AUG 28, 2025 Well No: 45-1
Temperature: 28° Tech: KQ Field Dup: _____

MONITORING WELL INFORMATION

Time of Measurement: _____ One Well Volume: _____
Depth of Water (A): 0.413 Diameter of Well: _____
Bottom of Well (B): _____ (B-A)*2 _____ Litres for 51mm ϕ well
Well Condition: _____ (B-A)*8 _____ Litres for 102mm ϕ well

EQUIPMENT LIST

☐ Waterra
☐ Hydrolift
☐ Bailer
☑ Peristaltic
☐ Bladder
Pump Details: _____

Multi-meter Model: YSI Pro
☐ Field Bump ☐ Field Calibration
pH 4 _____ pH 7 ✓ pH10 _____
1413µs/cm _____ 5000µs/cm _____ DO _____
op

WELL DEVELOPMENT

Purge Volume: Well Vol. X _____ = _____ Sample Intake Depth: _____
Average Flow Rate: _____

Time	Vol. Removed (L)	Temp (°C)	pH (Units)	Conductivity (uS/cm)	Redox (mV)	Dissolved O_2 (mg/L)	Water Level (m)	Comments
12:28	0						0.413	
12:31	0.700	17.5	6.65	5651	-63.4	0.35	0.437	
12:34	1.350	17.2	6.66	5657	-66.9	0.30	0.441	
12:37	2.000	17.4	6.61	5617	-70.7	0.27	0.446	
12:40	2.700	16.6	6.61	5643	-71.2	0.27	0.452	
12:43	3.350	16.7	6.60	5654	-71.9	0.24	0.452	
			SAMPLE					

Odour: ☐ Yes ☐ No If Yes, describe _____
Sheen: ☐ Yes ☐ No If Yes, describe _____
Turbidity: Clear I I I I I I I I I I I I I I I I I I I I I I I I I I I Very Silty

Analysis	Type		Container Size					Filtered	
			40 mL	125 mL	250 mL	500 mL	1 L		
General	X Plastic	☐ Glass					1	☐ Yes	☐ No
Metals	X Plastic	☐ Glass		1				☐ Yes	☐ No
Mercury	☐ Plastic	X Glass	1					☐ Yes	☐ No
COD, nutrient	X Plastic	X Glass		1				☐ Yes	☐ No
Organic C	☐ Plastic	X Glass	2					☐ Yes	☐ No
LEPH/HEPH	☐ Plastic	X Glass						☐ Yes	☐ No
Sulfide	X Plastic	☐ Glass						☐ Yes	☐ No
VOC/BTEX	☐ Plastic	X Glass						☐ Yes	☐ No

GROUNDWATER SAMPLING FORM
GLENMORE LANDFILL

City of Kelowna

Weather: Cloudy Date: AUG 28, 2025 Well No: GC 45-2
Temperature: 27° Tech: KR Field Dup:

MONITORING WELL INFORMATION

Time of Measurement: One Well Volume:
Depth of Water (A): 0.777 Diameter of Well:
Bottom of Well (B): (B-A)*2 _____ Litres for 51mm ϕ well
Well Condition: (B-A)*8 _____ Litres for 102mm ϕ well

EQUIPMENT LIST

☐ Waterra
☐ Hydrolift
☐ Bailer
☑ Peristaltic
☐ Bladder
Pump Details:

Multi-meter Model: YSI Pro
☐ Field Bump ☐ Field Calibration
pH 4 _____ pH 7 ✓ pH10 ✓
1413µs/cm _____ 5000µs/cm ✓ DO ✓
ORP

WELL DEVELOPMENT

Purge Volume: Well Vol. X _____ = _____ Sample Intake Depth:
Average Flow Rate:

Time	Vol. Removed (L)	Temp (°C)	pH (Units)	Conductivity (uS/cm)	Redox (mV)	Dissolved O_2 (mg/L)	Water Level (m)	Comments
11:55	0						0.777	SALT CRYSTALS ON
11:58	.600	17.9	7.41	2992	119.8	0.75	0.942	TUBING
12:01	1.100	17.2	7.36	2926	105.7	0.49	1.000	
12:04	1.600	17.0	7.43	2937	61.8	0.41	1.038	
12:07	2.100	17.2	7.40	2970	1.0	0.34	1.061	
12:10	2.60	16.8	7.35	2991	-36.9	0.31	1.071	
12:13	3.100	16.8	7.39	3034	-56.4	0.28	1.079	
12:16	3.600	16.7	7.37	3047	-71.4	0.28	1.071	
				SAMPLE				

Odour: ☐ Yes ☑ No If Yes, describe _____
Sheen: ☐ Yes ☑ No If Yes, describe _____
Turbidity: Clear I I I I I I I I I I I I I I I I I I I I I I I I I I I Very Silty

Analysis	Type		Container Size					Filtered	
			40 mL	125 mL	250 mL	500 mL	1 L		
General	X Plastic	☐ Glass					1	☐ Yes	☐ No
Metals	X Plastic	☐ Glass		1				☐ Yes	☐ No
Mercury	☐ Plastic	X Glass	1					☐ Yes	☐ No
COD, nutrient	X Plastic	X Glass		1				☐ Yes	☐ No
Organic C	☐ Plastic	X Glass	2					☐ Yes	☐ No
LEPH/HEPH	☐ Plastic	X Glass						☐ Yes	☐ No
Sulfide	X Plastic	☐ Glass						☐ Yes	☐ No
VOC/BTEX	☐ Plastic	X Glass						☐ Yes	☐ No

City of Kelowna

GROUNDWATER SAMPLING FORM
GLENMORE LANDFILL

Weather: MOSTLY CLOUDY Date: AUG 26, 2025 Well No: GL 46-1
Temperature: 21° Tech: KR Field Dup:

MONITORING WELL INFORMATION

Time of Measurement: One Well Volume:
Depth of Water (A): 11.311 Diameter of Well:
Bottom of Well (B): (B-A)*2 Litres for 51mm ϕ well
Well Condition: (B-A)*8 Litres for 102mm ϕ well

EQUIPMENT LIST

☐ Waterra Multi-meter Model: YSI Pro
☐ Hydrolift ☐ Field Bump ☐ Field Calibration
☐ Bailer pH 4 pH 7 ✓ pH10
☐ Peristaltic 1413µs/cm 5000µs/cm DO
☐ ✓Bladder ORP
Pump Details:

WELL DEVELOPMENT

Purge Volume: Well Vol. X = Sample Intake Depth:
Average Flow Rate:

Time	Vol. Removed (L)	Temp (°C)	pH (Units)	Conductivity (uS/cm)	Redox (mV)	Dissolved O_2 (mg/L)	Water Level (m)	Comments
8:55	0						11.311	AIR BUBBLES - CLEAR
8:58	.400	17.1	7.66	5879	-106.2	2.88	11.489	
9:01	.700	17.1	7.59	5900	-100.9	2.05	11.579	
9:04	1.100	17.1	7.56	5768	-100.5	1.76	11.557	
9:07	1.400	17.7	7.56	5762	-99.9	1.85	11.549	
9:10	1.700	18.1	7.56	5768	-97.0	1.68	11.557	
9:13	2.100	17.6	7.49	5742	-100.2	2.00	11.562	
9:16	2.400	17.3	7.47	5827	-117.2	0.82	11.573	
9:19	2.900	16.1	7.48	5760	-123.2	0.50	11.622	
9:22	3.300	15.6	7.48	5755	-126.6	0.27	11.683	
9:25	3.700	15.5	7.50	5742	-128.8	0.27	11.712	- SAMPLE -

Odour: ☐ Yes ☐ No If Yes, describe
Sheen: ☐ Yes ☐ No If Yes, describe
Turbidity: Clear I I I I I I I I I I I I I I I I I I I I I I I I I I I I I Very Silty

Analysis	Type		Container Size					Filtered	
			40 mL	125 mL	250 mL	500 mL	1 L		
General	X Plastic	☐ Glass					1	☐ Yes	☐ No
Metals	X Plastic	☐ Glass		1				☐ Yes	☐ No
Mercury	☐ Plastic	X Glass	1					☐ Yes	☐ No
COD, nutrient	X Plastic	X Glass		1				☐ Yes	☐ No
Organic C	☐ Plastic	X Glass	2					☐ Yes	☐ No
LEPH/HEPH	☐ Plastic	X Glass						☐ Yes	☐ No
Sulfide	X Plastic	☐ Glass						☐ Yes	☐ No
VOC/BTEX	☐ Plastic	X Glass						☐ Yes	☐ No

GTS - REPLICATE
DGS - PUMP
~ 28 psi

City of Kelowna

SURFACE WATER SAMPLING FORM
GLENMORE LANDFILL

Weather: CLOUDY
Temperature: 2°
Date: MARCH 11, 2025
Tech: KR/AG
Pond: NE POND [redacted]

POND INFORMATION

Time of Measurement: 10:15
Pond Elevation: _____
Location of Sample: _____
Location of Elevation: _____

EQUIPMENT LIST

☑ Swing Sampler
☐ Hydrolift
☐ Submersible
☑ Peristaltic FILTERED
Others _____

Multi-meter Model: ☑ YSI Pro ☐ Other _____
☐ Field Bump ☐ Field Calibration
pH 4 _____ pH 7 ✓ pH10 ✓
1413µs/cm ✓ 5000µs/cm ✓ DO ✓
ORP

FIELD MONITORING

Time	Temp (°C)	pH (Units)	Conductivity (µS/cm)	TDS (mg/L)	Redox (mV)	Dissolved O_2 (mg/L)	Comments
10:15	2.4	8:61	1577	1020.50	181.8	~~9.85~~	7.32

Odour: ☐ Yes ☑ No If Yes, describe _____
Sheen: ☐ Yes ☐ No If Yes, describe _____
Turbidity: Clear I I I I I I I I I I I I I I I I I I I I I Very Silty

Analysis	Type		Container Size					Filtered	
			40 mL	125 mL	250 mL	500 mL	1 L		
General	X Plastic	☐ Glass					1	☐ Yes	X No
Metals-Tot	X Plastic	☐ Glass		1				☐ Yes	X No
Mercury-Tot	☐ Plastic	X Glass	1					☐ Yes	X No
Metals-Dis	X Plastic	☐ Glass		1				X Yes	☐ No
Organic C	☐ Plastic	X Glass	2					☐ Yes	X No
Coliforms	X Plastic	☐ Glass			1			☐ Yes	X No
COD/Nutrients	X Plastic	☐ Glass			1			☐ Yes	X No
DOC	☐ Plastic	X Glass	2					X Yes	☐ No
Mercury-Dis	☐ Plastic	X Glass	1					X Yes	☐ No

Notes: - BANKS FLOODED
- 1ST BENCH FLOODED
- THIN ICE ON SURFACE

City of Kelowna

SURFACE WATER SAMPLING FORM
GLENMORE LANDFILL

Weather: CLOUDY
Temperature: 3°
Date: MARCH 11, 20
Tech: KR/AG
Pond: BRENN POND
DUP A ***

POND INFORMATION

Time of Measurement: _____
Location of Sample: _____
Pond Elevation: _____
Location of Elevation: _____

EQUIPMENT LIST

☑ Swing Sampler
☐ Hydrolift
☐ Submersible
☑ Peristaltic FILTERED
Others _____

Multi-meter Model: ☑ YSI Pro ☐ Other _____
☐ Field Bump ☐ Field Calibration
pH 4 _____ pH 7 ✓ pH10 ✓
1413µs/cm ✓ 5000µs/cm ✓ ORP DO ✓

FIELD MONITORING

Time	Temp (°C)	pH (Units)	Conductivity (µS/cm)	TDS (mg/L)	Redox (mV)	Dissolved O_2 (mg/L)	Comments
10:45	5.1	7.95	1403	910.00	164.5	7.51	

Odour: ☐ Yes ☑ No If Yes, describe _____
Sheen: ☐ Yes ☑ No If Yes, describe _____
Turbidity: Clear I I I I (I) I I I I I I I I I I I I I I I I I I Very Silty

Analysis	Type		Container Size					Filtered	
			40 mL	125 mL	250 mL	500 mL	1 L		
General	X Plastic	☐ Glass					1	☐ Yes	X No
Metals-Tot	X Plastic	☐ Glass		1				☐ Yes	X No
Mercury-Tot	☐ Plastic	X Glass	1					☐ Yes	X No
Metals-Dis	X Plastic	☐ Glass		1				X Yes	☐ No
Organic C	☐ Plastic	X Glass	2					☐ Yes	X No
Coliforms	X Plastic	☐ Glass			1			☐ Yes	X No
COD/Nutrients	X Plastic	☐ Glass			1			☐ Yes	X No
DOC	☐ Plastic	X Glass	2					X Yes	☐ No
Mercury-Dis	☐ Plastic	X Glass	1					X Yes	☐ No

Notes: _____

City of Kelowna

SURFACE WATER SAMPLING FORM
GLENMORE LANDFILL

Weather: CLOUDY
Temperature: 3°
Date: MARCH 11, 2025
Tech: KR / AG
Pond: TUTT POND

POND INFORMATION

Time of Measurement: _____
Pond Elevation: _____
Location of Sample: _____
Location of Elevation: _____

EQUIPMENT LIST

- ☐ Swing Sampler
- ☐ Hydrolift
- ☐ Submersible
- ☑ Peristaltic FILTERED
- Others _____

Multi-meter Model: ☑ YSI Pro ☐ Other _____
☐ Field Bump ☑ Field Calibration
pH 4 _____ pH 7 ✓ pH10 ✓
1413µs/cm ✓ 5000µs/cm ✓ DO ✓
ORP

FIELD MONITORING

Time	Temp (°C)	pH (Units)	Conductivity (µS/cm)	TDS (mg/L)	Redox (mV)	Dissolved O_2 (mg/L)	Comments
11:25	4.2	8.25	2133	1384.5	146.7	7.78	

Odour: ☐ Yes ☐ No If Yes, describe _____
Sheen: ☐ Yes ☐ No If Yes, describe _____
Turbidity: Clear I I I I I I I I I I I I I I I I I I I I I I I I Very Silty

Analysis	Type		Container Size					Filtered	
			40 mL	125 mL	250 mL	500 mL	1 L		
General	X Plastic	☐ Glass					1	☐ Yes	X No
Metals-Tot	X Plastic	☐ Glass		1				☐ Yes	X No
Mercury-Tot	☐ Plastic	X Glass	1					☐ Yes	X No
Metals-Dis	X Plastic	☐ Glass		1				X Yes	☐ No
Organic C	☐ Plastic	X Glass	2					☐ Yes	X No
Coliforms	X Plastic	☐ Glass			1			☐ Yes	X No
COD/Nutrients	X Plastic	☐ Glass			1			☐ Yes	X No
DOC	☐ Plastic	X Glass	2					X Yes	☐ No
Mercury-Dis	☐ Plastic	X Glass	1					X Yes	☐ No

Notes: _____

City of Kelowna

SURFACE WATER SAMPLING FORM
GLENMORE LANDFILL

Weather: CLOUDY
Temperature: 3°
Date: 8 MARCH 11, 2025
Tech: KR / AC
Pond: SLOUGH

POND INFORMATION

Time of Measurement: _____
Location of Sample: _____
Pond Elevation: _____
Location of Elevation: _____

EQUIPMENT LIST

☑ Swing Sampler
☐ Hydrolift
☐ Submersible
☑ Peristaltic
Others _____

Multi-meter Model: ☐ YSI Pro ☐ Other _____
☐ Field Bump ☐ Field Calibration
pH 4 _____ pH 7 _____ pH10 _____
1413µs/cm _____ 5000µs/cm _____ DO _____
ORP

FIELD MONITORING

Time	Temp (°C)	pH (Units)	Conductivity (µS/cm)	TDS (mg/L)	Redox (mV)	Dissolved O_2 (mg/L)	Comments
11:45	2.3	9.22	~~3165.50~~ 4876	~~3165.50~~ 3165.5	143.1	8.02	

Odour: ☐ Yes ☑ No If Yes, describe _____
Sheen: ☑ Yes ☐ No If Yes, describe SLIGHT ORGANIC SHEEN
Turbidity: Clear IIII

City of Kelowna

SURFACE WATER SAMPLING FORM
GLENMORE LANDFILL

Weather: MOSTLY CLOUDY Date: MARCH 12, 2025 Pond: BOUBNA SLOUGH
Temperature: 4° Tech: KB/AG

POND INFORMATION

Time of Measurement: _____ Location of Sample: _____
Pond Elevation: _____ Location of Elevation: _____

EQUIPMENT LIST

☑ Swing Sampler
☐ Hydrolift
☐ Submersible
☑ Peristaltic FILTERED
Others _____

Multi-meter Model: ☑ YSI Pro ☐ Other _____
☐ Field Bump ☐ Field Calibration
pH 4 _____ pH 7 ✓ pH10 ✓
1413µs/cm ✓ 5000µs/cm ✓ DO ✓
ORP

FIELD MONITORING

Time	Temp (°C)	pH (Units)	Conductivity (µS/cm)	TDS (mg/L)	Redox (mV)	Dissolved O_2 (mg/L)	Comments
10:15	2.7	6.65(?)	211.8	137.8	177.8	7.83	THIN ICE ON SURFACE

Odour: ☐ Yes ☑ No If Yes, describe _____
Sheen: ☐ Yes ☐ No If Yes, describe _____
Turbidity: Clear I I I I (I) I I I I I I I I I I I I I I I I I I Very Silty

Analysis	Type		Container Size					Filtered	
			40 mL	125 mL	250 mL	500 mL	1 L		
General	X Plastic	☐ Glass					1	☐ Yes	X No
Metals-Tot	X Plastic	☐ Glass		1				☐ Yes	X No
Mercury-Tot	☐ Plastic	X Glass	1					☐ Yes	X No
Metals-Dis	X Plastic	☐ Glass		1				X Yes	☐ No
Organic C	☐ Plastic	X Glass	2					☐ Yes	X No
Coliforms	X Plastic	☐ Glass			1			☐ Yes	X No
COD/Nutrients	X Plastic	☐ Glass			1			☐ Yes	X No
DOC	☐ Plastic	X Glass	2					X Yes	☐ No
Mercury-Dis	☐ Plastic	X Glass	1					X Yes	☐ No

Notes: _____

City of Kelowna

SURFACE WATER SAMPLING FORM
GLENMORE LANDFILL

Weather: MOSTLY CLOUDY Date: MARCH 12, 2025 Pond: SLOUGH #2
Temperature: 40 Tech: KR/AG

POND INFORMATION

Time of Measurement: _____ Location of Sample: _____
Pond Elevation: _____ Location of Elevation: _____

EQUIPMENT LIST

☑ Swing Sampler
☐ Hydrolift
☐ Submersible
☑ Peristaltic PAPER
Others _____

Multi-meter Model: ☐ YSI Pro ☐ Other _____
☐ Field Bump ☐ Field Calibration
pH 4 _____ pH 7 _____ pH10 _____
1413µs/cm _____ 5000µs/cm _____ DO _____

FIELD MONITORING

Time	Temp (°C)	pH (Units)	Conductivity (µS/cm)	TDS (mg/L)	Redox (mV)	Dissolved O_2 (mg/L)	Comments
10:30	2.2	8.44	2118	1378	172.2	7.27	

Odour: ☐ Yes ☑ No If Yes, describe _____
Sheen: ☐ Yes ☑ No If Yes, describe _____
Turbidity: Clear I I I I I (I) I I I I I I I I I I I I I I I I I Very Silty

Analysis	Type		Container Size					Filtered	
			40 mL	125 mL	250 mL	500 mL	1 L		
General	X Plastic	☐ Glass					1	☐ Yes	X No
Metals-Tot	X Plastic	☐ Glass		1				☐ Yes	X No
Mercury-Tot	☐ Plastic	X Glass	1					☐ Yes	X No
Metals-Dis	X Plastic	☐ Glass		1				X Yes	☐ No
Organic C	☐ Plastic	X Glass	2					☐ Yes	X No
Coliforms	X Plastic	☐ Glass			1			☐ Yes	X No
COD/Nutrients	X Plastic	☐ Glass			1			☐ Yes	X No
DOC	☐ Plastic	X Glass	2					X Yes	☐ No
Mercury-Dis	☐ Plastic	X Glass	1					X Yes	☐ No

Notes: _____

City of Kelowna

SURFACE WATER SAMPLING FORM
GLENMORE LANDFILL

Weather: CLOUDY
Temperature: 5°C
Date: MARCH 12, 2025
Tech: KR/AG
Pond: BRANDT'S CREEK (BONN RD)

POND INFORMATION

Time of Measurement: _____
Pond Elevation: _____
Location of Sample: _____
Location of Elevation: _____

EQUIPMENT LIST

☑ Swing Sampler
☐ Hydrolift
☐ Submersible
☑ Peristaltic (FILTERED)
Others _____

Multi-meter Model: ☑ YSI Pro ☐ Other _____
☐ Field Bump ☐ Field Calibration
pH 4 _____ pH 7 ✓ pH10 ✓
1413µs/cm ✓ 5000µs/cm ✓ DO ✓ ORP

FIELD MONITORING

Time	Temp (°C)	pH (Units)	Conductivity (µS/cm)	TDS (mg/L)	Redox (mV)	Dissolved O_2 (mg/L)	Comments
11:00	2.1	8.05	2263	1469	161.0	10.40	SHALLOW FLOW

Odour: ☐ Yes ☑ No If Yes, describe _____
Sheen: ☐ Yes ☐ No If Yes, describe _____
Turbidity: Clear IIII

City of Kelowna

SURFACE WATER SAMPLING FORM
GLENMORE LANDFILL

Weather: CLOUDY
Temperature: 7°
Date:
Tech:
Pond: LITTLE ROBERT LAKE
DUP B ***

POND INFORMATION

Time of Measurement:
Pond Elevation:
Location of Sample:
Location of Elevation:

EQUIPMENT LIST

☑ Swing Sampler
☐ Hydrolift
☐ Submersible
☑ Peristaltic FILTERED
Others

Multi-meter Model: ☑ YSI Pro ☐ Other
☐ Field Bump ☐ Field Calibration
pH 4 pH 7 ✓ pH10 ✓
1413µs/cm ✓ 5000µs/cm ✓ DO ✓
ORP

FIELD MONITORING

Time	Temp (°C)	pH (Units)	Conductivity (µS/cm)	TDS (mg/L)	Redox (mV)	Dissolved O_2 (mg/L)	Comments
13:35	6.1	8.52	5490	3568.5	132.4	8.85	

Odour: ☐ Yes ☑ No If Yes, describe
Sheen: ☐ Yes ☐ No If Yes, describe
Turbidity: Clear I I I I I I I I I I I I I I I I I I I I Very Silty

Analysis	Type		Container Size					Filtered	
			40 mL	125 mL	250 mL	500 mL	1 L		
General	X Plastic	☐ Glass					1	☐ Yes	X No
Metals-Tot	X Plastic	☐ Glass		1				☐ Yes	X No
Mercury-Tot	☐ Plastic	X Glass	1					☐ Yes	X No
Metals-Dis	X Plastic	☐ Glass		1				X Yes	☐ No
Organic C	☐ Plastic	X Glass	2					☐ Yes	X No
Coliforms	X Plastic	☐ Glass			1			☐ Yes	X No
COD/Nutrients	X Plastic	☐ Glass			1			☐ Yes	X No
DOC	☐ Plastic	X Glass	2					X Yes	☐ No
Mercury-Dis	☐ Plastic	X Glass	1					X Yes	☐ No

Notes:

SURFACE WATER SAMPLING FORM
GLENMORE LANDFILL

City of Kelowna

Weather: RAIN
Temperature: 8°
Date: MARCH 12, 2025
Tech: KR/AG
Pond: ROBERT LAKE NORTH

POND INFORMATION

Time of Measurement: _____
Pond Elevation: _____
Location of Sample: _____
Location of Elevation: _____

EQUIPMENT LIST

☑ Swing Sampler
☐ Hydrolift
☐ Submersible
☑ Peristaltic FILTERED
Others _____

Multi-meter Model: ☑ YSI Pro ☐ Other _____
☐ Field Bump ☐ Field Calibration
pH 4 _____ pH 7 ✓ pH10 ✓
1413µs/cm ✓ 5000µs/cm ✓ DO ✓
ORP

FIELD MONITORING

Time	Temp (°C)	pH (Units)	Conductivity (µS/cm)	TDS (mg/L)	Redox (mV)	Dissolved O_2 (mg/L)	Comments
14:15	7.1	9.33	5983	3887	129.0	6.88	BANKS SHALLOW SILTY

Odour: ☐ Yes ☑ No If Yes, describe _____
Sheen: ☐ Yes ☐ No If Yes, describe _____
Turbidity: Clear IIII

City of Kelowna

SURFACE WATER SAMPLING FORM
GLENMORE LANDFILL

Weather: CLOUDY
Temperature: 7°

Date: MARCH 13, 2025
Tech: KR

Pond: CULVERT 1002026
DUP.C ***

POND INFORMATION

Time of Measurement: _____
Pond Elevation: _____

Location of Sample: _____
Location of Elevation: _____

EQUIPMENT LIST

☑ Swing Sampler
☐ Hydrolift
☐ Submersible
☑ Peristaltic FILTERED
Others _____

Multi-meter Model: ☑ YSI Pro ☐ Other _____
☐ Field Bump ☐ Field Calibration
pH 4 _____ pH 7 ✓ pH10 ✓
1413µs/cm ✓ 5000µs/cm ✓ DO ✓
ORP

FIELD MONITORING

Time	Temp (°C)	pH (Units)	Conductivity (µS/cm)	TDS (mg/L)	Redox (mV)	Dissolved O_2 (mg/L)	Comments
15:00	5.2	7.36	1086	702.6	236.3	13.5	GOOD FLOW- WET SNOW IN THE AM

Odour: ☐ Yes ☑ No If Yes, describe _____
Sheen: ☐ Yes ☑ No If Yes, describe _____
Turbidity: Clear IIIIIIIIIIIIIIIIIIIIIIIII Very Silty

Analysis	Type		Container Size					Filtered	
			40 mL	125 mL	250 mL	500 mL	1 L		
General	X Plastic	☐ Glass					1	☐ Yes	X No
Metals-Tot	X Plastic	☐ Glass		1				☐ Yes	X No
Mercury-Tot	☐ Plastic	X Glass	1					☐ Yes	X No
Metals-Dis	X Plastic	☐ Glass		1				X Yes	☐ No
Organic C	☐ Plastic	X Glass	2					☐ Yes	X No
Coliforms	X Plastic	☐ Glass			1			☐ Yes	X No
COD/Nutrients	X Plastic	☐ Glass			1			☐ Yes	X No
DOC	☐ Plastic	X Glass	2					X Yes	☐ No
Mercury-Dis	☐ Plastic	X Glass	1					X Yes	☐ No

Notes: _____

SURFACE WATER SAMPLING FORM
GLENMORE LANDFILL

City of Kelowna

Weather: CLOUDY
Temperature: 7°
Date: MARCH 13, 2025
Tech: KL
Pond: S. STORM HEADWALL 186437

POND INFORMATION

Time of Measurement: _____
Pond Elevation: _____
Location of Sample: _____
Location of Elevation: _____

EQUIPMENT LIST

- ☐ Swing Sampler
- ☐ Hydrolift
- ☐ Submersible
- ☐ Peristaltic FILTERED
- Others _____

Multi-meter Model: ☐ YSI Pro ☐ Other _____
☐ Field Bump ☐ Field Calibration
pH 4 _____ pH 7 _____ pH10 _____
1413µs/cm _____ 5000µs/cm _____ DO _____ ORP

FIELD MONITORING

Time	Temp (°C)	pH (Units)	Conductivity (µS/cm)	TDS (mg/L)	Redox (mV)	Dissolved O_2 (mg/L)	Comments
15:25	5.3	7.83	1010	656.50	210.1	11.25	GOOD FLOW - SNOW MELT

Odour: ☐ Yes ☐ No If Yes, describe _____
Sheen: ☐ Yes ☐ No If Yes, describe _____
Turbidity: Clear I I I I I I I I I I I I I I I I I I I I I I I I I I I Very Silty

Analysis	Type		Container Size					Filtered	
			40 mL	125 mL	250 mL	500 mL	1 L		
General	X Plastic	☐ Glass					1	☐ Yes	X No
Metals-Tot	X Plastic	☐ Glass		1				☐ Yes	X No
Mercury-Tot	☐ Plastic	X Glass	1					☐ Yes	X No
Metals-Dis	X Plastic	☐ Glass		1				X Yes	☐ No
Organic C	☐ Plastic	X Glass	2					☐ Yes	X No
Coliforms	X Plastic	☐ Glass			1			☐ Yes	X No
COD/Nutrients	X Plastic	☐ Glass			1			☐ Yes	X No
DOC	☐ Plastic	X Glass	2					X Yes	☐ No
Mercury-Dis	☐ Plastic	X Glass	1					X Yes	☐ No

Notes: _____

City of Kelowna

SURFACE WATER SAMPLING FORM
GLENMORE LANDFILL

Weather: SUNNY
Temperature: 14°
Date: MAY 15, 2025
Tech: KR
Pond: NE POND

POND INFORMATION

Time of Measurement: 11:30
Location of Sample: _____
Pond Elevation: _____
Location of Elevation: _____

EQUIPMENT LIST

☑ Swing Sampler
☐ Hydrolift
☐ Submersible
☑ Peristaltic (FILTERED)
Others _____

Multi-meter Model: ☑ YSI Pro ☐ Other _____
☐ Field Bump ☑ Field Calibration
pH 4 _____ pH 7 ✓ pH10 ✓
1413µs/cm _____ 5000µs/cm ✓ DO ✓
ORP

FIELD MONITORING

Time	Temp (°C)	pH (Units)	Conductivity (µS/cm)	TDS (mg/L)	Redox (mV)	Dissolved O_2 (mg/L)	Comments
11:30	18.3	7.07	2416	1573	175.1	7.77	

Odour: ☑ Yes ☐ No If Yes, describe SWAMPY
Sheen: ☐ Yes ☑ No If Yes, describe _____
Turbidity: Clear I I I I I I I I I I I I I I I I I I I I I I I I I Very Silty

1ST BENCH FLOODED

Analysis	Type		Container Size					Filtered	
			40 mL	125 mL	250 mL	500 mL	1 L		
General	X Plastic	☐ Glass					1	☐ Yes	X No
Metals-Tot	X Plastic	☐ Glass		1				☐ Yes	X No
Mercury-Tot	☐ Plastic	X Glass	1					☐ Yes	X No
Metals-Dis	X Plastic	☐ Glass		1				X Yes	☐ No
Organic C	☐ Plastic	X Glass	2					☐ Yes	X No
Coliforms	X Plastic	☐ Glass			1			☐ Yes	X No
COD/Nutrients	X Plastic	☐ Glass			1			☐ Yes	X No
DOC	☐ Plastic	X Glass	2					X Yes	☐ No
Mercury-Dis	☐ Plastic	X Glass	1					X Yes	☐ No

Notes: _____

City of Kelowna

SURFACE WATER SAMPLING FORM
GLENMORE LANDFILL

Weather: MOSTLY SUNNY Date: MAY 15, 2025 Pond: SLOUGH
Temperature: 13° Tech: KR

POND INFORMATION

Time of Measurement: 10:50 Location of Sample: _____
Pond Elevation: _____ Location of Elevation: _____

EQUIPMENT LIST

☑ Swing Sampler
☐ Hydrolift
☐ Submersible
☑ Peristaltic (FILTERED)
Others _____

Multi-meter Model: ☐ YSI Pro ☐ Other _____
☐ Field Bump ☑ Field Calibration
pH 4 _____ pH 7 ✓ pH10 ✓
1413µs/cm _____ 5000µs/cm ✓ DO ✓
ORP

FIELD MONITORING

Time	Temp (°C)	pH (Units)	Conductivity (µS/cm)	TDS (mg/L)	Redox (mV)	Dissolved O_2 (mg/L)	Comments
10:50	17.8	9.07	784	506.5	175.9	4.45	

Odour: ☑ Yes ☐ No If Yes, describe EARTHY
Sheen: ☑ Yes ☐ No If Yes, describe THIN SCUM LAYER
Turbidity: Clear I I I

City of Kelowna

SURFACE WATER SAMPLING FORM
GLENMORE LANDFILL

Weather: SUNNY
Temperature: 12°
Date: MAY 15, 2025
Tech: KR
Pond: TUTT POND
** DUP 2 **

POND INFORMATION

Time of Measurement: 10:15
Location of Sample: @ SMART COVER
Pond Elevation: _____
Location of Elevation: _____

EQUIPMENT LIST

☑ Swing Sampler
☐ Hydrolift
☐ Submersible
☑ Peristaltic (CALIBRATED)
Others _____

Multi-meter Model: ☑ YSI Pro ☐ Other _____
☐ Field Bump ☐ Field Calibration
pH 4 _____ pH 7 _____ pH10 _____
1413µs/cm _____ 5000µs/cm _____ DO _____
ORP

FIELD MONITORING

Time	Temp (°C)	pH (Units)	Conductivity (µS/cm)	TDS (mg/L)	Redox (mV)	Dissolved O_2 (mg/L)	Comments
10:15	16.4	8.90	2930	1953	178.9	9.97	

Odour: ☐ Yes ☑ No If Yes, describe _____
Sheen: ☐ Yes ☐ No If Yes, describe _____
Turbidity: Clear I I I I I I I I I I I I I I I I I I I I I Very Silty

Analysis	Type		Container Size					Filtered	
			40 mL	125 mL	250 mL	500 mL	1 L		
General	X Plastic	☐ Glass					1	☐ Yes	X No
Metals-Tot	X Plastic	☐ Glass		1				☐ Yes	X No
Mercury-Tot	☐ Plastic	X Glass	1					☐ Yes	X No
Metals-Dis	X Plastic	☐ Glass		1				X Yes	☐ No
Organic C	☐ Plastic	X Glass	2					☐ Yes	X No
Coliforms	X Plastic	☐ Glass			1			☐ Yes	X No
COD/Nutrients	X Plastic	☐ Glass			1			☐ Yes	X No
DOC	☐ Plastic	X Glass	2					X Yes	☐ No
Mercury-Dis	☐ Plastic	X Glass	1					X Yes	☐ No

Notes: _____

City of Kelowna

SURFACE WATER SAMPLING FORM
GLENMORE LANDFILL

Weather: SUNNY ! Date: MAY 15, 2025 Pond: BOREDOM POND
Temperature: 10° Tech: KL

POND INFORMATION

Time of Measurement: 8:40 Location of Sample: END OF DOCK
Pond Elevation: _____ Location of Elevation: _____

EQUIPMENT LIST

☑ Swing Sampler
☐ Hydrolift
☐ Submersible
☑ Peristaltic (PICKLED)
Others _____

Multi-meter Model: ☐ YSI Pro ☐ Other _____
☐ Field Bump ☐ Field Calibration ✓
pH 4 _____ pH 7 _____ pH10 _____
1413µs/cm _____ 5000µs/cm _____ DO ✓
ORP

FIELD MONITORING

Time	Temp (°C)	pH (Units)	Conductivity (µS/cm)	TDS (mg/L)	Redox (mV)	Dissolved O_2 (mg/L)	Comments
8:40	17.2	8.73	1368	890.5	168.5	9.89	

Odour: ☐ Yes ☑ No If Yes, describe _____
Sheen: ☐ Yes ☑ No If Yes, describe _____
Turbidity: Clear I I I I (I) I I I I I I I I I I I I I I I I I I Very Silty

Analysis	Type		Container Size					Filtered	
			40 mL	125 mL	250 mL	500 mL	1 L		
General	X Plastic	☐ Glass					1	☐ Yes	X No
Metals-Tot	X Plastic	☐ Glass		1				☐ Yes	X No
Mercury-Tot	☐ Plastic	X Glass	1					☐ Yes	X No
Metals-Dis	X Plastic	☐ Glass		1				X Yes	☐ No
Organic C	☐ Plastic	X Glass	2					☐ Yes	X No
Coliforms	X Plastic	☐ Glass			1			☐ Yes	X No
COD/Nutrients	X Plastic	☐ Glass			1			☐ Yes	X No
DOC	☐ Plastic	X Glass	2					X Yes	☐ No
Mercury-Dis	☐ Plastic	X Glass	1					X Yes	☐ No

Notes: _____

City of Kelowna

SURFACE WATER SAMPLING FORM
GLENMORE LANDFILL

Weather: MOSTLY SUNNY Date: MAY 15, 2025 Pond: BURNA SCOUTS
Temperature: 16° Tech: KR

POND INFORMATION

Time of Measurement: 13:45 Location of Sample: _____
Pond Elevation: _____ Location of Elevation: _____

EQUIPMENT LIST

☑ Swing Sampler
☐ Hydrolift
☐ Submersible
☑ Peristaltic (FILTERED)
Others _____

Multi-meter Model: ☑ YSI Pro ☐ Other _____
☐ Field Bump ☑ Field Calibration
pH 4 _____ pH 7 _____ pH10 _____
1413µs/cm _____ 5000µs/cm _____ DO _____
ORP

FIELD MONITORING

Time	Temp (°C)	pH (Units)	Conductivity (µS/cm)	TDS (mg/L)	Redox (mV)	Dissolved O_2 (mg/L)	Comments
13:45	18.6	~~8.93~~ 8.93	3484	2262	1729	10.19	

Odour: ☐ Yes ☑ No If Yes, describe _____
Sheen: ☐ Yes ☑ No If Yes, describe _____
Turbidity: Clear I I I

City of Kelowna

SURFACE WATER SAMPLING FORM
GLENMORE LANDFILL

Weather: MOSTLY SUNNY Date: MAY 15, 2025 Pond: SLOUGH #2
Temperature: 16° Tech: _____

POND INFORMATION

Time of Measurement: _____ Location of Sample: _____
Pond Elevation: _____ Location of Elevation: _____

EQUIPMENT LIST

☑ Swing Sampler
☑ Hydrolift
☐ Submersible
☑ Peristaltic (FIGURED)
Others _____

Multi-meter Model: ☑ YSI Pro ☐ Other _____
☐ Field Bump ☑ Field Calibration
pH 4 _____ pH 7 _____ pH10 _____
1413µs/cm _____ 5000µs/cm _____ DO _____
ORP

FIELD MONITORING

Time	Temp (°C)	pH (Units)	Conductivity (µS/cm)	TDS (mg/L)	Redox (mV)	Dissolved O_2 (mg/L)	Comments
12:10	19.5	8.80	7127	4634.5	182.9	9.95	

Odour: ☐ Yes ☑ No If Yes, describe _____
Sheen: ☐ Yes ☑ No If Yes, describe _____
Turbidity: Clear I I I (I) I I I I I I I I I I I I I I I I I I I Very Silty

Analysis	Type		Container Size					Filtered	
			40 mL	125 mL	250 mL	500 mL	1 L		
General	X Plastic	☐ Glass					1	☐ Yes	X No
Metals-Tot	X Plastic	☐ Glass		1				☐ Yes	X No
Mercury-Tot	☐ Plastic	X Glass	1					☐ Yes	X No
Metals-Dis	X Plastic	☐ Glass		1				X Yes	☐ No
Organic C	☐ Plastic	X Glass	2					☐ Yes	X No
Coliforms	X Plastic	☐ Glass			1			☐ Yes	X No
COD/Nutrients	X Plastic	☐ Glass			1			☐ Yes	X No
DOC	☐ Plastic	X Glass	2					X Yes	☐ No
Mercury-Dis	☐ Plastic	X Glass	1					X Yes	☐ No

Notes: _____

City of Kelowna

SURFACE WATER SAMPLING FORM
GLENMORE LANDFILL

Weather: CLOUDY
Temperature: 10°
Date: MAY 16, 2025
Tech: VK
Pond: LITTLE BRANDTS CREEK
** DUP 3 **

POND INFORMATION

Time of Measurement: 11:05
Pond Elevation: _____
Location of Sample: _____
Location of Elevation: _____

EQUIPMENT LIST

☑ Swing Sampler
☐ Hydrolift
☐ Submersible
☑ Peristaltic (FILTERED)
Others _____

Multi-meter Model: ☑ YSI Pro ☐ Other _____
☐ Field Bump ☑ Field Calibration
pH 4 _____ pH 7 _____ pH10 _____
1413µs/cm _____ 5000µs/cm _____ DO _____
GRAB

FIELD MONITORING

Time	Temp (°C)	pH (Units)	Conductivity (µS/cm)	TDS (mg/L)	Redox (mV)	Dissolved O_2 (mg/L)	Comments
11:05	17.4	8.72	716	371.6	188.4	8.39	

Odour: ☑ Yes ☐ No If Yes, describe EARTHY
Sheen: ☑ Yes ☐ No If Yes, describe SOME GREEN SCUM
Turbidity: Clear I I I I I I I I I I I I I I I I I I I I I I I I I Very Silty

Analysis	Type		Container Size					Filtered	
			40 mL	125 mL	250 mL	500 mL	1 L		
General	X Plastic	☐ Glass					1	☐ Yes	X No
Metals-Tot	X Plastic	☐ Glass		1				☐ Yes	X No
Mercury-Tot	☐ Plastic	X Glass	1					☐ Yes	X No
Metals-Dis	X Plastic	☐ Glass		1				X Yes	☐ No
Organic C	☐ Plastic	X Glass	2					☐ Yes	X No
Coliforms	X Plastic	☐ Glass			1			☐ Yes	X No
COD/Nutrients	X Plastic	☐ Glass			1			☐ Yes	X No
DOC	☐ Plastic	X Glass	2					X Yes	☐ No
Mercury-Dis	☐ Plastic	X Glass	1					X Yes	☐ No

Notes: _____

SURFACE WATER SAMPLING FORM
GLENMORE LANDFILL

City of Kelowna

Weather: CLOUDY
Temperature: 14°
Date: MAY 16, 2025
Tech: KR
Pond: ROBERT LAKE NORTH

POND INFORMATION

Time of Measurement: 13:00
Pond Elevation: _____
Location of Sample: _____
Location of Elevation: _____

EQUIPMENT LIST

☑ Swing Sampler
☐ Hydrolift
☐ Submersible
☑ Peristaltic (FILTERED)
Others _____

Multi-meter Model: ☑ YSI Pro ☐ Other _____
☐ Field Bump ☑ Field Calibration
pH 4 _____ pH 7 ✓ pH10 ✓
1413µs/cm _____ 5000µs/cm ✓ DO ✓
SKP

FIELD MONITORING

Time	Temp (°C)	pH (Units)	Conductivity (µS/cm)	TDS (mg/L)	Redox (mV)	Dissolved O_2 (mg/L)	Comments
13:00	19.7	9.15	15198	9880	1463	7.84	

Odour: ☑ Yes ☐ No If Yes, describe SWAMPY
Sheen: ☑ Yes ☐ No If Yes, describe SCUM LAYER ON TOP
Turbidity: Clear I I I

City of Kelowna

SURFACE WATER SAMPLING FORM
GLENMORE LANDFILL

Weather: DRIZZLE Date: MAY 16, 2025 Pond: BRANDT'S CREEK
Temperature: 11° Tech: KR

POND INFORMATION

Time of Measurement: 10:30 Location of Sample: _____
Pond Elevation: _____ Location of Elevation: _____

EQUIPMENT LIST

☑ Swing Sampler
☐ Hydrolift
☐ Submersible
☑ Peristaltic (CALIBRATED)
Others _____

Multi-meter Model: ☑ YSI Pro ☐ Other _____
☐ Field Bump ☑ Field Calibration
pH 4 _____ pH 7 ✓ pH10 ✓
1413µs/cm _____ 5000µs/cm ✓ DO ✓ (DRY)

FIELD MONITORING

Time	Temp (°C)	pH (Units)	Conductivity (µS/cm)	TDS (mg/L)	Redox (mV)	Dissolved O_2 (mg/L)	Comments
10:30	11.3	8.23	3160	2054	203.7	9.19	

Odour: ☐ Yes ☑ No If Yes, describe _____
Sheen: ☐ Yes ☑ No If Yes, describe _____
Turbidity: Clear I I I I I I I I I I I I I I I I I I I I I I I I I I I Very Silty

SHALLOW HARD SAMPLING WITHOUT DIST. THE SEDIMENT

Analysis	Type		Container Size					Filtered	
			40 mL	125 mL	250 mL	500 mL	1 L		
General	X Plastic	☐ Glass					1	☐ Yes	X No
Metals-Tot	X Plastic	☐ Glass		1				☐ Yes	X No
Mercury-Tot	☐ Plastic	X Glass	1					☐ Yes	X No
Metals-Dis	X Plastic	☐ Glass		1				X Yes	☐ No
Organic C	☐ Plastic	X Glass	2					☐ Yes	X No
Coliforms	X Plastic	☐ Glass			1			☐ Yes	X No
COD/Nutrients	X Plastic	☐ Glass			1			☐ Yes	X No
DOC	☐ Plastic	X Glass	2					X Yes	☐ No
Mercury-Dis	☐ Plastic	X Glass	1					X Yes	☐ No

Notes: _____

City of Kelowna

LEACHATE SAMPLING FORM
GLENMORE LANDFILL

Weather: SUNNY Temperature: 16° Date: SEPT 22
Sample Location: NE POND Tech: _____

EQUIPMENT LIST

☐ Grab Sampler
☐ Bailer
☑ Peristaltic (PUMP)
☐ Other _____

Multi-meter Model: ☑ YSI Pro Plus Other: _____
☐ Field Bump
pH 4 _____ pH 7 ✓ pH10 ✓ 5000µs/cm ✓
☐ Field Calibration _____ SKP

FIELD MONITORING

Time	Temp (°C)	pH (Units)	Conductivity (uS/cm)	TDS (mg/L)	Redox (mV)	Dissolved O_2 (mg/L)	Comments
10:30	18.4	9.23	3049	19825	111.1	9.50	

Odour: ☐ Yes ☑ No If Yes, describe _____
Sheen: ☐ Yes ☐ No If Yes, describe _____
Turbidity: Clear I I I I I I I I I I I I I I I I I I I I I I I I I Very Silty

Analysis	Type		Container Size					Filtered	
			40 mL	125 mL	250 mL	500 mL	1 L		
General	X Plastic	☐ Glass			1			☐ Yes	☐ No
Metals	X Plastic	☐ Glass		1				☐ Yes	☐ No
Mercury	☐ Plastic	X Glass	1					☐ Yes	☐ No
COD, etc	☐ Plastic	X Glass		1				☐ Yes	☐ No
DOC, etc	☐ Plastic	X Glass		1				☐ Yes	☐ No
LEPH/HEPH	☐ Plastic	X Glass			2			☐ Yes	☐ No
Sulfide	X Plastic	☐ Glass		1				☐ Yes	☐ No
VOC/BTEX	☐ Plastic	X Glass	2					☐ Yes	☐ No
BOD	X Plastic	☐ Glass				1		☐ Yes	☐ No
VFA	☐ Plastic	X Glass	2					☐ Yes	☐ No

Notes: _____

City of Kelowna

LEACHATE SAMPLING FORM
GLENMORE LANDFILL

Weather: SUNNY Temperature: 12° Date: SEPT 22, 2025
Sample Location: BRETTON POND Tech: KL

EQUIPMENT LIST

☑ Grab Sampler
☐ Bailer
☑ Peristaltic PUMP
☐ Other _____

Multi-meter Model: ☐ YSI Pro Plus Other: _____
☐ Field Bump
pH 4 _____ pH 7 ✓ pH10 ✓ 5000µs/cm ✓
☐ Field Calibration _____

* DUP 10 X
ORP

FIELD MONITORING

Time	Temp (°C)	pH (Units)	Conductivity (uS/cm)	TDS (mg/L)	Redox (mV)	Dissolved O_2 (mg/L)	Comments
9:45	17.0	8.84	1544	1001	111.6	6.19	GREEN SCUM ON SURFACE

Odour: ☐ Yes ☑ No If Yes, describe _____
Sheen: ☐ Yes ☑ No If Yes, describe _____
Turbidity: Clear I I I I I I I I I I (1) I I I I I I I I I I I I I I I I Very Silty

Analysis	Type		Container Size					Filtered	
			40 mL	125 mL	250 mL	500 mL	1 L		
General	X Plastic	☐ Glass			1			☐ Yes	☐ No
Metals	X Plastic	☐ Glass		1				☐ Yes	☐ No
Mercury	☐ Plastic	X Glass	1					☐ Yes	☐ No
COD, etc	☐ Plastic	X Glass		1				☐ Yes	☐ No
DOC, etc	☐ Plastic	X Glass		1				☐ Yes	☐ No
LEPH/HEPH	☐ Plastic	X Glass			2			☐ Yes	☐ No
Sulfide	X Plastic	☐ Glass		1				☐ Yes	☐ No
VOC/BTEX	☐ Plastic	X Glass	2					☐ Yes	☐ No
BOD	X Plastic	☐ Glass				1		☐ Yes	☐ No
VFA	☐ Plastic	X Glass	2					☐ Yes	☐ No

Notes: _____

City of Kelowna

LEACHATE SAMPLING FORM
GLENMORE LANDFILL

Weather: SUNNY Temperature: 17° Date: SEPT 22, 2025
Sample Location: TUTT POND Tech: KR

EQUIPMENT LIST

☑ Grab Sampler
☐ Bailer
☑ Peristaltic (PUMP)
☐ Other _____

Multi-meter Model: ☐ YSI Pro Plus Other: _____
☐ Field Bump
pH 4 _____ pH 7 ✓ pH10 ✓ 5000µs/cm ✓
☐ Field Calibration _____ ORP

FIELD MONITORING

Time	Temp (°C)	pH (Units)	Conductivity (uS/cm)	TDS (mg/L)	Redox (mV)	Dissolved O_2 (mg/L)	Comments
11:00	19.5	9.05	2826	1839.50	120.0	7.01	WEEDY

Odour: ☐ Yes ☑ No If Yes, describe _____
Sheen: ☐ Yes ☐ No If Yes, describe _____
Turbidity: Clear I I I

City of Kelowna

LEACHATE SAMPLING FORM
GLENMORE LANDFILL

Weather: SUNNY Temperature: 17° Date: SEPT 22, 2015
Sample Location: SLUDGE Tech: KL

EQUIPMENT LIST

☑ Grab Sampler
☐ Bailer
☑ Peristaltic (FILTERED)
☐ Other _____

Multi-meter Model: ☐ YSI Pro Plus Other: _____
☐ Field Bump
pH 4 _____ pH 7 ✓ pH10 ✓ 5000µs/cm ✓
☐ Field Calibration _____

GRAB

FIELD MONITORING

Time	Temp (°C)	pH (Units)	Conductivity (uS/cm)	TDS (mg/L)	Redox (mV)	Dissolved O_2 (mg/L)	Comments
11:20	18.1 ✓	9.62	29750	19337.50	76.20	25.14!?	· GREEN TINGE WATER · PINK SLUDGE

Odour: ☑ Yes ☐ No If Yes, describe LEACHY ✓
Sheen: ☐ Yes ☒ No If Yes, describe _____
Turbidity: Clear I I I I I I I I I I I I I I I I I I I I I I I I I I I I I Very Silty

Analysis	Type		Container Size					Filtered	
			40 mL	125 mL	250 mL	500 mL	1 L		
General	X Plastic	☐ Glass			1			☐ Yes	☐ No
Metals	X Plastic	☐ Glass		1				☐ Yes	☐ No
Mercury	☐ Plastic	X Glass	1					☐ Yes	☐ No
COD, etc	☐ Plastic	X Glass		1				☐ Yes	☐ No
DOC, etc	☐ Plastic	X Glass		1				☐ Yes	☐ No
LEPH/HEPH	☐ Plastic	X Glass			2			☐ Yes	☐ No
Sulfide	X Plastic	☐ Glass		1				☐ Yes	☐ No
VOC/BTEX	☐ Plastic	X Glass	2					☐ Yes	☐ No
BOD	X Plastic	☐ Glass				1		☐ Yes	☐ No
VFA	☐ Plastic	X Glass	2					☐ Yes	☐ No

Notes: ** SHALLOW - HARD TO SAMPLE WITHOUT DISTURBING THE SEDIMENT

City of Kelowna

LEACHATE SAMPLING FORM
GLENMORE LANDFILL

Weather: SUNNY Temperature: 20° Date: SEPT. 22, 2025
Sample Location: BOREHOLE SLOUGH Tech: KR

EQUIPMENT LIST

☑ Grab Sampler
☐ Bailer
☑ Peristaltic (FILTERED)
☐ Other _____

Multi-meter Model: ☐ YSI Pro Plus Other: _____
☐ Field Bump
pH 4 _____ pH 7 — pH10 ✓ 5000µs/cm ✓
☐ Field Calibration _____ ORP

FIELD MONITORING

Time	Temp (°C)	pH (Units)	Conductivity (uS/cm)	TDS (mg/L)	Redox (mV)	Dissolved O_2 (mg/L)	Comments
13:20	20.4	9.16	4404	2853.50	100.1	7.80	

Odour: ☐ Yes ☐ No If Yes, describe _____
Sheen: ☐ Yes ☐ No If Yes, describe _____
Turbidity: Clear I I I I I I I I I I I I I I I I I I I I I I I I I Very Silty

Analysis	Type		Container Size					Filtered	
			40 mL	125 mL	250 mL	500 mL	1 L		
General	X Plastic	☐ Glass			1			☐ Yes	☐ No
Metals	X Plastic	☐ Glass		1				☐ Yes	☐ No
Mercury	☐ Plastic	X Glass	1					☐ Yes	☐ No
COD, etc	☐ Plastic	X Glass		1				☐ Yes	☐ No
DOC, etc	☐ Plastic	X Glass		1				☐ Yes	☐ No
LEPH/HEPH	☐ Plastic	X Glass			2			☐ Yes	☐ No
Sulfide	X Plastic	☐ Glass		1				☐ Yes	☐ No
VOC/BTEX	☐ Plastic	X Glass	2					☐ Yes	☐ No
BOD	X Plastic	☐ Glass				1		☐ Yes	☐ No
VFA	☐ Plastic	X Glass	2					☐ Yes	☐ No

Notes: _____

City of Kelowna

LEACHATE SAMPLING FORM
GLENMORE LANDFILL

Weather: SUNNY Temperature: 20° Date: SEPT. 20, 2025
Sample Location: SLUDGE #2 Tech: ICR

EQUIPMENT LIST

☑ Grab Sampler
☐ Bailer
☑ Peristaltic (PIGTURED)
☐ Other _____

Multi-meter Model: ☑ YSI Pro Plus Other: _____
☐ Field Bump
pH 4 _____ pH 7 ✓ pH10 ✓ 5000µs/cm ✓
☐ Field Calibration _____ ORP

FIELD MONITORING

Time	Temp (°C)	pH (Units)	Conductivity (uS/cm)	TDS (mg/L)	Redox (mV)	Dissolved O_2 (mg/L)	Comments
13:50	19.7	9.02	9095	5908.50	118.4	5.22	

Odour: ☐ Yes ☑ No If Yes, describe _____
Sheen: ☐ Yes ☑ No If Yes, describe _____
Turbidity: Clear I I I

City of Kelowna

LEACHATE SAMPLING FORM
GLENMORE LANDFILL

Weather: SUNNY Temperature: 12° Date: SEPT 23, 2025
Sample Location: BRANDT'S CREEK Tech: KR

EQUIPMENT LIST

☑ Grab Sampler
☐ Bailer
☑ Peristaltic (FILTER)
☐ Other _____

Multi-meter Model: ☐ YSI Pro Plus Other: _____
☐ Field Bump
pH 4 _____ pH 7 ✓ pH10 ✓ 5000µs/cm ✓
☐ Field Calibration _____ ORP

FIELD MONITORING

Time	Temp (°C)	pH (Units)	Conductivity (uS/cm)	TDS (mg/L)	Redox (mV)	Dissolved O_2 (mg/L)	Comments
8:30	11.4°	8.18	3261	2119	129	10.03	* SEE BELOW

Odour: ☐ Yes ☐ No If Yes, describe _____
Sheen: ☐ Yes ☐ No If Yes, describe _____
Turbidity: Clear IIIIIIIIIIIIIIIIIIIIIIIIIIIIII Very Silty

Analysis	Type		Container Size					Filtered	
			40 mL	125 mL	250 mL	500 mL	1 L		
General	X Plastic	☐ Glass			1			☐ Yes	☐ No
Metals	X Plastic	☐ Glass		1				☐ Yes	☐ No
Mercury	☐ Plastic	X Glass	1					☐ Yes	☐ No
COD, etc	☐ Plastic	X Glass		1				☐ Yes	☐ No
DOC, etc	☐ Plastic	X Glass		1				☐ Yes	☐ No
LEPH/HEPH	☐ Plastic	X Glass			2			☐ Yes	☐ No
Sulfide	X Plastic	☐ Glass		1				☐ Yes	☐ No
VOC/BTEX	☐ Plastic	X Glass	2					☐ Yes	☐ No
BOD	X Plastic	☐ Glass				1		☐ Yes	☐ No
VFA	☐ Plastic	X Glass	2					☐ Yes	☐ No

Notes: * SHALLOWER THAN USUAL; LOT OF VEGETATION, BRANCHES
* HARD TO SAMPLE WITHOUT DISTURBING THE SEDIMENT
* CONSTRUCTION UP STREAM

LEACHATE SAMPLING FORM
GLENMORE LANDFILL

City of Kelowna

Weather: SUNNY Temperature: 18° Date: SEPT 23, 2025

Sample Location: LITTLE ROBERT LAKE Tech: KL

EQUIPMENT LIST

* DUP II *

☑ Grab Sampler
☐ Bailer
☑ Peristaltic (PUMP)
☐ Other _____

Multi-meter Model: ☑ YSI Pro Plus Other: _____
☐ Field Bump
pH 4 _____ pH 7 ✓ pH10 ✓ 5000µs/cm ~
☐ Field Calibration _____ ORP

FIELD MONITORING

Time	Temp (°C)	pH (Units)	Conductivity (uS/cm)	TDS (mg/L)	Redox (mV)	Dissolved O_2 (mg/L)	Comments
10:30	17.2	8.93	7660	4979	129.2	6.35	* SHALLOW, HARD TO GRAB A SAMPLE WITHOUT DISTURBING THE SEDIMENT

Odour: ☑ Yes ☐ No If Yes, describe SLIGHT SULPUR
Sheen: ☐ Yes ☑ No If Yes, describe 0
Turbidity: Clear IIII

City of Kelowna

LEACHATE SAMPLING FORM
GLENMORE LANDFILL

Weather: SUNNY Temperature: 18° Date: SEPT 23, 2025
Sample Location: ROBERTS CAKE NORTH Tech: KR

EQUIPMENT LIST

- ☑ Grab Sampler
- ☐ Bailer
- ☑ Peristaltic (LATER)
- ☐ Other _____

Multi-meter Model: ☑ YSI Pro Plus Other: _____
☐ Field Bump
pH 4 _____ pH 7 _____ ✓ pH10 ✓ 5000µs/cm ✓ ORP
☐ Field Calibration _____

FIELD MONITORING

Time	Temp (°C)	pH (Units)	Conductivity (uS/cm)	TDS (mg/L)	Redox (mV)	Dissolved O_2 (mg/L)	Comments
11:00	19.0	9.46	18561	12064	128.4	7.04	SHALLOW, HARD TO GRAB A SAMPLE WITHOUT DISTURBING THE SEDIMENT

Odour: ☒ Yes ☐ No If Yes, describe EARTHY
Sheen: ☐ Yes ☒ No If Yes, describe _____
Turbidity: Clear I I I

City of Kelowna

SURFACE WATER SAMPLING FORM
GLENMORE LANDFILL

Weather: Cloudy
Temperature: 4°
Date: Nov. 8, 2017
Tech: KR
Pond: NE POND

POND INFORMATION

Time of Measurement: _____
Pond Elevation: _____
Location of Sample: _____
Location of Elevation: _____

EQUIPMENT LIST

☒ Swing Sampler
☐ Hydrolift
☐ Submersible
☒ Peristaltic (PUMP)
Others _____

Multi-meter Model: ☐ YSI Pro ☐ Other _____
☐ Field Bump ☐ Field Calibration ✓
pH 4 _____ pH 7 _____ pH10 _____
1413µs/cm _____ 5000µs/cm ✓ _____ DO _____
ORP

FIELD MONITORING

Time	Temp (°C)	pH (Units)	Conductivity (µS/cm)	TDS (mg/L)	Redox (mV)	Dissolved O_2 (mg/L)	Comments
8:50	5.0	9.28	2899	1885	189.3	8.90	

Odour: ☐ Yes ☐ No If Yes, describe _____
Sheen: ☐ Yes ☐ No If Yes, describe _____
Turbidity: Clear I I I I I I I I I I I I I I I I I I I I I I I I I Very Silty

Analysis	Type		Container Size					Filtered	
			40 mL	125 mL	250 mL	500 mL	1 L		
General	X Plastic	☐ Glass					1	☐ Yes	X No
Metals-Tot	X Plastic	☐ Glass		1				☐ Yes	X No
Mercury-Tot	☐ Plastic	X Glass	1					☐ Yes	X No
Metals-Dis	X Plastic	☐ Glass		1				X Yes	☐ No
Organic C	☐ Plastic	X Glass	2					☐ Yes	X No
Coliforms	X Plastic	☐ Glass			1			☐ Yes	X No
COD/Nutrients	X Plastic	☐ Glass			1			☐ Yes	X No
DOC	☐ Plastic	X Glass	2					X Yes	☐ No
Mercury-Dis	☐ Plastic	X Glass	1					X Yes	☐ No

Notes: _____

City of Kelowna

SURFACE WATER SAMPLING FORM
GLENMORE LANDFILL

Weather: DRIZZLE Date: NOV. 5, 2025 Pond: BALLOON POND
Temperature: 5° Tech: KL

POND INFORMATION

Time of Measurement: _____ Location of Sample: _____
Pond Elevation: _____ Location of Elevation: _____

EQUIPMENT LIST

☑ Swing Sampler
☐ Hydrolift
☐ Submersible
☐ Peristaltic (PUMP)
Others _____

Multi-meter Model: ☐ YSI Pro ☐ Other _____
☐ Field Bump ☐ Field Calibration ✓
pH 4 _____ pH 7 ✓ pH10 _____
1413µs/cm _____ 5000µs/cm ✓ DO ✓
ORP

FIELD MONITORING

Time	Temp (°C)	pH (Units)	Conductivity (µS/cm)	TDS (mg/L)	Redox (mV)	Dissolved O_2 (mg/L)	Comments
9:15	5.6	8.18	1404	910	180.5	8.4	SOME ALGAE

Odour: ☐ Yes ☐ No If Yes, describe _____
Sheen: ☐ Yes ☐ No If Yes, describe _____
Turbidity: Clear I I I I I I I I I I I I I I I I I I I I I I I I I I I I I I I I I I I I I Very Silty

Analysis	Type		Container Size					Filtered	
			40 mL	125 mL	250 mL	500 mL	1 L		
General	X Plastic	☐ Glass					1	☐ Yes	X No
Metals-Tot	X Plastic	☐ Glass		1				☐ Yes	X No
Mercury-Tot	☐ Plastic	X Glass	1					☐ Yes	X No
Metals-Dis	X Plastic	☐ Glass		1				X Yes	☐ No
Organic C	☐ Plastic	X Glass	2					☐ Yes	X No
Coliforms	X Plastic	☐ Glass			1			☐ Yes	X No
COD/Nutrients	X Plastic	☐ Glass			1			☐ Yes	X No
DOC	☐ Plastic	X Glass	2					X Yes	☐ No
Mercury-Dis	☐ Plastic	X Glass	1					X Yes	☐ No

Notes: _____

City of Kelowna

SURFACE WATER SAMPLING FORM
GLENMORE LANDFILL

Weather: cloudy
Temperature: 6°
Date: Nov. 5, 2025
Tech: KR
Pond: TOP POND
** DUPE **

POND INFORMATION

Time of Measurement: _____
Pond Elevation: _____
Location of Sample: _____
Location of Elevation: _____

EQUIPMENT LIST

☑ Swing Sampler
☐ Hydrolift
☐ Submersible
☐ Peristaltic (PUMP)
Others _____

Multi-meter Model: ☐ YSI Pro ☐ Other _____
☐ Field Bump ☐ Field Calibration
pH 4 _____ pH 7 ~ pH10 ✓
1413µs/cm _____ 5000µs/cm L DO ✓
ORP

FIELD MONITORING

Time	Temp (°C)	pH (Units)	Conductivity (µS/cm)	TDS (mg/L)	Redox (mV)	Dissolved O_2 (mg/L)	Comments
11:00	6.6	9.21	2508	1631.5	179.2	8.52	

Odour: ☐ Yes ☐ No If Yes, describe _____
Sheen: ☐ Yes ☐ No If Yes, describe _____
Turbidity: Clear I I I I I I I I I I I I I I I I I I I I I I I I I Very Silty

Analysis	Type		Container Size					Filtered	
			40 mL	125 mL	250 mL	500 mL	1 L		
General	X Plastic	☐ Glass					1	☐ Yes	X No
Metals-Tot	X Plastic	☐ Glass		1				☐ Yes	X No
Mercury-Tot	☐ Plastic	X Glass	1					☐ Yes	X No
Metals-Dis	X Plastic	☐ Glass		1				X Yes	☐ No
Organic C	☐ Plastic	X Glass	2					☐ Yes	X No
Coliforms	X Plastic	☐ Glass			1			☐ Yes	X No
COD/Nutrients	X Plastic	☐ Glass			1			☐ Yes	X No
DOC	☐ Plastic	X Glass	2					X Yes	☐ No
Mercury-Dis	☐ Plastic	X Glass	1					X Yes	☐ No

Notes: _____

City of Kelowna

SURFACE WATER SAMPLING FORM
GLENMORE LANDFILL

Weather: DRIZZLY
Temperature: 6°
Date: NOV. 5, 2025
Tech: KR
Pond: SLOUGH

POND INFORMATION

Time of Measurement: _____
Location of Sample: _____
Pond Elevation: _____
Location of Elevation: _____

EQUIPMENT LIST

☑ Swing Sampler
☐ Hydrolift
☐ Submersible
☑ Peristaltic (PUMP)
Others _____

Multi-meter Model: ☐ YSI Pro ☐ Other _____
☐ Field Bump ☐ Field Calibration
pH 4 _____ pH 7 _____ pH10 _____
1413µs/cm _____ 5000µs/cm ✓ DO ✓
ORP

FIELD MONITORING

Time	Temp (°C)	pH (Units)	Conductivity (µS/cm)	TDS (mg/L)	Redox (mV)	Dissolved O_2 (mg/L)	Comments
11:30	5.6	9.58	8120	3978	-102.6	2.59	PINK ~~ALGAE~~

SHALLOW - HARD TO SAMPLE W/O DISTURBING THE SEDIMENT

Odour: ☑ Yes ☐ No If Yes, describe ~~EARTHY~~ / SULPUR
Sheen: ☐ Yes ☐ No If Yes, describe _____
Turbidity: Clear I I I

City of Kelowna

SURFACE WATER SAMPLING FORM
GLENMORE LANDFILL

Weather: MOSTLY SUNNY
Temperature: 8°
Date: NOV 6, 2025
Tech: KR
Pond: BOUCHER SLOUGH

POND INFORMATION

Time of Measurement: _____
Pond Elevation: _____
Location of Sample: _____
Location of Elevation: _____

EQUIPMENT LIST

☑ Swing Sampler
☐ Hydrolift
☐ Submersible
☑ Peristaltic (FILTERED)
Others _____

Multi-meter Model: ☐ YSI Pro ☐ Other _____
☐ Field Bump ☐ Field Calibration
pH 4 _____ pH 7 ✓ pH10 ✓
1413µs/cm _____ 5000µs/cm ✓ DO ✓
ORP

FIELD MONITORING

Time	Temp (°C)	pH (Units)	Conductivity (µS/cm)	TDS (mg/L)	Redox (mV)	Dissolved O_2 (mg/L)	Comments
10:00	6.0	9.24	4213	2743	134.0	8.80	

Odour: ☐ Yes ☑ No If Yes, describe _____
Sheen: ☐ Yes ☑ No If Yes, describe _____
Turbidity: Clear I I I I I I I I I I I I I I I I I I I I I I I I I Very Silty

Analysis	Type		Container Size					Filtered	
			40 mL	125 mL	250 mL	500 mL	1 L		
General	X Plastic	☐ Glass					1	☐ Yes	X No
Metals-Tot	X Plastic	☐ Glass		1				☐ Yes	X No
Mercury-Tot	☐ Plastic	X Glass	1					☐ Yes	X No
Metals-Dis	X Plastic	☐ Glass		1				X Yes	☐ No
Organic C	☐ Plastic	X Glass	2					☐ Yes	X No
Coliforms	X Plastic	☐ Glass			1			☐ Yes	X No
COD/Nutrients	X Plastic	☐ Glass			1			☐ Yes	X No
DOC	☐ Plastic	X Glass	2					X Yes	☐ No
Mercury-Dis	☐ Plastic	X Glass	1					X Yes	☐ No

Notes: _____

City of Kelowna

SURFACE WATER SAMPLING FORM
GLENMORE LANDFILL

Weather: MOSTLY SUNNY
Temperature: 9°

Date: NOV. 6, 2025
Tech: KR

Pond: SLOUGH #2
DUP F XXX

POND INFORMATION

Time of Measurement: _____
Pond Elevation: _____

Location of Sample: _____
Location of Elevation: _____

EQUIPMENT LIST

☑ Swing Sampler
☐ Hydrolift
☐ Submersible
☑ Peristaltic (FLUSHED)
Others _____

Multi-meter Model: ☐ YSI Pro ☐ Other _____
☐ Field Bump ☐ Field Calibration
pH 4 _____ pH 7 _____ pH10 _____
1413µs/cm _____ 5000µs/cm _____ DO _____
RKP

FIELD MONITORING

Time	Temp (°C)	pH (Units)	Conductivity (µS/cm)	TDS (mg/L)	Redox (mV)	Dissolved O_2 (mg/L)	Comments
10:30	6.5	9.19	8573	5577	139.9	6.76	PLANT ~~WEED~~ SPORES IN WATER

Odour: ☐ Yes ☑ No If Yes, describe _____
Sheen: ☐ Yes ☑ No If Yes, describe _____
Turbidity: Clear I I I I I I I I I I I I I I I I I I I I I I I I I Very Silty

Analysis	Type		Container Size					Filtered	
			40 mL	125 mL	250 mL	500 mL	1 L		
General	X Plastic	☐ Glass					1	☐ Yes	X No
Metals-Tot	X Plastic	☐ Glass		1				☐ Yes	X No
Mercury-Tot	☐ Plastic	X Glass	1					☐ Yes	X No
Metals-Dis	X Plastic	☐ Glass		1				X Yes	☐ No
Organic C	☐ Plastic	X Glass	2					☐ Yes	X No
Coliforms	X Plastic	☐ Glass			1			☐ Yes	X No
COD/Nutrients	X Plastic	☐ Glass			1			☐ Yes	X No
DOC	☐ Plastic	X Glass	2					X Yes	☐ No
Mercury-Dis	☐ Plastic	X Glass	1					X Yes	☐ No

Notes: _____

City of Kelowna

SURFACE WATER SAMPLING FORM
GLENMORE LANDFILL

Weather: MOSTLY CLOUDY Date: NOV. 6, 2025 Pond: BRANDT'S CREEK
Temperature: 6° Tech: KR

POND INFORMATION

Time of Measurement: _____ Location of Sample: _____
Pond Elevation: _____ Location of Elevation: _____

EQUIPMENT LIST

☑ Swing Sampler
☐ Hydrolift
☐ Submersible
☐ Peristaltic (paper)
Others _____

Multi-meter Model: ☑ YSI Pro ☐ Other _____
☐ Field Bump ☐ Field Calibration
pH 4 _____ pH 7 _____ pH10 _____
1413µs/cm _____ 5000µs/cm _____ DO _____ SAT

FIELD MONITORING

Time	Temp (°C)	pH (Units)	Conductivity (µS/cm)	TDS (mg/L)	Redox (mV)	Dissolved O_2 (mg/L)	Comments
11:30	7.3	8.49	3076	1995.10	113.9	14.71	SHALLOW - HARD TO SAMPLE W/O DISTURBING THE SEDIMENT

Odour: ☐ Yes ☑ No If Yes, describe _____
Sheen: ☐ Yes ☑ No If Yes, describe _____
Turbidity: Clear I I I I I I I I (I) I I I I I I I I I I I I I I I I I I I Very Silty

Analysis	Type		Container Size					Filtered	
			40 mL	125 mL	250 mL	500 mL	1 L		
General	X Plastic	☐ Glass					1	☐ Yes	X No
Metals-Tot	X Plastic	☐ Glass		1				☐ Yes	X No
Mercury-Tot	☐ Plastic	X Glass	1					☐ Yes	X No
Metals-Dis	X Plastic	☐ Glass		1				X Yes	☐ No
Organic C	☐ Plastic	X Glass	2					☐ Yes	X No
Coliforms	X Plastic	☐ Glass			1			☐ Yes	X No
COD/Nutrients	X Plastic	☐ Glass			1			☐ Yes	X No
DOC	☐ Plastic	X Glass	2					X Yes	☐ No
Mercury-Dis	☐ Plastic	X Glass	1					X Yes	☐ No

Notes: _____

City of Kelowna

SURFACE WATER SAMPLING FORM
GLENMORE LANDFILL

Weather: CLOUDY
Temperature: 11°
Date: NOV 6 2024
Tech: KR
Pond: LITTLE ROBERT LAKE

POND INFORMATION

Time of Measurement: _____
Location of Sample: _____
Pond Elevation: _____
Location of Elevation: _____

EQUIPMENT LIST

☑ Swing Sampler
☐ Hydrolift
☐ Submersible
☐ Peristaltic (FILTER)
Others _____

Multi-meter Model: ☐ YSI Pro ☐ Other _____
☐ Field Bump ☐ Field Calibration
pH 4 _____ pH 7 _____ pH10 _____
1413µs/cm _____ 5000µs/cm _____ DO _____
ORP

FIELD MONITORING

Time	Temp (°C)	pH (Units)	Conductivity (µS/cm)	TDS (mg/L)	Redox (mV)	Dissolved O_2 (mg/L)	Comments
13:00	6.9	8.83	6644	4316	165.8	9.24	PLANT MATERIAL + SHALLOW, SILTY

Odour: ☐ Yes ☑ No If Yes, describe _____
Sheen: ☐ Yes ☑ No If Yes, describe _____
Turbidity: Clear I I I I I I I I I I I I I I I I I I I I I I I I I I I I I Very Silty

Analysis	Type		Container Size					Filtered	
			40 mL	125 mL	250 mL	500 mL	1 L		
General	X Plastic	☐ Glass					1	☐ Yes	X No
Metals-Tot	X Plastic	☐ Glass		1				☐ Yes	X No
Mercury-Tot	☐ Plastic	X Glass	1					☐ Yes	X No
Metals-Dis	X Plastic	☐ Glass		1				X Yes	☐ No
Organic C	☐ Plastic	X Glass	2					☐ Yes	X No
Coliforms	X Plastic	☐ Glass			1			☐ Yes	X No
COD/Nutrients	X Plastic	☐ Glass			1			☐ Yes	X No
DOC	☐ Plastic	X Glass	2					X Yes	☐ No
Mercury-Dis	☐ Plastic	X Glass	1					X Yes	☐ No

Notes: _____

City of Kelowna

SURFACE WATER SAMPLING FORM
GLENMORE LANDFILL

Weather: CLOUDY
Temperature: 11°
Date: NOV. 6, 2025
Tech: KR
Pond: ROBERT LAKE NORTH

POND INFORMATION

Time of Measurement: _____
Pond Elevation: _____
Location of Sample: _____
Location of Elevation: _____

EQUIPMENT LIST

☑ Swing Sampler
☐ Hydrolift
☐ Submersible
☑ Peristaltic (FULL)
Others _____

Multi-meter Model: ☐ ~~YSI~~ Pro ☐ Other _____
☐ Field Bump ☐ Field Calibration
pH 4 _____ pH 7 ✓ pH10 ✓
1413µs/cm _____ 5000µs/cm ✓ DO ✓
OK D

FIELD MONITORING

Time	Temp (°C)	pH (Units)	Conductivity (µS/cm)	TDS (mg/L)	Redox (mV)	Dissolved O_2 (mg/L)	Comments
13:30	10.7	9.50	9626	6253	125.4	10.72	SHALLOW - HARD TO GRAB SAMPLE W/O DISTURBING THE SEDIMENT

Odour: ☐ Yes ☑ No If Yes, describe _____
Sheen: ☐ Yes ☑ No If Yes, describe _____
Turbidity: Clear I I I

City of Kelowna

SURFACE WATER SAMPLING FORM
GLENMORE LANDFILL

Weather: CLOUDY
Temperature: 2°
Date: DEC 17, 2025
Tech: KL
Pond: CULVERT 1 00 2026

POND INFORMATION

Time of Measurement: _____
Pond Elevation: _____
Location of Sample: _____
Location of Elevation: _____

EQUIPMENT LIST

- ☐ Swing Sampler
- ☐ Hydrolift
- ☐ Submersible
- ☐ Peristaltic

Others GRAB

Multi-meter Model: ☐ YSI Pro ☐ Other _____
☐ Field Bump ☒ Field Calibration
pH 4 X pH 7 ✓ pH10 ✓
1413µs/cm _____ 5000µs/cm ✓ DO ✓

FIELD MONITORING

Time	Temp (°C)	pH (Units)	Conductivity (µS/cm)	TDS (mg/L)	Redox (mV)	Dissolved O_2 (mg/L)	Comments
8:20	5.3	7.46	616.9	401.05	173.7	10.87	SILTY

Odour: ☐ Yes ☒ No If Yes, describe _____
Sheen: ☐ Yes ☐ No If Yes, describe _____
Turbidity: Clear I I I

City of Kelowna

SURFACE WATER SAMPLING FORM
GLENMORE LANDFILL

Weather: Cloudy
Temperature: 20
Date: DEC 17, 2025
Tech: KG
Pond: S STORM HW
* DUP G *

POND INFORMATION

Time of Measurement: 9:00
Pond Elevation: _____
Location of Sample: _____
Location of Elevation: _____

EQUIPMENT LIST

☐ Swing Sampler
☐ Hydrolift
☐ Submersible
☐ Peristaltic
Others GRAB

Multi-meter Model: ☑ YSI Pro ☐ Other _____
☐ Field Bump ☐ Field Calibration
pH 4 _____ pH 7 _____ pH10 _____
1413µs/cm _____ 5000µs/cm _____ DO _____

FIELD MONITORING

Time	Temp (°C)	pH (Units)	Conductivity (µS/cm)	TDS (mg/L)	Redox (mV)	Dissolved O_2 (mg/L)	Comments
9:00	4.3	7.24	467.7	304.6	174.5	10.79	SILTY

Odour: ☐ Yes ☑ No If Yes, describe _____
Sheen: ☐ Yes ☑ No If Yes, describe _____
Turbidity: Clear I I I I I I I I I I I I I I I I I I I I I I I I I I I Very Silty

Analysis	Type		Container Size					Filtered	
			40 mL	125 mL	250 mL	500 mL	1 L		
General	X Plastic	☐ Glass					1	☐ Yes	X No
Metals-Tot	X Plastic	☐ Glass		1				☐ Yes	X No
Mercury-Tot	☐ Plastic	X Glass	1					☐ Yes	X No
Metals-Dis	X Plastic	☐ Glass		1				X Yes	☐ No
Organic C	☐ Plastic	X Glass	2					☐ Yes	X No
Coliforms	X Plastic	☐ Glass			1			☐ Yes	X No
COD/Nutrients	X Plastic	☐ Glass			1			☐ Yes	X No
DOC	☐ Plastic	X Glass	2					X Yes	☐ No
Mercury-Dis	☐ Plastic	X Glass	1					X Yes	☐ No

Notes: _____

City of Kelowna

LEACHATE SAMPLING FORM
GLENMORE LANDFILL

Weather: CLOUDY Temperature: 7° Date: MARCH 28, 2024
Sample Location: S. LEACHATE WW Tech: KR

EQUIPMENT LIST

- ☐ Grab Sampler
- ☐ Bailer
- ☑ Peristaltic
- ☐ Other _____

Multi-meter Model: ☐ YSI Pro Plus Other: _____
☐ Field Bump
pH 4 _____ pH 7 _____ pH10 _____ 5000µs/cm _____
☐ Field Calibration _____ ORP

FIELD MONITORING

Time	Temp (°C)	pH (Units)	Conductivity (uS/cm)	TDS (mg/L)	Redox (mV)	Dissolved O_2 (mg/L)	Comments
9:15	13.6	7.47	11457	7449.0	3.15	3.17	

Odour: ☑ Yes ☐ No If Yes, describe SULFUR-12.8
Sheen: ☑ Yes ☐ No If Yes, describe CLOUDY
Turbidity: Clear I I I I I I I I I I I I I I I I I I I I I I I I I Very Silty

Analysis	Type		Container Size					Filtered	
			40 mL	125 mL	250 mL	500 mL	1 L		
General	X Plastic	☐ Glass			1			☐ Yes	☐ No
Metals	X Plastic	☐ Glass		1				☐ Yes	☐ No
Mercury	☐ Plastic	X Glass	1					☐ Yes	☐ No
COD, etc	☐ Plastic	X Glass		1				☐ Yes	☐ No
DOC, etc	☐ Plastic	X Glass		1				☐ Yes	☐ No
LEPH/HEPH	☐ Plastic	X Glass			2			☐ Yes	☐ No
Sulfide	X Plastic	☐ Glass		1				☐ Yes	☐ No
VOC/BTEX	☐ Plastic	X Glass	2					☐ Yes	☐ No
BOD	X Plastic	☐ Glass				1		☐ Yes	☐ No
VFA	☐ Plastic	X Glass	2					☐ Yes	☐ No

Notes: _____

City of Kelowna

LEACHATE SAMPLING FORM
GLENMORE LANDFILL

Weather: CLOUDY Temperature: 8° Date: MARCH 28, 2025
Sample Location: P1 LEACHATE MH 2 Tech: KR

EQUIPMENT LIST

- ☐ Grab Sampler
- ☐ Bailer
- ☑ Peristaltic
- ☐ Other _____

Multi-meter Model: ☑ YSI Pro Plus Other: _____
☐ Field Bump
pH 4 _____ pH 7 ✓ pH10 ✓ 5000µs/cm ✓
☐ Field Calibration _____ DRY

FIELD MONITORING

Time	Temp (°C)	pH (Units)	Conductivity (uS/cm)	TDS (mg/L)	Redox (mV)	Dissolved O_2 (mg/L)	Comments
10:45	12.5	7.16	9241	6006	-173.5	2.41	

Odour: ☑ Yes ☐ No If Yes, describe SULFUR / GARBAGE
Sheen: ☐ Yes ☑ No If Yes, describe SOME BLACK CHUNKS
Turbidity: Clear I I I I I I I I I I I I I I I I I I I I I I I I I Very Silty

Analysis	Type		Container Size					Filtered	
			40 mL	125 mL	250 mL	500 mL	1 L		
General	X Plastic	☐ Glass			1			☐ Yes	☐ No
Metals	X Plastic	☐ Glass		1				☐ Yes	☐ No
Mercury	☐ Plastic	X Glass	1					☐ Yes	☐ No
COD, etc	☐ Plastic	X Glass		1				☐ Yes	☐ No
DOC, etc	☐ Plastic	X Glass		1				☐ Yes	☐ No
LEPH/HEPH	☐ Plastic	X Glass			2			☐ Yes	☐ No
Sulfide	X Plastic	☐ Glass		1				☐ Yes	☐ No
VOC/BTEX	☐ Plastic	X Glass	2					☐ Yes	☐ No
BOD	X Plastic	☐ Glass				1		☐ Yes	☐ No
VFA	☐ Plastic	X Glass	2					☐ Yes	☐ No

Notes: RAINED A LOT PREVIOUS WEEK

City of Kelowna

LEACHATE SAMPLING FORM
GLENMORE LANDFILL

Weather: CLOUDY Temperature: 5° Date: MARCH 28, 2025
Sample Location: N. PUMPHOUSE MH Tech: KR

EQUIPMENT LIST

- ☑ Grab Sampler
- ☐ Bailer
- ☑ Peristaltic
- ☐ Other _____

Multi-meter Model: ☑ YSI Pro Plus Other: _____
☐ Field Bump
pH 4 _____ pH 7 _____ pH10 _____ 5000µs/cm _____
☐ Field Calibration _____ ORP

FIELD MONITORING

Time	Temp (°C)	pH (Units)	Conductivity (uS/cm)	TDS (mg/L)	Redox (mV)	Dissolved O_2 (mg/L)	Comments
8:25	13.2	7.49	2208	1336.5	-213.5	5.7	

Odour: ☑ Yes ☐ No If Yes, describe SULFUR — NO H_2S ON G.D.
Sheen: ☐ Yes ☑ No If Yes, describe _____
Turbidity: Clear I I I

LEACHATE SAMPLING FORM
GLENMORE LANDFILL

City of Kelowna

Weather: CLOUDY Temperature: 10° Date: MARCH 28, 2025
Sample Location: P2A2 LEACHATE MH Tech: KR

EQUIPMENT LIST

- ☐ Grab Sampler
- ☐ Bailer
- ☐ ✓ Peristaltic
- ☐ Other _____

Multi-meter Model: ☐ YSI Pro Plus Other: _____
☐ Field Bump
pH 4 _____ pH 7 _____ pH10 ____ 5000µs/cm _____
☐ Field Calibration _____

FIELD MONITORING

Time	Temp (°C)	pH (Units)	Conductivity (uS/cm)	TDS (mg/L)	Redox (mV)	Dissolved O_2 (mg/L)	Comments
12:15	13.1	7.82	9947	6123	44.1	4.74	

Odour: ☐ Yes ☐ No If Yes, describe · SULFUR
Sheen: ☐ Yes ☐ ✓ No If Yes, describe — SHALLOW MOUSY
Turbidity: Clear I I I

City of Kelowna

LEACHATE SAMPLING FORM
GLENMORE LANDFILL

Weather: PARTLY CLOUDY Temperature: 21° Date: JUNE 4, 2025
Sample Location: ~~S LEACHATE~~ WWL (LS #2) Tech: KR

EQUIPMENT LIST

- ☑ Grab Sampler
- ☐ Bailer
- ☐ Peristaltic
- ☐ Other _____

Multi-meter Model: ☐ YSI Pro Plus Other: _____
☑ Field Bump
pH 4 _____ pH 7 _____ pH10 _____ 5000µs/cm _____
☐ Field Calibration _____

ORP

FIELD MONITORING

Time	Temp (°C)	pH (Units)	Conductivity (uS/cm)	TDS (mg/L)	Redox (mV)	Dissolved O_2 (mg/L)	Comments
10:45	17.5	7.72	10344	6721	+339.8	0.55	MILKY DARK YELLOW

Odour: ☑ Yes ☐ No If Yes, describe SULFUR
Sheen: ☐ Yes ☑ No If Yes, describe FOAMY BLANKET / BIOXIDE DOSING
Turbidity: Clear I I I

City of Kelowna

LEACHATE SAMPLING FORM
GLENMORE LANDFILL

Weather: CLOUDY Temperature: 23° Date: JUNE 4, 2025
Sample Location: P2A2 LEACHATE MH Tech: KR

EQUIPMENT LIST

- ☐ Grab Sampler
- ☐ Bailer
- ☑ Peristaltic
- ☐ Other _____

Multi-meter Model: ☐ YSI Pro Plus Other: _____
☑ Field Bump
pH 4 _____ pH 7 ✓ pH10 ✓ 5000µs/cm ✓
☐ Field Calibration _____ ORP

FIELD MONITORING

Time	Temp (°C)	pH (Units)	Conductivity (uS/cm)	TDS (mg/L)	Redox (mV)	Dissolved O_2 (mg/L)	Comments
13:30	17.5	7.23	10705	6948.50	-38.4	2.41	

Odour: ☑ Yes ☐ No If Yes, describe EARTHY / MERCAPTANY
Sheen: ☐ Yes ☑ No If Yes, describe _____
Turbidity: Clear I I I

City of Kelowna

LEACHATE SAMPLING FORM
GLENMORE LANDFILL

Weather: CLOUDY Temperature: 25° Date: JUNE 4, 2025

Sample Location: P1 LEACHATE MH2 Tech: ICR

EQUIPMENT LIST

☐ Grab Sampler
☐ Bailer
☑ Peristaltic
☐ Other _____

Multi-meter Model: ☐ YSI Pro Plus Other: _____
☐ Field Bump
pH 4 _____ pH 7 ~ pH10 ~ 5000µs/cm ~
☑ Field Calibration _____ ORP

FIELD MONITORING

Time	Temp (°C)	pH (Units)	Conductivity (uS/cm)	TDS (mg/L)	Redox (mV)	Dissolved O_2 (mg/L)	Comments
14:15	15.4	7.17	12477	811210	-100.8	1.80	BLACK SPECKS

Odour: ☑ Yes ☐ No If Yes, describe SULFUR / MERCAPTANS
Sheen: ☐ Yes ☑ No If Yes, describe _____
Turbidity: Clear I I I

City of Kelowna

LEACHATE SAMPLING FORM
GLENMORE LANDFILL

Weather: MOSTLY CLOUDY Temperature: 22° Date: JUNE 4, 2024
Sample Location: N PUMPHOUSE MH Tech: KR

EQUIPMENT LIST

☑ Grab Sampler
☐ Bailer
☐ Peristaltic
☐ Other _____

Multi-meter Model: ☐ YSI Pro Plus Other: _____
☑ Field Bump
pH 4 _____ pH 7 ✓ pH10 ✓ 5000µs/cm ✓
ORP
☐ Field Calibration _____

FIELD MONITORING

Time	Temp (°C)	pH (Units)	Conductivity (uS/cm)	TDS (mg/L)	Redox (mV)	Dissolved O_2 (mg/L)	Comments
11:20	14.3	7.21	4463	~~4463~~ 2899	155	1.81	

Odour: ☐ Yes ☑ No If Yes, describe _____
Sheen: ☑ Yes ☐ No If Yes, describe SCUMMY SURFACE
Turbidity: Clear I I I I I I I I I I I I I I I I I I I I I I I I I Very Silty

Analysis	Type		Container Size					Filtered	
			40 mL	125 mL	250 mL	500 mL	1 L		
General	X Plastic	☐ Glass			1			☐ Yes	☐ No
Metals	X Plastic	☐ Glass		1				☑ Yes	☐ No
Mercury	☐ Plastic	X Glass	1					☑ Yes	☐ No
COD, etc	☐ Plastic	X Glass		1				☐ Yes	☐ No
DOC, etc	☐ Plastic	X Glass		1				☑ Yes	☐ No
LEPH/HEPH	☐ Plastic	X Glass			2			☐ Yes	☐ No
Sulfide	X Plastic	☐ Glass		1				☐ Yes	☐ No
VOC/BTEX	☐ Plastic	X Glass	2					☐ Yes	☐ No
BOD	X Plastic	☐ Glass				1		☐ Yes	☐ No
VFA	☐ Plastic	X Glass	2					☐ Yes	☐ No

Notes: _____

City of Kelowna

LEACHATE SAMPLING FORM
GLENMORE LANDFILL

Weather: MOSTLY CLOUDY Temperature: 16° Date: SEPT 15, 2024
Sample Location: S. LEACHATE WW Tech: KR

EQUIPMENT LIST

☑ Grab Sampler
☐ Bailer
☑ Peristaltic (FILTER)
☐ Other _____

Multi-meter Model: ☑ ☐ YSI Pro Plus Other: _____
☐ Field Bump
pH 4 _____ pH 7 ✓ pH10 ✓ 5000µs/cm 12880
☐ Field Calibration ✓ ORP

** DUP 9 @ X1

FIELD MONITORING

Time	Temp (°C)	pH (Units)	Conductivity (uS/cm)	TDS (mg/L)	Redox (mV)	Dissolved O_2 (mg/L)	Comments
8:30	16.3	7.51	14024	9113	-388.9	2.79	RUSTY, ROTTEN EGG SMELL

Odour: ☐ Yes ☐ No If Yes, describe _____
Sheen: ☐ Yes ☐ No If Yes, describe _____
Turbidity: Clear I I I

City of Kelowna

LEACHATE SAMPLING FORM
GLENMORE LANDFILL

Weather: SUNNY Temperature: 20° Date: SEPT 15, 2025
Sample Location: P1 LEACHATE MH-2 Tech: KR

EQUIPMENT LIST

☐ Grab Sampler
☐ Bailer
☑ Peristaltic PT
☐ Other _____

Multi-meter Model: ☑ YSI Pro Plus Other: _____
☐ Field Bump
pH 4 _____ pH 7 ✓ pH10 ✓ 5000µs/cm 12880
☐ Field Calibration _____ ORP

FIELD MONITORING

Time	Temp (°C)	pH (Units)	Conductivity (uS/cm)	TDS (mg/L)	Redox (mV)	Dissolved O_2 (mg/L)	Comments
11:30	17.3	7.09	19336	9327	-133.0	2.60	RUSTY

Odour: ☑ Yes ☐ No If Yes, describe EARTHY
Sheen: ☐ Yes ☑ No If Yes, describe _____
Turbidity: Clear IIIIIIIIIIIIIIIIIIIIIIIIIII Very Silty

Analysis	Type		Container Size					Filtered	
			40 mL	125 mL	250 mL	500 mL	1 L		
General	X Plastic	☐ Glass			1			☐ Yes	☐ No
Metals	X Plastic	☐ Glass		1				☐ Yes	☐ No
Mercury	☐ Plastic	X Glass	1					☐ Yes	☐ No
COD, etc	☐ Plastic	X Glass		1				☐ Yes	☐ No
DOC, etc	☐ Plastic	X Glass		1				☐ Yes	☐ No
LEPH/HEPH	☐ Plastic	X Glass			2			☐ Yes	☐ No
Sulfide	X Plastic	☐ Glass		1				☐ Yes	☐ No
VOC/BTEX	☐ Plastic	X Glass	2					☐ Yes	☐ No
BOD	X Plastic	☐ Glass				1		☐ Yes	☐ No
VFA	☐ Plastic	X Glass	2					☐ Yes	☐ No

Notes: _____

City of Kelowna

LEACHATE SAMPLING FORM
GLENMORE LANDFILL

Weather: SUNNY Temperature: 27° Date: SEPT 15, 2025
Sample Location: N - PUMPHOUSE MH Tech: KR

EQUIPMENT LIST

- ☐ Grab Sampler
- ☐ Bailer
- ☑ Peristaltic
- ☐ Other _____

Multi-meter Model: ☐ YSI Pro Plus Other: _____
☐ Field Bump
pH 4 _____ pH 7 _____ ✓ pH10 ✓ 5000µs/cm 12880
☐ Field Calibration _____ ORP

FIELD MONITORING

Time	Temp (°C)	pH (Units)	Conductivity (uS/cm)	TDS (mg/L)	Redox (mV)	Dissolved O_2 (mg/L)	Comments
15:00	17.6	7.56	12285	7988	-383.2	0.56	

Odour: ☑ Yes ☐ No If Yes, describe EARTHY
Sheen: ☐ Yes ☑ No If Yes, describe _____
Turbidity: Clear I'I I I

City of Kelowna

LEACHATE SAMPLING FORM
GLENMORE LANDFILL

Weather: SUNNY Temperature: 24° Date: SEPT 15, 2025
Sample Location: P2A2 Tech: ICL

EQUIPMENT LIST

☐ Grab Sampler
☐ Bailer
☑ Peristaltic
☐ Other _____

Multi-meter Model: ☐ YSI Pro Plus Other: _____
☐ Field Bump
pH 4 _____ pH 7 ✓ pH10 ✓ 5000µs/cm 12880
☐ Field Calibration _____ ORP DO

FIELD MONITORING

Time	Temp (°C)	pH (Units)	Conductivity (uS/cm)	TDS (mg/L)	Redox (mV)	Dissolved O_2 (mg/L)	Comments
13:45	25.5	6.99	10054	6532.5	-45.6	1.07	DARK, FOAM BLANKET FROM A3

Odour: ☑ Yes ☐ No If Yes, describe GARBAGE
Sheen: ☐ Yes ☑ No If Yes, describe _____
Turbidity: Clear I I I

LEACHATE SAMPLING FORM
GLENMORE LANDFILL

City of Kelowna

Weather: PARTLY CLOUDY Temperature: 17° Date: SEPT 15, 2025

Sample Location: AREA 3 (LSG) (MH) Tech: CR

EQUIPMENT LIST

☑ Grab Sampler
☐ Bailer
☑ Peristaltic FILTERED
☐ Other _____

Multi-meter Model: ☑ YSI Pro Plus Other: _____
☐ Field Bump
pH 4 _____ pH 7 ✓ pH10 ✓ 5000µs/cm 12880
☑ Field Calibration _____

FIELD MONITORING

Time	Temp (°C)	pH (Units)	Conductivity (uS/cm)	TDS (mg/L)	Redox (mV)	Dissolved O_2 (mg/L)	Comments
9:10	21.6	6.54	12814	8333.0	-62.1	2.94	BLACK, FOAMY, THICK HARD TO FILTER

Odour: ☐ Yes ☐ No If Yes, describe _____
Sheen: ☐ Yes ☐ No If Yes, describe _____
Turbidity: Clear I I I

City of Kelowna

LEACHATE SAMPLING FORM
GLENMORE LANDFILL

Weather: RAIN Temperature: 7° Date: OCT 28, 2025
Sample Location: LS#2 (LEACHATE WW) Tech: ICR

EQUIPMENT LIST

- ☑ Grab Sampler
- ☐ Bailer
- ☑ Peristaltic (PAPER)
- ☐ Other _____

Multi-meter Model: ☐ YSI Pro Plus Other: _____
☐ Field Bump
pH 4 _____ pH 7 _____ pH10 _____ 5000µs/cm _____
☐ Field Calibration _____ ORP

FIELD MONITORING

Time	Temp (°C)	pH (Units)	Conductivity (uS/cm)	TDS (mg/L)	Redox (mV)	Dissolved O_2 (mg/L)	Comments
14:00	15.5	7.88	15190	9880	-30.6	2.34	FOAMY, MILKY

Odour: ☑ Yes ☐ No If Yes, describe MERCAPTANS
Sheen: ☐ Yes ☐ No If Yes, describe _____
Turbidity: Clear I I I

City of Kelowna

LEACHATE SAMPLING FORM
GLENMORE LANDFILL

Weather: CLOUDY Temperature: 4° Date: OCT 28, 2015
Sample Location: P1 LEACHATE MH-2 Tech: KR

EQUIPMENT LIST

- ☑ Grab Sampler
- ☐ Bailer
- ☑ Peristaltic
- ☐ Other _____

Multi-meter Model: ☑ YSI Pro Plus Other: _____
☐ Field Bump
pH 4 _____ pH 7 _____ pH10 _____ 5000µs/cm _____
☐ Field Calibration _____ orp

FIELD MONITORING

Time	Temp (°C)	pH (Units)	Conductivity (uS/cm)	TDS (mg/L)	Redox (mV)	Dissolved O_2 (mg/L)	Comments
10:30	12.0	7.11	13210	8955	-117	2.21	

Odour: ☑ Yes ☐ No If Yes, describe Sulphur
Sheen: ☐ Yes ☐ No If Yes, describe _____
Turbidity: Clear I I I I I I I I I I I I I I I I I I I I I I I I I Very Silty

Analysis	Type		Container Size					Filtered	
			40 mL	125 mL	250 mL	500 mL	1 L		
General	X Plastic	☐ Glass			1			☐ Yes	☐ No
Metals	X Plastic	☐ Glass		1				☐ Yes	☐ No
Mercury	☐ Plastic	X Glass	1					☐ Yes	☐ No
COD, etc	☐ Plastic	X Glass		1				☐ Yes	☐ No
DOC, etc	☐ Plastic	X Glass		1				☐ Yes	☐ No
LEPH/HEPH	☐ Plastic	X Glass			2			☐ Yes	☐ No
Sulfide	X Plastic	☐ Glass		1				☐ Yes	☐ No
VOC/BTEX	☐ Plastic	X Glass	2					☐ Yes	☐ No
BOD	X Plastic	☐ Glass				1		☐ Yes	☐ No
VFA	☐ Plastic	X Glass	2					☐ Yes	☐ No

Notes: _____

City of Kelowna

LEACHATE SAMPLING FORM
GLENMORE LANDFILL

Weather: Cloudy Temperature: 6° Date: Oct 28, 2025
Sample Location: P2A2 ~~LEACHATE MH~~ Tech: KL

EQUIPMENT LIST

☐ Grab Sampler
☐ Bailer
☑ Peristaltic
☐ Other _____

Multi-meter Model: ☑ YSI Pro Plus Other: _____
☐ Field Bump
pH 4 _____ pH 7 ✓ pH10 ✓ 5000µs/cm ✓
☐ Field Calibration _____ ORP

FIELD MONITORING

Time	Temp (°C)	pH (Units)	Conductivity (uS/cm)	TDS (mg/L)	Redox (mV)	Dissolved O_2 (mg/L)	Comments
13:30	11.1	7.67	3332	2180	11.2	5.40	

Odour: ☑ Yes ☐ No If Yes, describe EARTHY
Sheen: ☐ Yes ☑ No If Yes, describe _____
Turbidity: Clear I I I I I I I I I I I I I I I I I I I I I I I I I I I Very Silty

Analysis	Type		Container Size					Filtered	
			40 mL	125 mL	250 mL	500 mL	1 L		
General	X Plastic	☐ Glass			1			☐ Yes	☐ No
Metals	X Plastic	☐ Glass		1				☐ Yes	☐ No
Mercury	☐ Plastic	X Glass	1					☐ Yes	☐ No
COD, etc	☐ Plastic	X Glass		1				☐ Yes	☐ No
DOC, etc	☐ Plastic	X Glass		1				☐ Yes	☐ No
LEPH/HEPH	☐ Plastic	X Glass			2			☐ Yes	☐ No
Sulfide	X Plastic	☐ Glass		1				☐ Yes	☐ No
VOC/BTEX	☐ Plastic	X Glass	2					☐ Yes	☐ No
BOD	X Plastic	☐ Glass				1		☐ Yes	☐ No
VFA	☐ Plastic	X Glass	2					☐ Yes	☐ No

Notes: _____

City of Kelowna

LEACHATE SAMPLING FORM
GLENMORE LANDFILL

Weather: CLOUDY Temperature: 4° Date: OCT 28, 2015
Sample Location: N PUMPHOUSE MH Tech: KR

EQUIPMENT LIST

☑ Grab Sampler
☐ Bailer
☑ Peristaltic (FIGURED)
☐ Other _____

Multi-meter Model: ☐ YSI Pro Plus Other: _____
☐ Field Bump
pH 4 _____ pH 7 _____ pH10 ✓ 5000µs/cm ✓
☐ Field Calibration _____ ORP

FIELD MONITORING

Time	Temp (°C)	pH (Units)	Conductivity (uS/cm)	TDS (mg/L)	Redox (mV)	Dissolved O_2 (mg/L)	Comments
11:15	15.3	7.69	10123	6578	-351.1	2.98	

Odour: ☑ Yes ☐ No If Yes, describe MERCAPTANS
Sheen: ☐ Yes ☑ No If Yes, describe _____
Turbidity: Clear I I I

City of Kelowna

LEACHATE SAMPLING FORM
GLENMORE LANDFILL

Weather: CLOUDY Temperature: 1° Date: OCT 22, 2025
Sample Location: GS# 4 Tech: KE

EQUIPMENT LIST

- ☑ Grab Sampler
- ☐ Bailer
- ☑ Peristaltic (FILTERED)
- ☐ Other _____

Multi-meter Model: ☑ YSI Pro Plus Other: _____
☐ Field Bump
pH 4 _____ pH 7 ✓ pH10 ✓ 5000µs/cm ✓
☐ Field Calibration _____

FIELD MONITORING

Time	Temp (°C)	pH (Units)	Conductivity (uS/cm)	TDS (mg/L)	Redox (mV)	Dissolved O_2 (mg/L)	Comments
8:30	20	7.27	10133	6974.5	1296	1.90	

Odour: ☑ Yes ☐ No If Yes, describe GARBAGE
Sheen: ☐ Yes ☐ No If Yes, describe _____
Turbidity: Clear I I I I I I I I I I I I I I I I I I I I I I I I I I I I I Very Silty

Analysis	Type		Container Size					Filtered	
			40 mL	125 mL	250 mL	500 mL	1 L		
General	X Plastic	☐ Glass			1			☐ Yes	☐ No
Metals	X Plastic	☐ Glass		1				☐ Yes	☐ No
Mercury	☐ Plastic	X Glass	1					☐ Yes	☐ No
COD, etc	☐ Plastic	X Glass		1				☐ Yes	☐ No
DOC, etc	☐ Plastic	X Glass		1				☐ Yes	☐ No
LEPH/HEPH	☐ Plastic	X Glass			2			☐ Yes	☐ No
Sulfide	X Plastic	☐ Glass		1				☐ Yes	☐ No
VOC/BTEX	☐ Plastic	X Glass	2					☐ Yes	☐ No
BOD	X Plastic	☐ Glass				1		☐ Yes	☐ No
VFA	☐ Plastic	X Glass	2					☐ Yes	☐ No

Notes: _____

Tech: KR Date: MARCH 24, 2025

GL1-1	2.693	2.353	~~2.35~~	12.7	
GL1-2	2.759	2.409		5.7	
GL2-1	0.100	FULL TO THE TOP		10.5	
GL2-2	0.417	0.361		6.4	
GL4-1	1.533	1.174		9.8	
GL4-2	2.173	1.871		5.9	
GL5-1	1.398	6.294		20.4	Sub. Pump
GL5-2	1.532	.429		10.3	
GL5-3	1.565	.444		5.6	
GL7-1	1.931	1.595		6.1	Sub Pump
GL8-1	1.198	1.111		10.1	
GL8-2	1.490	1.121		4.3	
GL10-1	1.678	1.136		9.4	
GL15-1	6.577	6.720		18.2	
GL15-2	5.847	5.974		6.4	questionable reading - levels seemed to be falling
GL16-1	1.084	1.002		15.3	
GL20-1	2.983	2.785		5.5	
GL23-1	2.626	2.246		9.8	
GL24-1	3.399	3.077		5.4	
GL26-1	0.566	0.533		26.6	
GL26-2	3.527	3.023		7.5	
GL26-3	3.552	3.017		6.0	
GL26-4	3.678	3.046		4.2	
GL27-1	1.537	1.576		26.2	
GL27-2	2.469	2.094		12.8	
GL27-3	2.320	1.962		10.7	
GL27-4	2.215	1.906		2.3	
GL28-1	5.368	5.398		22.7	
GL28-2	4.914	4.911		9.5	
GL28-3	4.872	4.883		7.5	
GL29-1	4.423	4.319		46.2	
GL29-2	4.351	4.174		12.1	
GL35-1	0.955	0.823		8.4	
GL35-2	0.658	0.558		13.0	
GL35-3	0.872	0.764		15.4	
GL39-1	3.412	3.348		10.5	
GL39-2	3.413	3.367		6.5	
GL39-3	3.414	2.104		3.8	
GL40-1	dry	DRY		5.4	
GL41-1	4.226	2.620		11.5	
GL41-2	2.972	2.622		8.2	
GL41-3	2.948	2.599		5.2	
GL42-1	10.729	11.000		21.1	
GL42-2	11.066	11.157		12.5	
GL42-3	8.786	9.172		9.4	
06BH02	1.069	1.118		10.9	

09BH04	artesian	ARTESIAN		12.9	
09BH06-S	0.258	0 FULL TO THE TOP		5.8	
09BH06-D	0.452	.379		10.3	raised in Q3 2022
NEW GW (2024)					
GL 43-1	3.387	2.972		4.3	NE Field (clay)
GL 44-1	0.820	.841		18.5	S Closer to Little Robert Lake
GL 44-2	0.862	.877		16.1	N
GL 45-1	0.838	0.871		22.5	S Closer to Robert Lake
GL 45-2	0.949	0.896		11.3	N
GL 46-1	11.233	11.321		-	

Tech: KR Date: MAY 30/25

Monitoring Well ID	Previous Level (m)	Water Level (m)	Measured EOH (m)	EOH	Notes
GL1-1	2.353	2.319		12.7	
GL1-2	2.409	2.394		5.7	
GL2-1	full to the top	0.010		10.5	
GL2-2	0.361	0.464		6.4	
GL4-1	1.574	1.251		9.8	
GL4-2	1.871	2.049		5.9	
GL5-1	1.294	1.427		20.4	Sub. Pump
GL5-2	1.429	1.550		10.3	
GL5-3	1.444	1.651		5.6	
GL7-1	1.595	1.629		6.1	Sub Pump
GL8-1	1.111	1.185		10.1	
GL8-2	1.121	1.447		4.3	
GL10-1	1.136	1.542		9.4	
GL15-1	6.720	6.649		18.2	
GL15-2	5.974	5.896		6.4	questionable reading - levels seemed to be falling
GL16-1	1.002	1.082		15.3	
GL20-1	2.785	2.882		5.5	
GL23-1	2.246	2.249		9.8	
GL24-1	3.077	3.039		5.4	
GL26-1	0.533	0.498		26.6	
GL26-2	3.023	3.292		7.5	
GL26-3	3.017	3.293		6.0	
GL26-4	3.046	3.389		4.2	
GL27-1	1.576	1.585		26.2	
GL27-2	2.094	2.107		12.8	
GL27-3	1.962	1.967		10.7	
GL27-4	1.906	1.929		2.3	
GL28-1	5.398	5.392		22.7	
GL28-2	4.911	4.971		9.5	
GL28-3	4.883	4.959		7.5	
GL29-1	4.319	4.385		46.2	
GL29-2	4.174	3.601		12.1	
GL35-1	0.823	0.833		8.4	
GL35-2	0.558	0.628		13.0	
GL35-3	0.764	0.632		15.4	
GL39-1	3.348	3.529		10.5	
GL39-2	3.367	3.523		6.5	
GL39-3	2.104	3.595		3.8	
GL40-1	dry	dry		5.4	
GL41-1	2.620	2.730		11.5	
GL41-2	2.622	2.726		8.2	
GL41-3	2.599	2.712		5.2	
GL42-1	11.000	10.867		21.1	
GL42-2	11.157	11.019		12.5	
GL42-3	9.172	8.959		9.4	
06BH02	1.118	1.164		10.9	

09BH04	artesian	BROKEN		**12.9**	
09BH06-S	full to the top	0.263		**5.8**	
09BH06-D	0.379	0.434		**10.3**	raised in Q3 2022
GL 43-1	2.972	2.995		**4.3**	NE Field (clay)
GL 44-1	0.841	0.887		**18.5**	S Closer to Little Robert Lake
GL 44-2	0.877	0.987		**16.1**	N
GL 45-1	0.871	0.802		**22.5**	S Closer to Robert Lake
GL 45-2	0.896	1.011		**11.3**	N
GL 46-1	11.321	11.249		**-**	

Tech: KK Date: SEPT 10, 2025

Monitoring Well ID	Previous Level (m)	Water Level (m)	Measured EOH (m)	EOH	Notes
GL1-1	2.319	2.760		12.7	
GL1-2	2.394	2.825		5.7	
GL2-1	0.010	0.509		10.5	
GL2-2	0.464	0.726		6.4	
GL4-1	1.251	1.486		9.8	
GL4-2	2.049	2.190		5.9	
GL5-1	1.427	1.675		20.4	Sub. Pump
GL5-2	1.550	1.829		10.3	NEW LOCKS
GL5-3	1.651	1.884		5.6	
GL7-1	1.629	1.911		6.1	Sub Pump
GL8-1	1.185	1.459		10.1	
GL8-2	1.447	1.664		4.3	
GL10-1	1.542	2.159		9.4	
GL15-1	6.649	6.556		18.2	
GL15-2	5.846	5.755		6.4	questionable reading - levels seemed to be falling
GL16-1	1.082	1.346		15.3	
GL20-1	2.882	3.157		5.5	
GL23-1	2.249	2.566		9.8	
GL24-1	3.039	3.442		5.4	
GL26-1	0.498	0.546		26.6	
GL26-2	3.292	3.687		7.5	
GL26-3	3.293	3.674		6.0	
GL26-4	3.389	3.772		4.2	
GL27-1	1.585	1.572		26.2	
GL27-2	2.107	2.317		12.8	
GL27-3	1.967	2.386		10.7	
GL27-4	1.929	2.172		2.3	
GL28-1	5.392	5.243		22.7	
GL28-2	4.971	4.910		9.5	
GL28-3	4.939	4.866		7.5	
GL29-1	4.385	4.449		46.2	NEW LOCKS
GL29-2	3.601	3.477		12.1	NEW LOCKS
GL35-1	0.833	1.139		8.4	CASINGS CORRODED
GL35-2	0.628	0.893		13.0	
GL35-3	0.632	1.096		15.4	
GL39-1	3.529	3.452		10.5	
GL39-2	3.523	3.460		6.5	
GL39-3	3.595	3.724		3.8	
GL40-1	dry	DRY		5.4	
GL41-1	2.730	2.613		11.5	
GL41-2	2.726	2.523		8.2	
GL41-3	2.712	2.575		5.2	
GL42-1	10.867	10.967		21.1	
GL42-2	11.019	11.062		12.5	
GL42-3	8.952	9.047		9.4	
06BH02	1.164	0.946		10.9	

09BH04	artesian	~~0.180~~		**12.9**	
09BH06-S	0.263	0.180		**5.8**	
09BH06-D	0.434	0.335		**10.3**	raised in Q3 2022
GL 43-1	2.995	3.381		**4.3**	NE Field (clay)
GL 44-1	0.841	~~0.518~~ 0.583		**18.5**	S Closer to Little Robert Lake
GL 44-2	0.987	0.648		**16.1**	N
GL 45-1	0.802	0.527		**22.5**	S Closer to Robert Lake
GL 45-2	1.011	0.759		**11.3**	N
GL 46-1	11.249	11.322		-	

Tech: KR Date: Nov 21, 2025

Monitoring Well ID	Previous Level (m)	Water Level (m)	Measured EOH (m)	EOH	Notes
GL1-1	2.760	2.608		12.7	
GL1-2	2.825	2.678		5.7	
GL2-1	0.509	0.471		10.5	
GL2-2	0.726	0.341		6.4	
GL4-1	1.486	1.441		9.8	
GL4-2	2.190	2.103		5.9	
GL5-1	1.675	1.353		20.4	Sub. Pump
GL5-2	1.829	1.545		10.3	
GL5-3	1.884	1.552		5.6	
GL7-1	1.911	1.922		6.1	Sub Pump
GL8-1	1.459	1.193		10.1	
GL8-2	1.664	1.444		4.3	
GL10-1	2.119	1.651		9.4	
GL15-1	6.556	6.671		18.2	
GL15-2	5.755	5.912		6.4	questionable reading - levels seemed to be falling
GL16-1	1.346	1.079		15.3	
GL20-1	3.157	2.914		5.5	
GL23-1	2.566	2.526		9.8	
GL24-1	3.442	3.309		5.4	
GL26-1	0.546	0.645		26.6	
GL26-2	3.687	3.327		7.5	
GL26-3	3.674	3.326		6.0	
GL26-4	3.772	3.374		4.2	
GL27-1	1.572	1.660		26.2	
GL27-2	2.317	2.384		12.8	
GL27-3	2.386	2.307		10.7	
GL27-4	2.172	2.246		2.3	
GL28-1	5.243	5.476		22.7	
GL28-2	4.910	5.046		9.5	
GL28-3	4.866	5.004		7.5	
GL29-1	4.449	4.342		46.2	
GL29-2	3.477	4.432		12.1	
GL35-1	1.139	0.944		8.4	
GL35-2	0.893	0.680		13.0	
GL35-3	1.096	0.863 ← 0.863		15.4	
GL39-1	3.452	3.880		10.5	
GL39-2	3.460	3.893		6.5	
GL39-3	3.724	3.774		3.8	
GL40-1	dry	dry		5.4	
GL41-1	2.613	2.719		11.5	
GL41-2	2.623	2.727		8.2	
GL41-3	2.575	2.704		5.2	
GL42-1	10.967	11.056		21.1	
GL42-2	11.062	11.170		12.5	
GL42-3	9.047	9.324		9.4	
06BH02	0.946	1.310		10.9	

09BH04	artesian	ARTESIAN		**12.9**	
09BH06-S	0.180	0.265		**5.8**	
09BH06-D	0.335	0.527		**10.3**	raised in Q3 2022
GL 43-1	3.381	3.276		**4.3**	NE Field (clay)
GL 44-1	0.583	0.861		**18.5**	S Closer to Little Robert Lake
GL 44-2	0.648	0.902		**16.1**	N
GL 45-1	0.527	0.856		**22.5**	S Closer to Robert Lake
GL 45-2	0.759	1.034		**11.3**	N
GL 46-1	11.322	11.411		-	

Glenmore Landfill - Surface Water Level Monitor

City of Kelowna

Tech: KR Date: JANUARY 21, 2025

Water Body	Location	Reading (m at MH, cm at Staff)	Notes: surveys completed Apr 9/Nov 13, 2019 & April 2018*
Bredin Pond	Dock	0.52	Transducer reading. Dock Elevation 439.171*. 2.16 - GROUND
NE Pond	MH	0.883	MH Elevation 444.165
NE Pond - 1st Bench	MH	0.740	MH Elevation 444.165
Tutt Pond	MH	~~0.883~~ NA	MH Elevation 440.694 ~~POLE SAMPLED~~
Tutt Pond	Staff Gauge	ND	Installed near discharge to Slough for quick water reference POLE WITH GAUGE SAMPLED
Slough	Hydrometer MH	1.587	MH Elevation 439.229
Slough	Staff Gauge	BG	Installed on GL35 well for quick water reference
Leachate Trench	Greywater MH	2.896	MH Elevation 440.607
Robert Lake	Staff Gauge	24	Install on fence post at Robert Lake for quick water reference

Glenmore Landfill - Surface Water Level Monitor

City of Kelowna

Tech: KR Date: FEB 20, 2025

Water Body	Location	Reading (m at MH, cm at Staff)	Notes: surveys completed Apr 9/Nov 13, 2019 & April 2018*
Bredin Pond	Dock	0.51	Transducer reading. Dock Elevation 439.171*. 2.19 - GROUND
NE Pond	MH	0.870	MH Elevation 444.165
NE Pond - 1st Bench	MH	NM?	MH Elevation 444.165
Tutt Pond	MH	ND	MH Elevation 440.694 GAUGE SUBMERGED
Tutt Pond	Staff Gauge	ND	Installed near discharge to Slough for quick water reference POLE WITH GAUGE SHIFTED
Slough	Hydrometer MH	1.510	MH Elevation 439.229
Slough	Staff Gauge	BG	Installed on GL35 well for quick water reference
Leachate Trench	Greywater MH	2.857	MH Elevation 440.607
Robert Lake	Staff Gauge	23	Install on fence post at Robert Lake for quick water reference FROZEN

Glenmore Landfill - Surface Water Level Monitor

City of Kelowna

Tech: KR Date: MARCH 20, 2025

Water Body	Location	Reading (m at MH, cm at Staff)	Notes: surveys completed Apr 9/Nov 13, 2019 & April 2018*
Bredin Pond	Dock	0.62	Transducer reading. Dock Elevation 439.171*. 211 GROUND
NE Pond	MH	0.533	MH Elevation 444.165
NE Pond - 1st Bench	MH	0.545	MH Elevation 444.165
Tutt Pond	MH		MH Elevation 440.694
Tutt Pond	Staff Gauge	(ND) POLE WITH STAFF GAUGE SHIFTED	Installed near discharge to Slough for quick water reference
Slough	Hydrometer MH	1.307	MH Elevation 439.229
Slough	Staff Gauge (BG)	(ND) NO STAFF GAUGE INSTALLED	Installed on GL35 well for quick water reference
Leachate Trench	Greywater MH	2.700	MH Elevation 440.607
Robert Lake	Staff Gauge	33	Install on fence post at Robert Lake for quick water reference

Glenmore Landfill - Surface Water Level Monitor

City of Kelowna

Tech: KR Date: APRIL 25, 2025

Water Body	Location	Reading (m at MH, cm at Staff)	Notes: surveys completed Apr 9/Nov 13, 2019 & April 2018*
Bredin Pond	Dock	0.56	Transducer reading. Dock Elevation 439.171*. 2.12
NE Pond	MH	0.394	MH Elevation 444.165 — APRIL 29 \ FLOODED +
NE Pond - 1st Bench	MH	0.399	MH Elevation 444.165 — APRIL 29 / ROA NOT ACCESSIBLE ON 25TH
Tutt Pond	MH	—	MH Elevation 440.694
Tutt Pond	Staff Gauge	ND	Installed near discharge to Slough for quick water reference NEW STAFF GAUGE NOT INSTALLED
Slough	Hydrometer MH	1.255	MH Elevation 439.229
Slough	Staff Gauge	BG	Installed on GL35 well for quick water reference * NEW STAFF GAUGE NOT INSTALLED
Leachate Trench	Greywater MH	2.607	MH Elevation 440.607
Robert Lake	Staff Gauge	39	Install on fence post at Robert Lake for quick water reference

Glenmore Landfill - Surface Water Level Monitor

City of Kelowna

Tech: KR Date: MAY 20, 2025

Water Body	Location	Reading (m at MH, cm at Staff)	Notes: surveys completed Apr 9/Nov 13, 2019 & April 2018*
Bredin Pond	Dock	0.64	Transducer reading. Dock Elevation 439.171*. 2.14
NE Pond	MH	0.412	MH Elevation 444.165
NE Pond - 1st Bench	MH	0.422	MH Elevation 444.165
Tutt Pond	MH		MH Elevation 440.694
Tutt Pond	Staff Gauge	ND	Installed near discharge to Slough for quick water reference
Slough	Hydrometer MH	1.317	MH Elevation 439.229
Slough	Staff Gauge	BG	Installed on GL35 well for quick water reference
Leachate Trench	Greywater MH	2.704	MH Elevation 440.607
Robert Lake	Staff Gauge	35	Install on fence post at Robert Lake for quick water reference

Glenmore Landfill - Surface Water Level Monitor

City of Kelowna

Tech: KR Date: JUNE 20, 2025

Water Body	Location	Reading (m at MH, cm at Staff)	Notes: surveys completed Apr 9/Nov 13, 2019 & April 2018*
Bredin Pond	Dock	0.85	Transducer reading. Dock Elevation 439.171*. 2.16
NE Pond	MH	0.564	MH Elevation 444.165
NE Pond - 1st Bench	MH	0.566	MH Elevation 444.165
Tutt Pond	MH	/	MH Elevation 440.694
Tutt Pond	Staff Gauge	ND	Installed near discharge to Slough for quick water reference
Slough	Hydrometer MH	1.432	MH Elevation 439.229
Slough	Staff Gauge	65	Installed on GL35 well for quick water reference
Leachate Trench	Greywater MH	2.866	MH Elevation 440.607
Robert Lake	Staff Gauge	24	Install on fence post at Robert Lake for quick water reference

Glenmore Landfill - Surface Water Level Monitor

City of Kelowna

Tech: KR Date: July 21, 2025

Water Body	Location	Reading (m at MH, cm at Staff)	Notes: surveys completed Apr 9/Nov 13, 2019 & April 2018*
Bredin Pond	Dock	0.92	Transducer reading. Dock Elevation 439.171*. 2.22
NE Pond	MH	0.723	MH Elevation 444.165
NE Pond - 1st Bench	MH	0.695	MH Elevation 444.165
Tutt Pond	MH	~~NA~~	MH Elevation 440.694
Tutt Pond	Staff Gauge	ND	Installed near discharge to Slough for quick water reference
Slough	Hydrometer MH	1.562	MH Elevation 439.229
Slough	Staff Gauge	ND	Installed on GL35 well for quick water reference
Leachate Trench	Greywater MH	3.092	MH Elevation 440.607
Robert Lake	Staff Gauge	ND	Install on fence post at Robert Lake for quick water reference

Glenmore Landfill - Surface Water Level Monitor

City of Kelowna

Tech: KL Date: AUG 25, 2025

Water Body	Location	Reading (m at MH, cm at Staff)	Notes: surveys completed Apr 9/Nov 13, 2019 & April 2018*
Bredin Pond	Dock	0.63	Transducer reading. Dock Elevation 439.171*. 2.10
NE Pond	MH	0.866	MH Elevation 444.165
NE Pond - 1st Bench	MH	0.823	MH Elevation 444.165
Tutt Pond	MH	/	MH Elevation 440.694
Tutt Pond	Staff Gauge	ND	Installed near discharge to Slough for quick water reference
Slough	Hydrometer MH	1.724	MH Elevation 439.229
Slough	Staff Gauge	BG	Installed on GL35 well for quick water reference
Leachate Trench	Greywater MH	3.121	MH Elevation 440.607
Robert Lake	Staff Gauge	IG	Install on fence post at Robert Lake for quick water reference

Glenmore Landfill - Surface Water Level Monitor

City of Kelowna

Tech: KR Date: SEPT 19, 2025

Water Body	Location	Reading (m at MH, cm at Staff)	Notes: surveys completed Apr 9/Nov 13, 2019 & April 2018*
Bredin Pond	Dock	0.54	Transducer reading. Dock Elevation 439.171*. 2.06
NE Pond	MH	.957	MH Elevation 444.165
NE Pond - 1st Bench	MH	.937	MH Elevation 444.165
Tutt Pond	MH	/	MH Elevation 440.694
Tutt Pond	Staff Gauge	ND	Installed near discharge to Slough for quick water reference
Slough	Hydrometer MH	1.894	MH Elevation 439.229
Slough	Staff Gauge	BG	Installed on GL35 well for quick water reference
Leachate Trench	Greywater MH	3.742	MH Elevation 440.607
Robert Lake	Staff Gauge	8cm	Install on fence post at Robert Lake for quick water reference

Glenmore Landfill - Surface Water Level Monitor

City of Kelowna

Tech: KR Date: OCT 21, 2025

Water Body	Location	Reading (m at MH, cm at Staff)	Notes: surveys completed Apr 9/Nov 13, 2019 & April 2018*
Bredin Pond	Dock	0.49	Transducer reading. Dock Elevation 439.171*. 2.00 GROUND
NE Pond	MH	0.982	MH Elevation 444.165
NE Pond - 1st Bench	MH	0.884	MH Elevation 444.165
Tutt Pond	MH	~~ND~~	MH Elevation 440.694
Tutt Pond	Staff Gauge	ND	Installed near discharge to Slough for quick water reference
Slough	Hydrometer MH	2.033	MH Elevation 439.229
Slough	Staff Gauge	BG	Installed on GL35 well for quick water reference
Leachate Trench	Greywater MH	3.872	MH Elevation 440.607
Robert Lake	Staff Gauge	✓	Install on fence post at Robert Lake for quick water reference

Glenmore Landfill - Surface Water Level Monitor

City of Kelowna

Tech: KL Date: Nov 20, 2025

Water Body	Location	Reading (m at MH, cm at Staff)	Notes: surveys completed Apr 9/Nov 13, 2019 & April 2018*
Bredin Pond	Dock	0.46	Transducer reading. Dock Elevation 439.171*. 1.97
NE Pond	MH	0.916	MH Elevation 444.165
NE Pond - 1st Bench	MH	0.787	MH Elevation 444.165
Tutt Pond	MH	~~NS~~	MH Elevation 440.694
Tutt Pond	Staff Gauge	ND	Installed near discharge to Slough for quick water reference
Slough	Hydrometer MH	1.894	MH Elevation 439.229
Slough	Staff Gauge	BG	Installed on GL35 well for quick water reference
Leachate Trench	Greywater MH	3.372	MH Elevation 440.607
Robert Lake	Staff Gauge	12	Install on fence post at Robert Lake for quick water reference

Glenmore Landfill - Surface Water Level Monitor

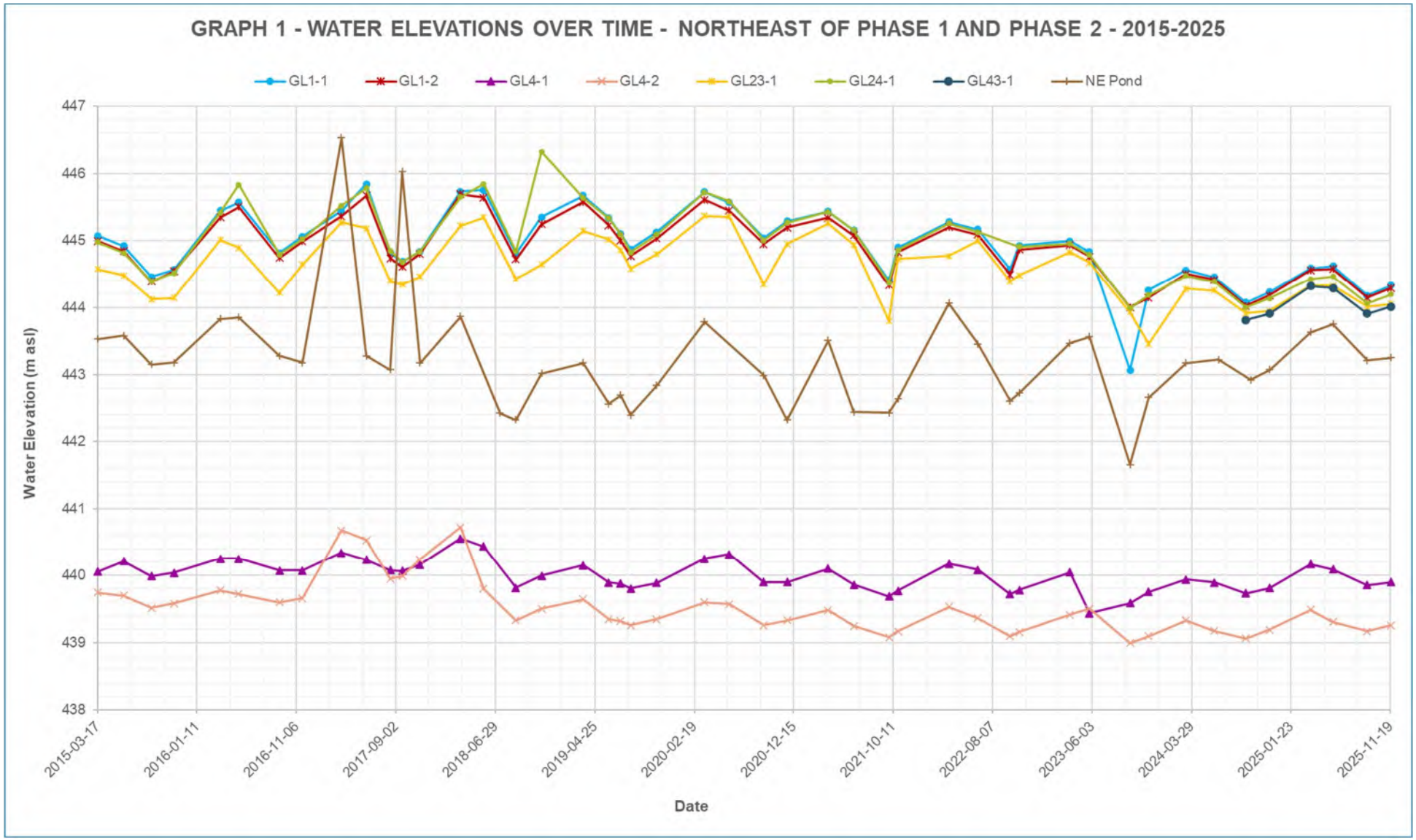
City of Kelowna

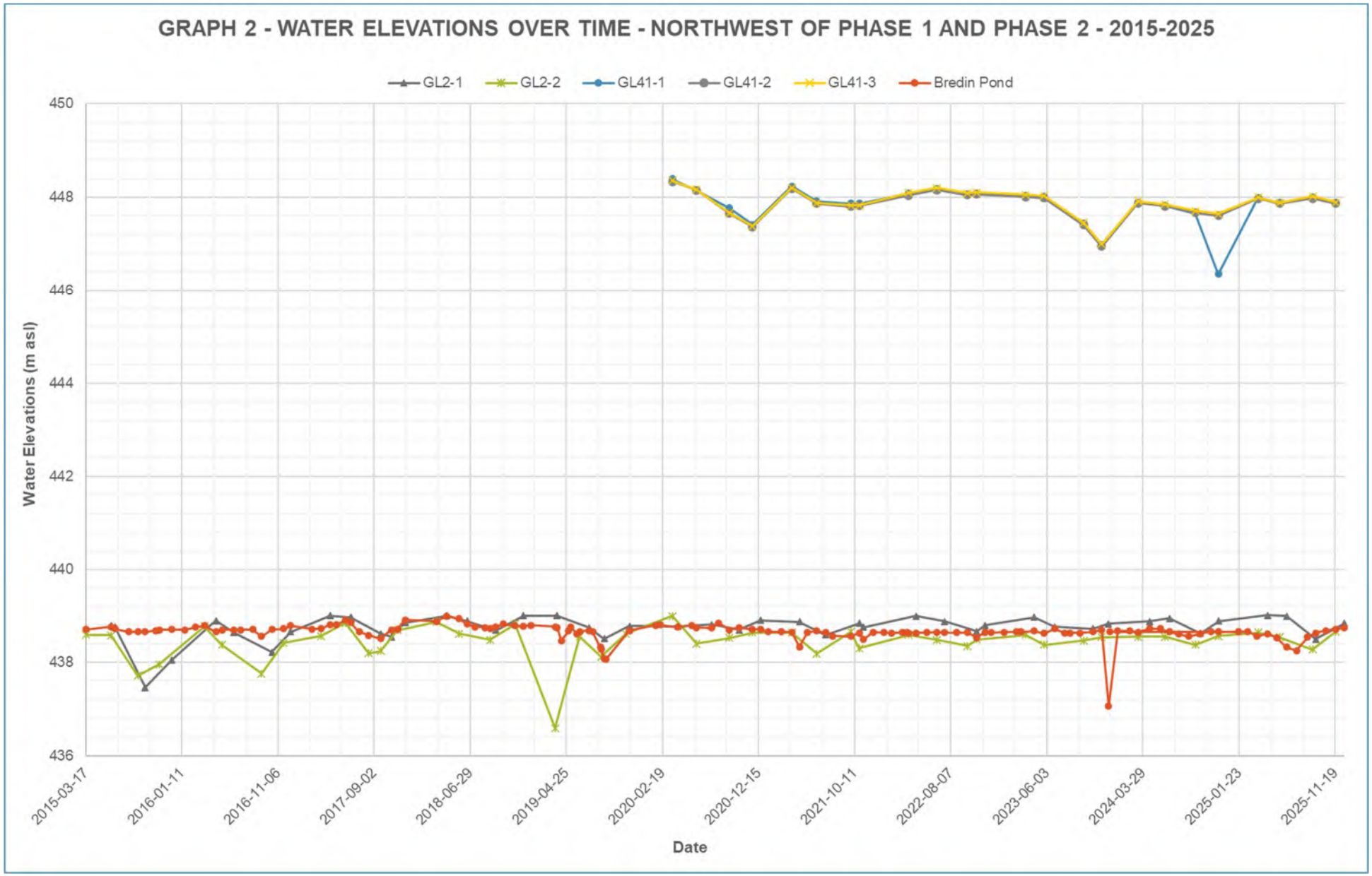
Tech: KAROLINA Date: Dec. 18, 2025

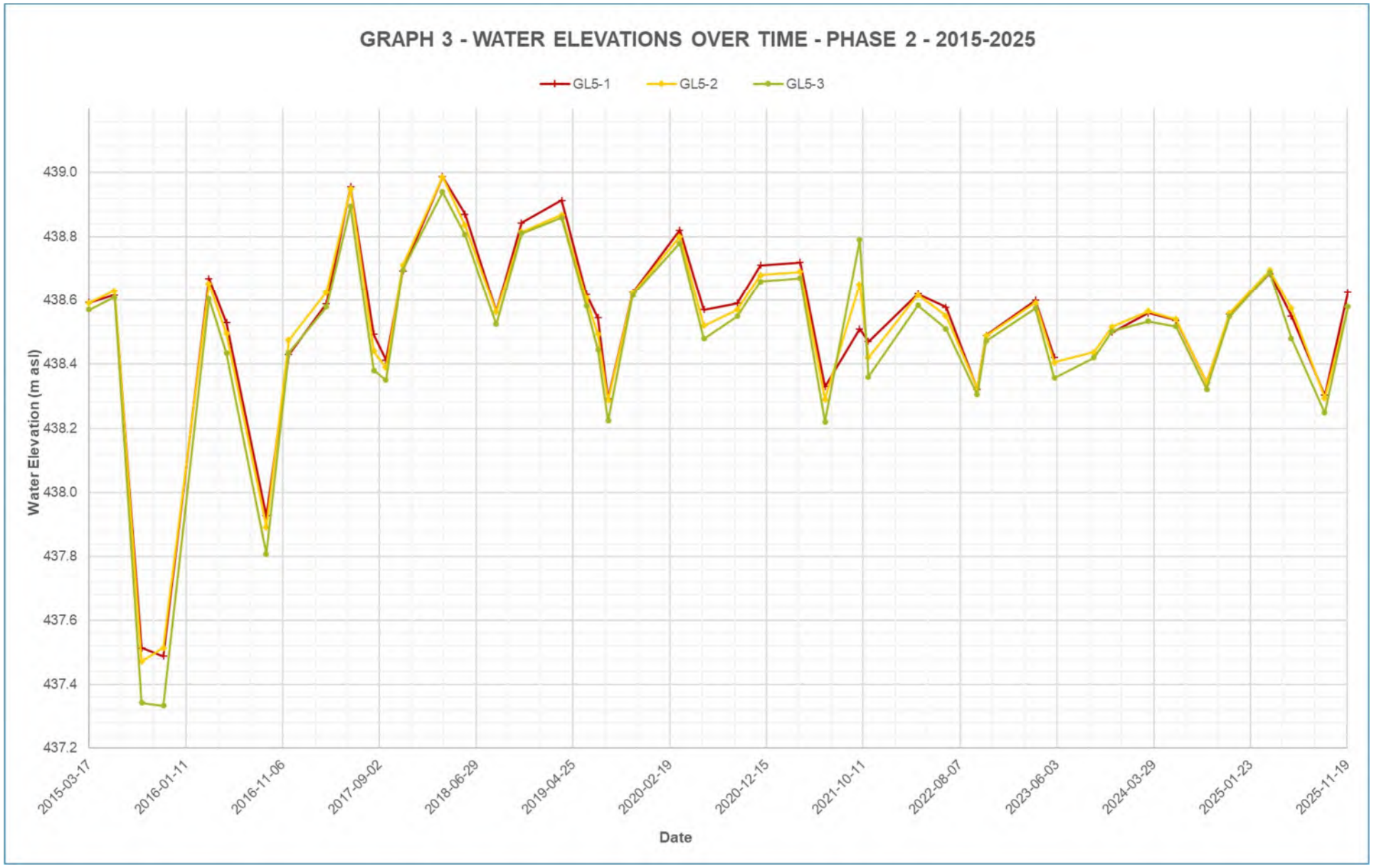
Water Body	Location	Reading (m at MH, cm at Staff)	Notes: surveys completed Apr 9/Nov 13, 2019 & April 2018*
Bredin Pond	Dock	0.44	Transducer reading. Dock Elevation 439.171*. 1.85
NE Pond	MH	0.800	MH Elevation 444.165
NE Pond - 1st Bench	MH	0.656	MH Elevation 444.165
Tutt Pond	MH	/	MH Elevation 440.694
Tutt Pond	Staff Gauge	ND	Installed near discharge to Slough for quick water reference
Slough	Hydrometer MH	1.547	MH Elevation 439.229
Slough	Staff Gauge	BG	Installed on GL35 well for quick water reference
Leachate Trench	Greywater MH	2.924	MH Elevation 440.607
Robert Lake	Staff Gauge	23	Install on fence post at Robert Lake for quick water reference

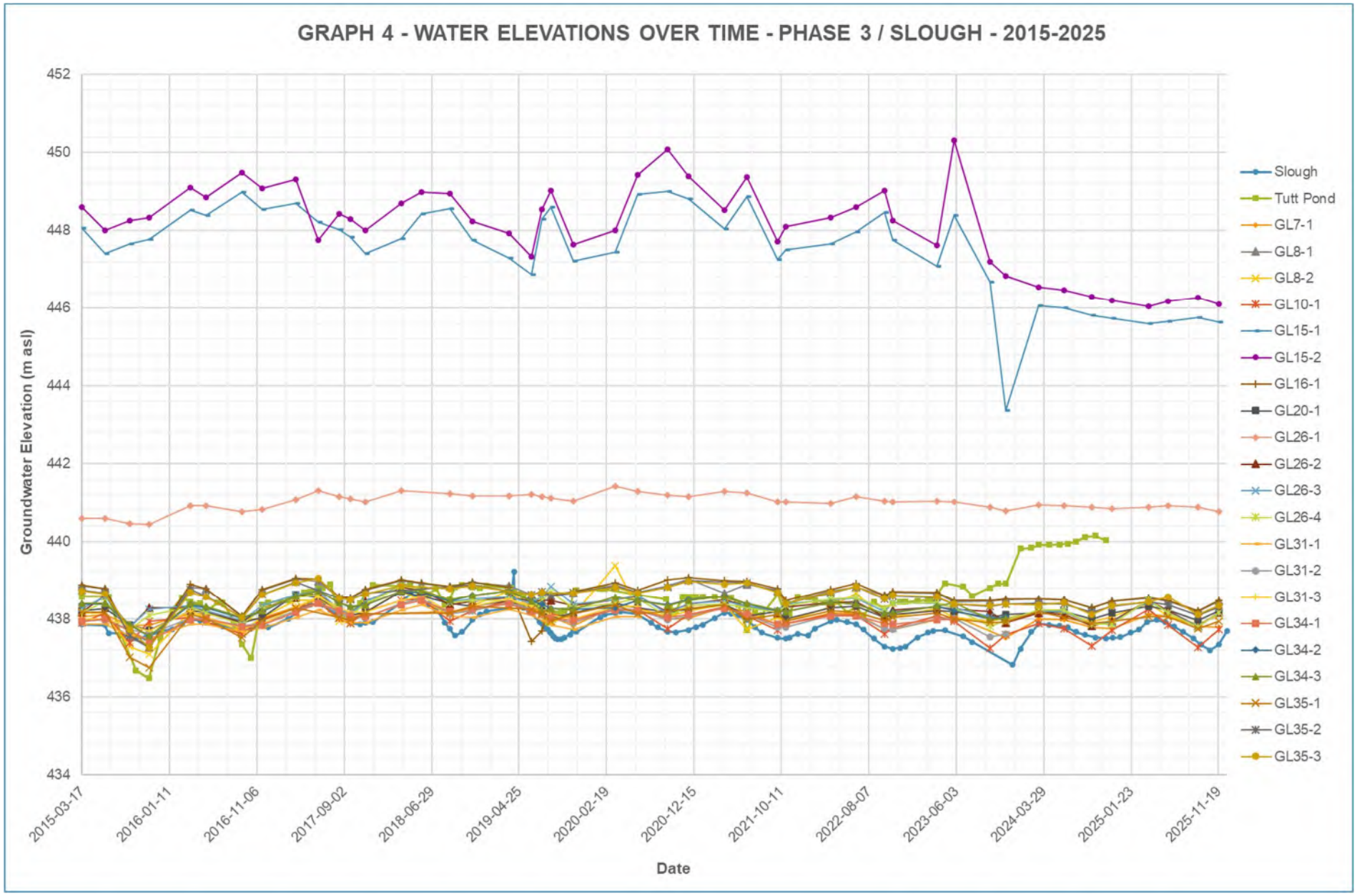
APPENDIX E

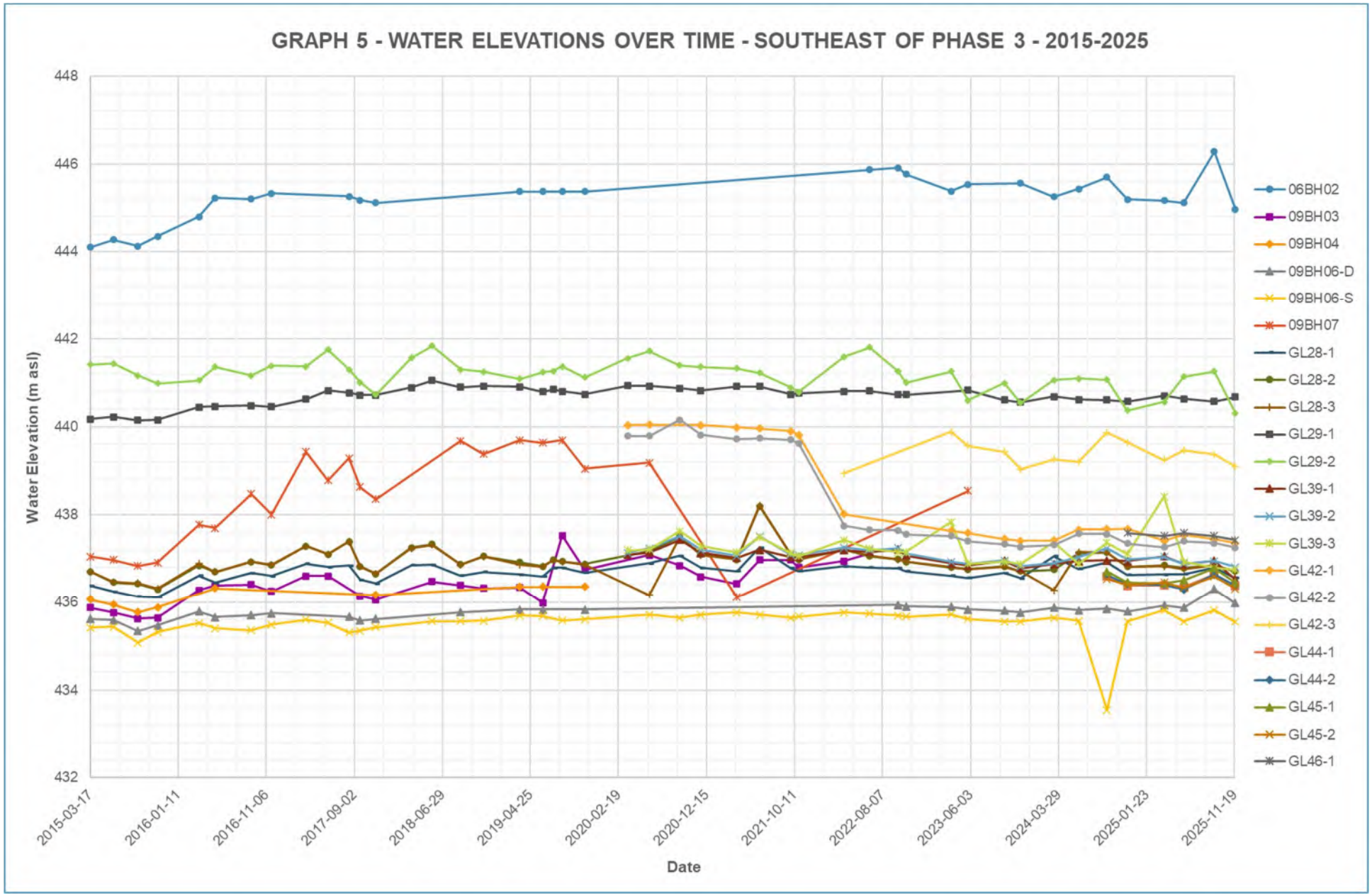
GRAPHS AND PLOTS

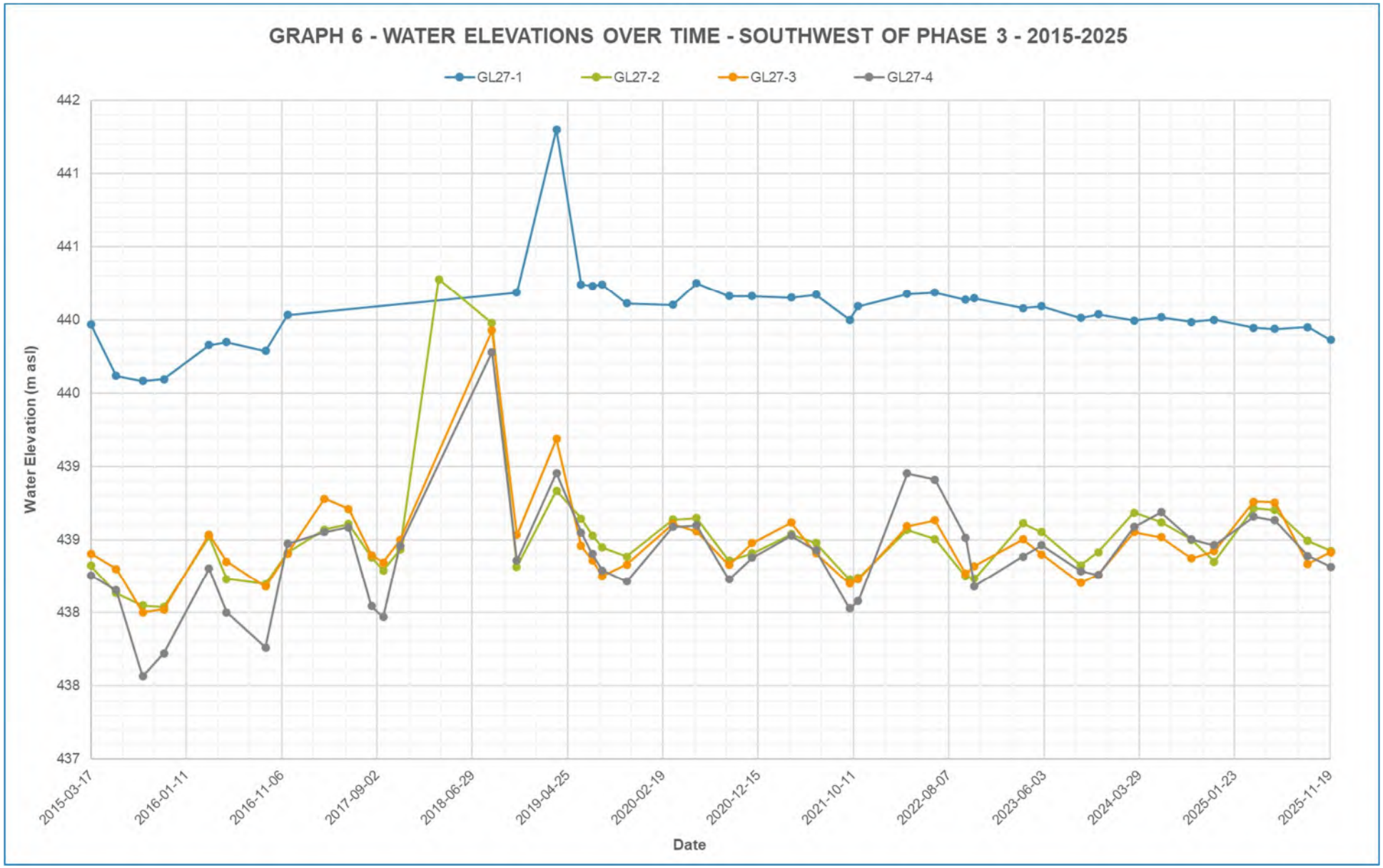

GRAPH 1 - WATER ELEVATIONS OVER TIME - NORTHEAST OF PHASE 1 AND PHASE 2 - 2015-2025
GL1-1
GL1-2
GL4-1
GL4-2
GL23-1
GL24-1
GL43-1
NE Pond
Water Elevation (m asl)
447
446
445
444
443
442
441
440
439
438
2015-03-17
2016-01-11
2016-11-06
2017-09-02
2018-06-29
2019-04-25
2020-02-19
2020-12-15
2021-10-11
2022-08-07
2023-06-03
2024-03-29
2025-01-23
2025-11-19
Date

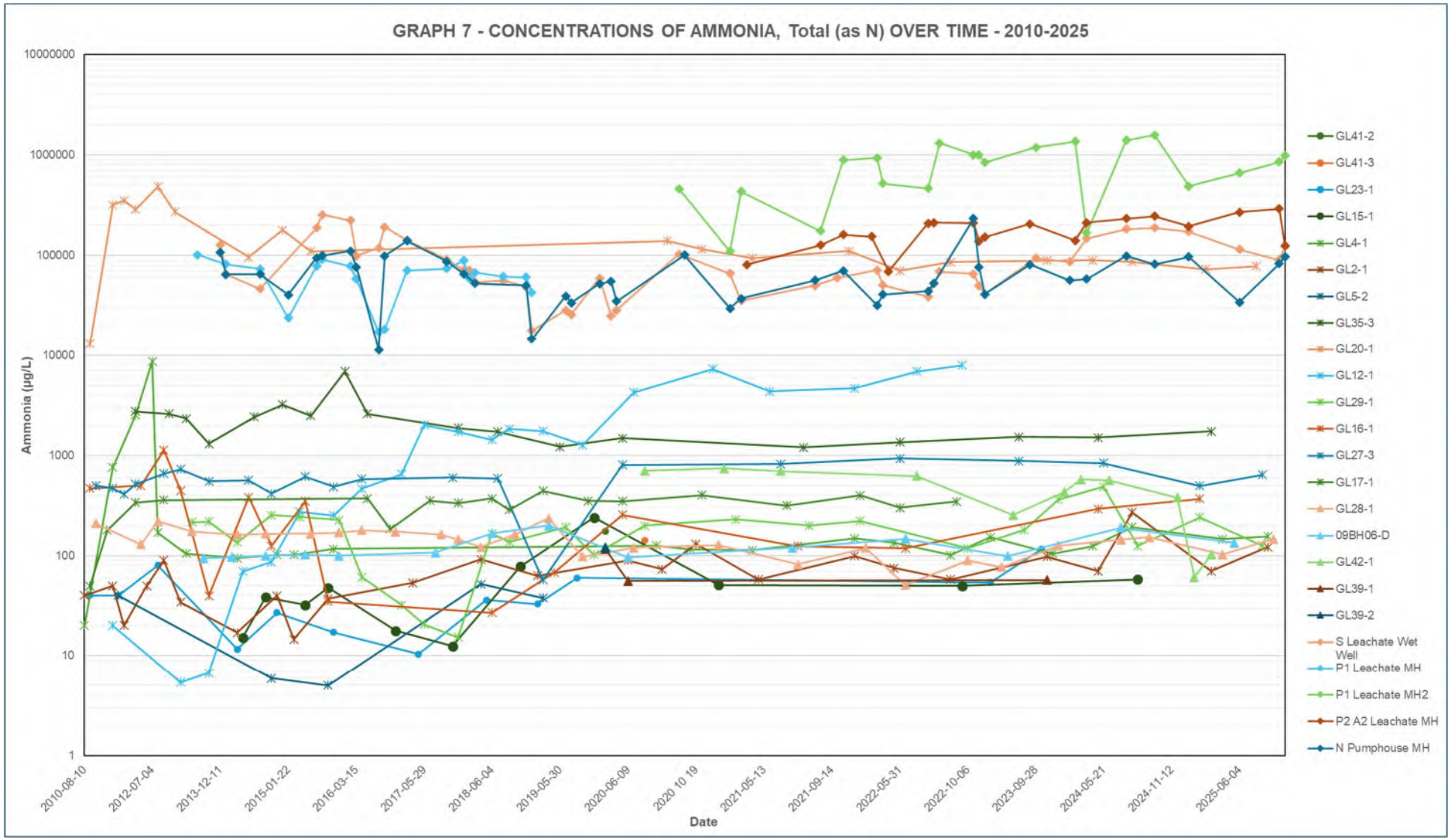

GRAPH 2 - WATER ELEVATIONS OVER TIME - NORTHWEST OF PHASE 1 AND PHASE 2 - 2015-2025
GL2-1
GL2-2
GL41-1
GL41-2
GL41-3
Bredin Pond
Water Elevations (m asl)
450
448
446
444
442
440
438
436
2015-03-17
2016-01-11
2016-11-06
2017-09-02
2018-06-29
2019-04-25
2020-02-19
2020-12-15
2021-10-11
2022-08-07
2023-06-03
2024-03-29
2025-01-23
2025-11-19
Date

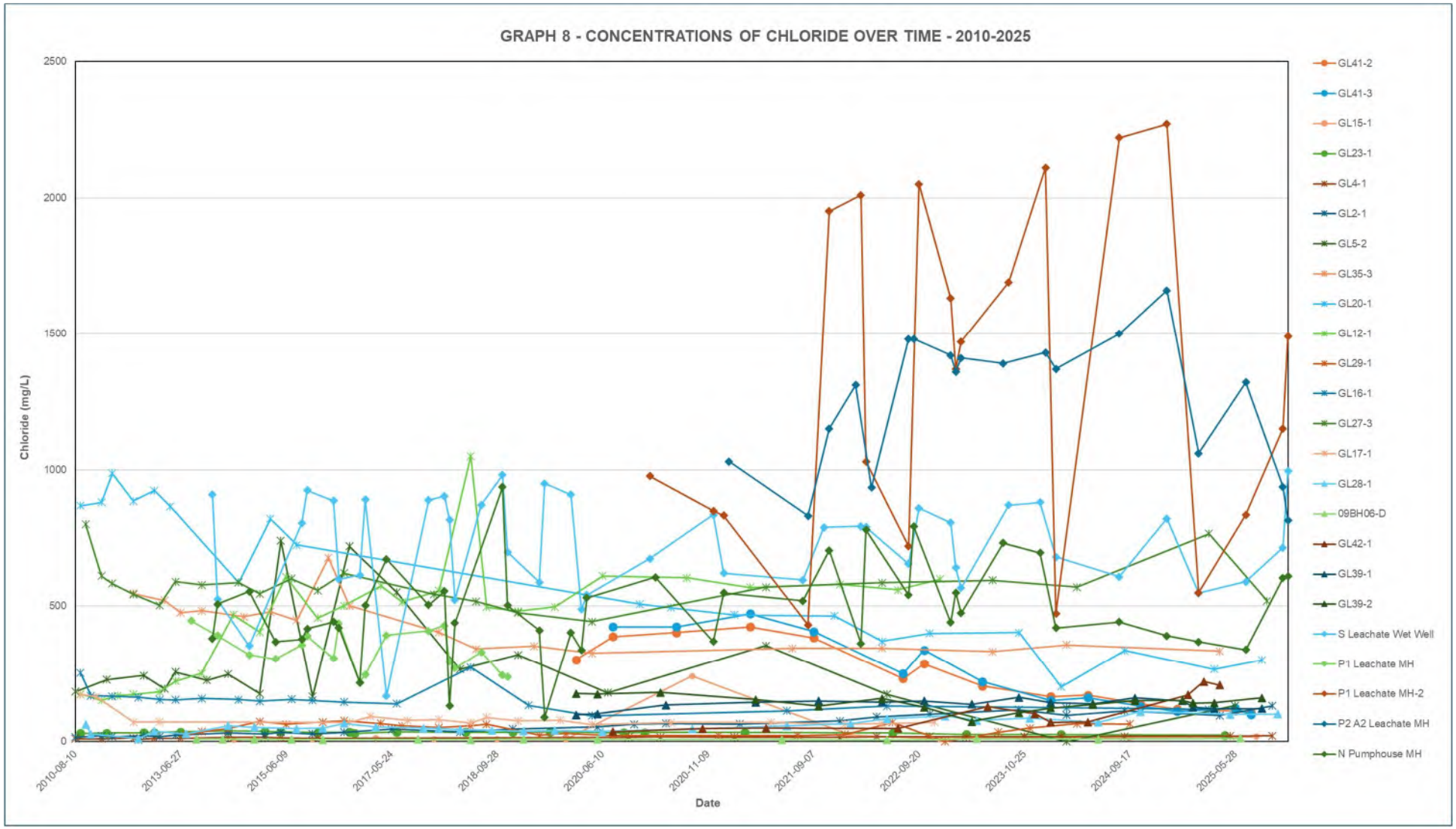

GRAPH 3 - WATER ELEVATIONS OVER TIME - PHASE 2 - 2015-2025
GL5-1
GL5-2
GL5-3
Water Elevation (m asl)
439.0
438.8
438.6
438.4
438.2
438.0
437.8
437.6
437.4
437.2
2015-03-17
2016-01-11
2016-11-06
2017-09-02
2018-06-29
2019-04-25
2020-02-19
2020-12-15
2021-10-11
2022-08-07
2023-06-03
2024-03-29
2025-01-23
2025-11-19
Date

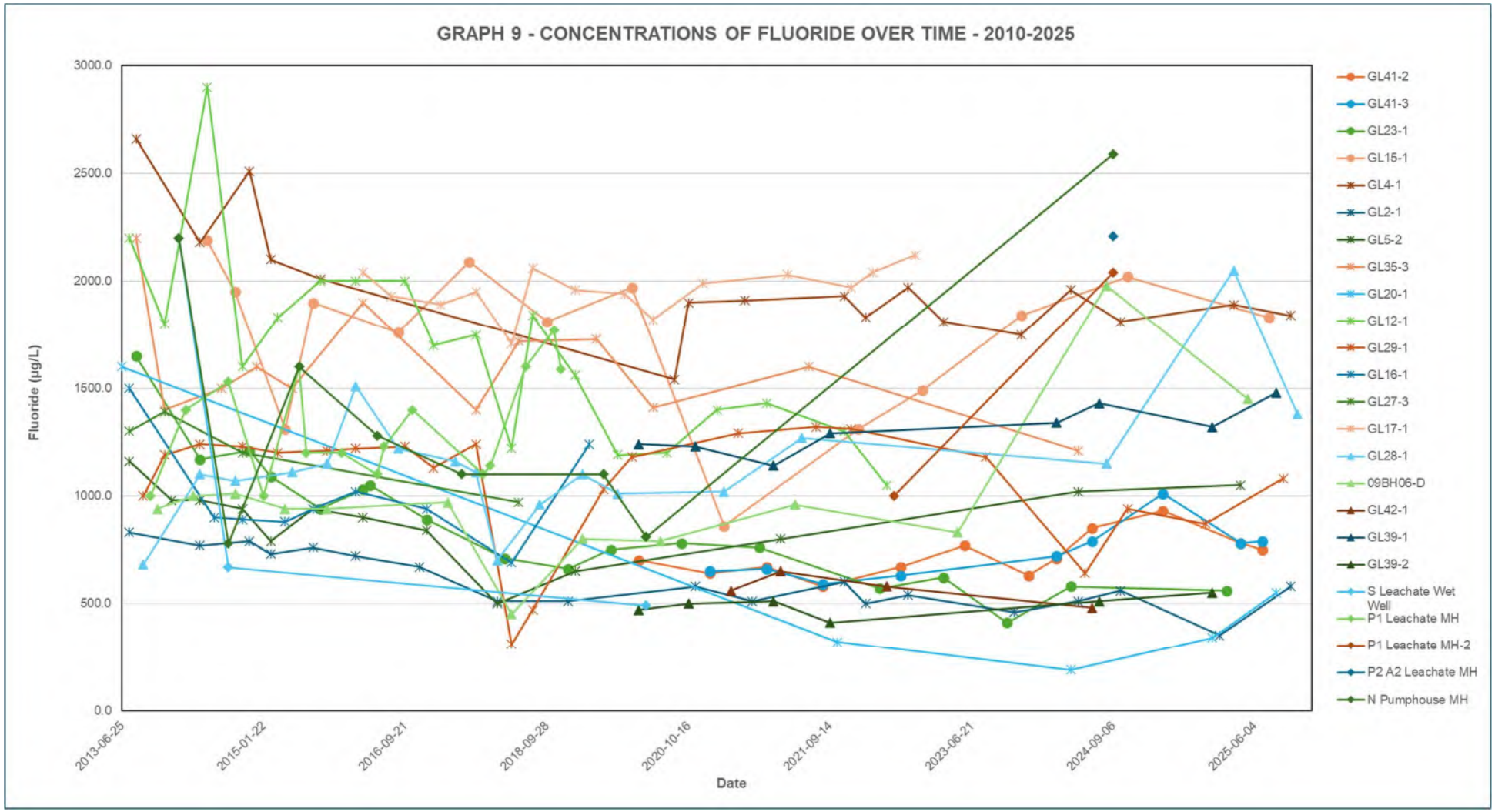

GRAPH 4 - WATER ELEVATIONS OVER TIME - PHASE 3 / SLOUGH - 2015-2025
Groundwater Elevation (m asl)
452
450
448
446
444
442
440
438
436
434
2015-03-17
2016-01-11
2016-11-06
2017-09-02
2018-06-29
2019-04-25
2020-02-19
2020-12-15
2021-10-11
2022-08-07
2023-06-03
2024-03-29
2025-01-23
2025-11-19
Date
Slough
Tutt Pond
GL7-1
GL8-1
GL8-2
GL10-1
GL15-1
GL15-2
GL16-1
GL20-1
GL26-1
GL26-2
GL26-3
GL26-4
GL31-1
GL31-2
GL31-3
GL34-1
GL34-2
GL34-3
GL35-1
GL35-2
GL35-3

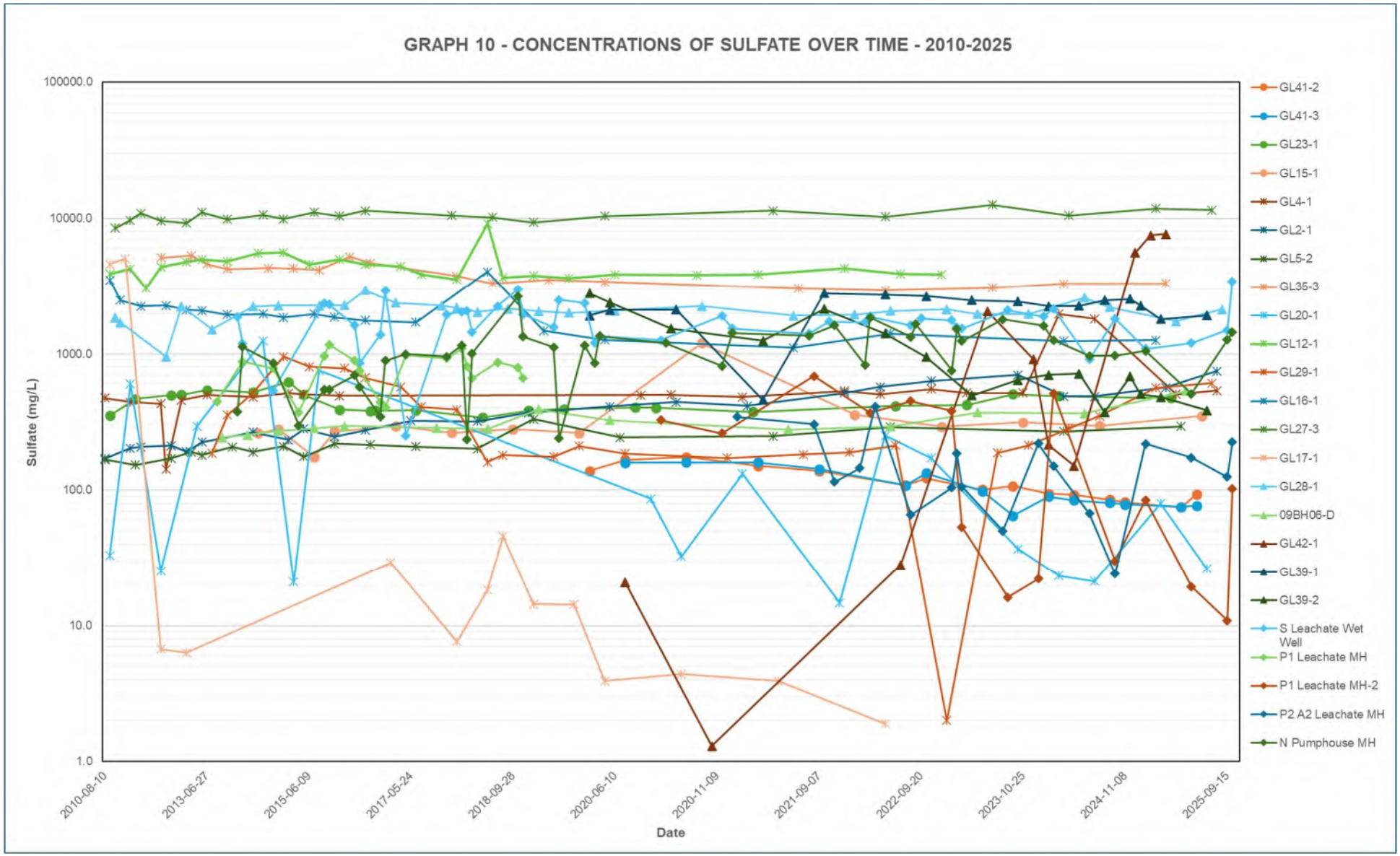

GRAPH 5 - WATER ELEVATIONS OVER TIME - SOUTHEAST OF PHASE 3 - 2015-2025
Water Elevation (m asl)
448
446
444
442
440
438
436
434
432
2015-03-17
2016-01-11
2016-11-06
2017-09-02
2018-06-29
2019-04-25
2020-02-19
2020-12-15
2021-10-11
2022-08-07
2023-06-03
2024-03-29
2025-01-23
2025-11-19
Date
06BH02
09BH03
09BH04
09BH06-D
09BH06-S
09BH07
GL28-1
GL28-2
GL28-3
GL29-1
GL29-2
GL39-1
GL39-2
GL39-3
GL42-1
GL42-2
GL42-3
GL44-1
GL44-2
GL45-1
GL45-2
GL46-1

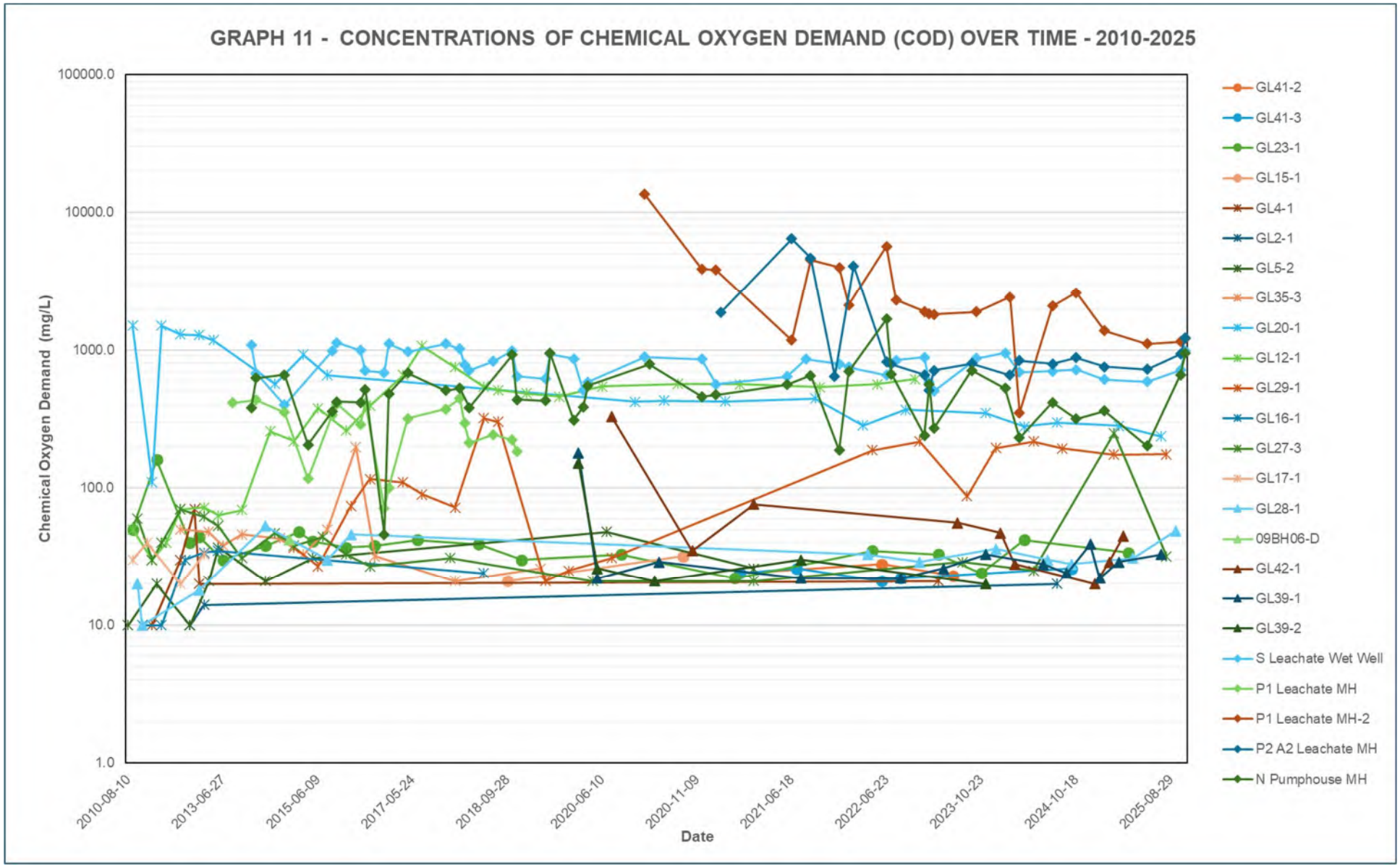

GRAPH 6 - WATER ELEVATIONS OVER TIME - SOUTHWEST OF PHASE 3 - 2015-2025
GL27-1
GL27-2
GL27-3
GL27-4
Water Elevation (m asl)
442
441
441
440
440
439
439
438
438
437
2015-03-17
2016-01-11
2016-11-06
2017-09-02
2018-06-29
2019-04-25
2020-02-19
2020-12-15
2021-10-11
2022-08-07
2023-06-03
2024-03-29
2025-01-23
2025-11-19
Date

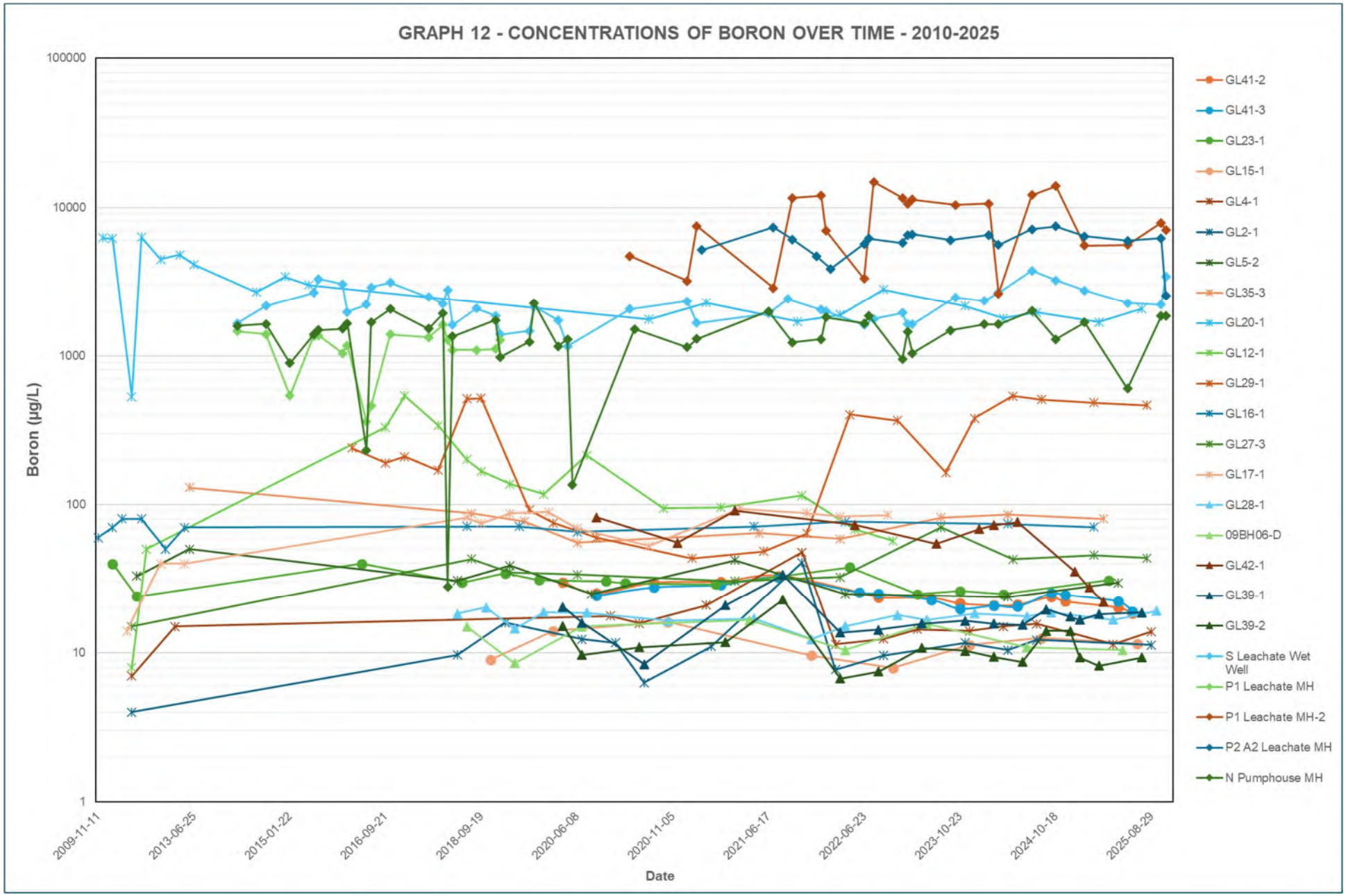

GRAPH 7 - CONCENTRATIONS OF AMMONIA, Total (as N) OVER TIME - 2010-2025
Ammonia (µg/L)
10000000
1000000
100000
10000
1000
100
10
1
2010-08-10
2012-07-04
2013-12-11
2015-01-22
2016-03-15
2017-05-29
2018-06-04
2019-05-30
2020-06-09
2020 10 19
2021-05-13
2021-09-14
2022-05-31
2022-10-06
2023-09-28
2024-05-21
2024-11-12
2025-06-04
Date
GL41-2
GL41-3
GL23-1
GL15-1
GL4-1
GL2-1
GL5-2
GL35-3
GL20-1
GL12-1
GL29-1
GL16-1
GL27-3
GL17-1
GL28-1
09BH06-D
GL42-1
GL39-1
GL39-2
S Leachate Wet Well
P1 Leachate MH
P1 Leachate MH2
P2 A2 Leachate MH
N Pumphouse MH

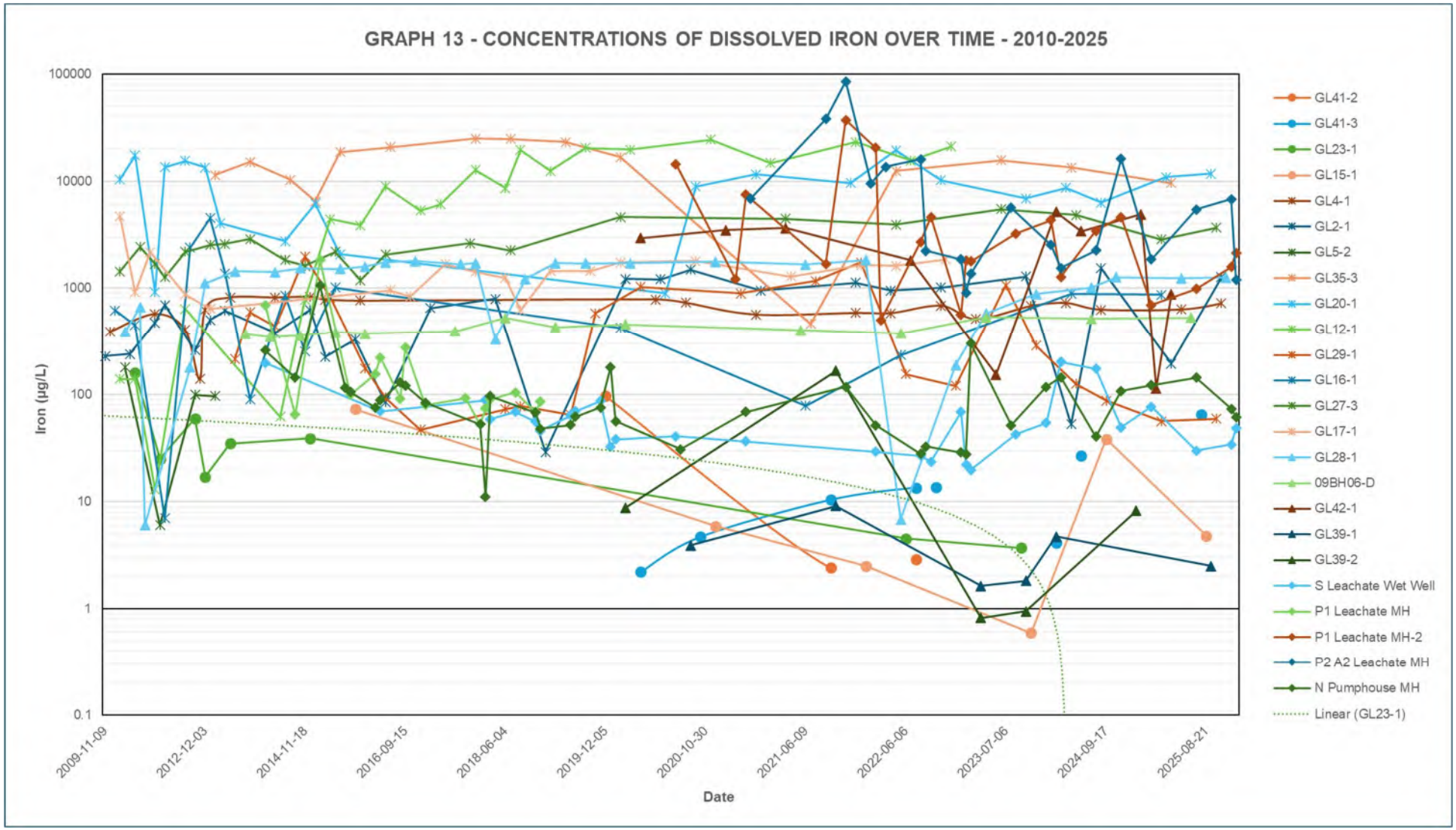

GRAPH 8 - CONCENTRATIONS OF CHLORIDE OVER TIME - 2010-2025
Chloride (mg/L)
2500
2000
1500
1000
500
0
2010-08-10
2013-06-27
2015-06-09
2017-05-24
2018-09-28
2020-06-10
2020-11-09
2021-09-07
2022-09-20
2023-10-25
2024-09-17
2025-05-28
Date
GL41-2
GL41-3
GL15-1
GL23-1
GL4-1
GL2-1
GL5-2
GL35-3
GL20-1
GL12-1
GL29-1
GL16-1
GL27-3
GL17-1
GL28-1
09BH06-D
GL42-1
GL39-1
GL39-2
S Leachate Wet Well
P1 Leachate MH
P1 Leachate MH-2
P2 A2 Leachate MH
N Pumphouse MH

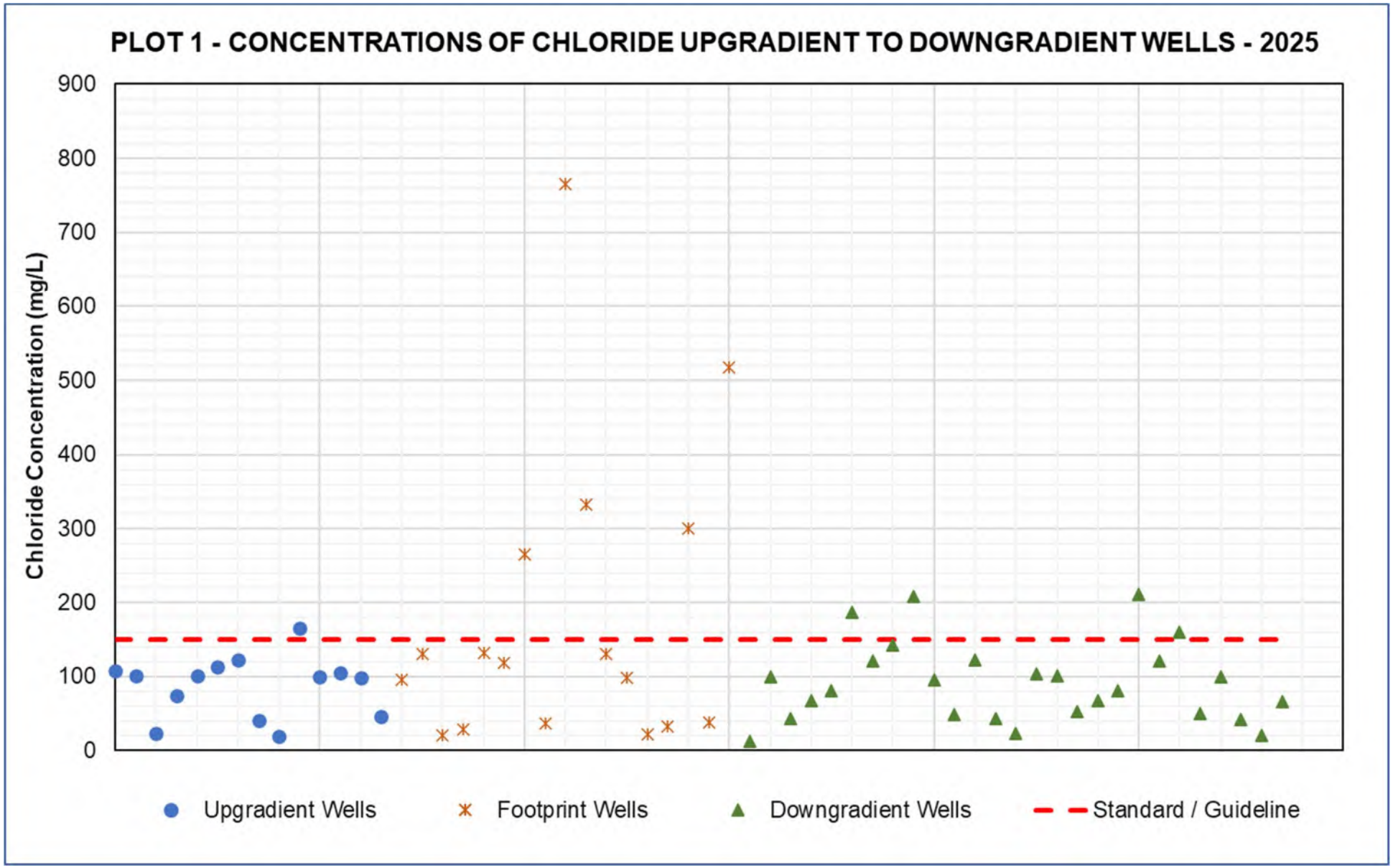

GRAPH 9 - CONCENTRATIONS OF FLUORIDE OVER TIME - 2010-2025
Fluoride (µg/L)
3000.0
2500.0
2000.0
1500.0
1000.0
500.0
0.0
2013-06-25
2015-01-22
2016-09-21
2018-09-28
2020-10-16
2021-09-14
2023-06-21
2024-09-06
2025-06-04
Date
GL41-2
GL41-3
GL23-1
GL15-1
GL4-1
GL2-1
GL5-2
GL35-3
GL20-1
GL12-1
GL29-1
GL16-1
GL27-3
GL17-1
GL28-1
09BH06-D
GL42-1
GL39-1
GL39-2
S Leachate Wet Well
P1 Leachate MH
P1 Leachate MH-2
P2 A2 Leachate MH
N Pumphouse MH


GRAPH 10 - CONCENTRATIONS OF SULFATE OVER TIME - 2010-2025
Sulfate (mg/L)
100000.0
10000.0
1000.0
100.0
10.0
1.0
2010-08-10
2013-06-27
2015-06-09
2017-05-24
2018-09-28
2020-06-10
2020-11-09
2021-09-07
2022-09-20
2023-10-25
2024-11-08
2025-09-15
Date
GL41-2
GL41-3
GL23-1
GL15-1
GL4-1
GL2-1
GL5-2
GL35-3
GL20-1
GL12-1
GL29-1
GL16-1
GL27-3
GL17-1
GL28-1
09BH06-D
GL42-1
GL39-1
GL39-2
S Leachate Wet Well
P1 Leachate MH
P1 Leachate MH-2
P2 A2 Leachate MH
N Pumphouse MH

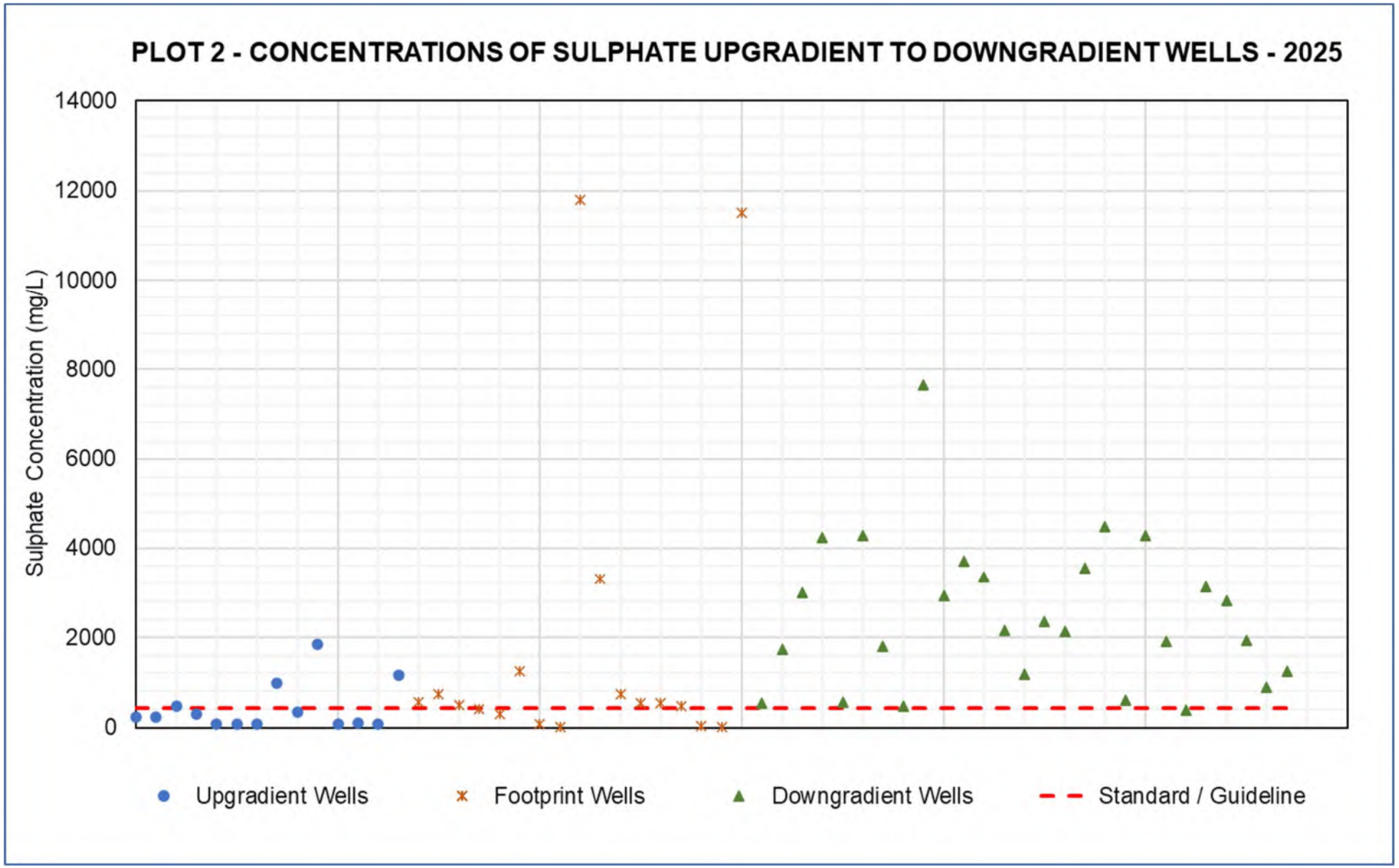

GRAPH 11 - CONCENTRATIONS OF CHEMICAL OXYGEN DEMAND (COD) OVER TIME - 2010-2025
Chemical Oxygen Demand (mg/L)
100000.0
10000.0
1000.0
100.0
10.0
1.0
2010-08-10
2013-06-27
2015-06-09
2017-05-24
2018-09-28
2020-06-10
2020-11-09
2021-06-18
2022-06-23
2023-10-23
2024-10-18
2025-08-29
Date
GL41-2
GL41-3
GL23-1
GL15-1
GL4-1
GL2-1
GL5-2
GL35-3
GL20-1
GL12-1
GL29-1
GL16-1
GL27-3
GL17-1
GL28-1
09BH06-D
GL42-1
GL39-1
GL39-2
S Leachate Wet Well
P1 Leachate MH
P1 Leachate MH-2
P2 A2 Leachate MH
N Pumphouse MH


GRAPH 12 - CONCENTRATIONS OF BORON OVER TIME - 2010-2025
Boron (µg/L)
100000
10000
1000
100
10
1
2009-11-11
2013-06-25
2015-01-22
2016-09-21
2018-09-19
2020-06-08
2020-11-05
2021-06-17
2022-06-23
2023-10-23
2024-10-18
2025-08-29
Date
GL41-2
GL41-3
GL23-1
GL15-1
GL4-1
GL2-1
GL5-2
GL35-3
GL20-1
GL12-1
GL29-1
GL16-1
GL27-3
GL17-1
GL28-1
09BH06-D
GL42-1
GL39-1
GL39-2
S Leachate Wet Well
P1 Leachate MH
P1 Leachate MH-2
P2 A2 Leachate MH
N Pumphouse MH

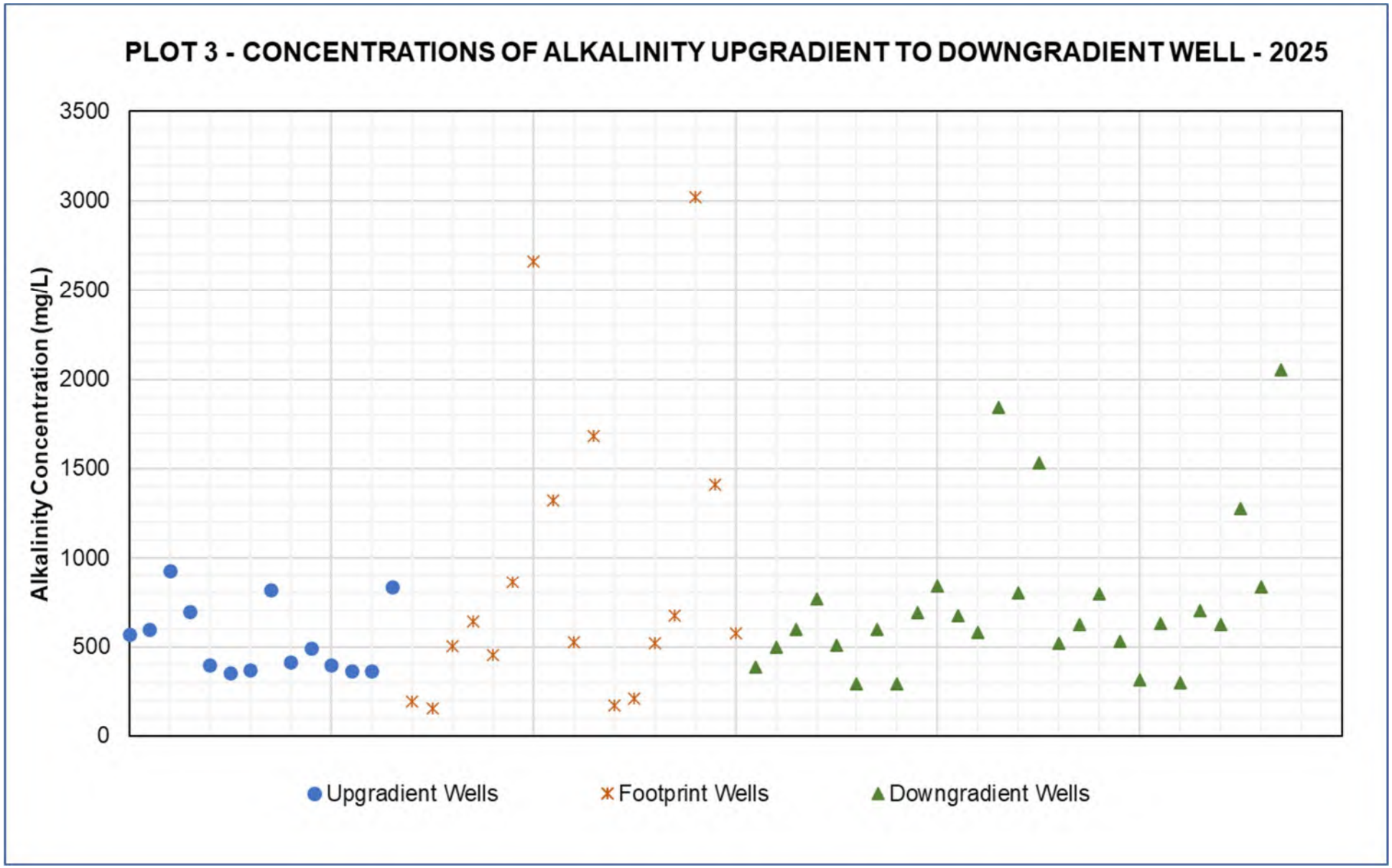

GRAPH 13 - CONCENTRATIONS OF DISSOLVED IRON OVER TIME - 2010-2025
Iron (µg/L)
100000
10000
1000
100
10
1
0.1
2009-11-09
2012-12-03
2014-11-18
2016-09-15
2018-06-04
2019-12-05
2020-10-30
2021-06-09
2022-06-06
2023-07-06
2024-09-17
2025-08-21
Date
GL41-2
GL41-3
GL23-1
GL15-1
GL4-1
GL2-1
GL5-2
GL35-3
GL20-1
GL12-1
GL29-1
GL16-1
GL27-3
GL17-1
GL28-1
09BH06-D
GL42-1
GL39-1
GL39-2
S Leachate Wet Well
P1 Leachate MH
P1 Leachate MH-2
P2 A2 Leachate MH
N Pumphouse MH
Linear (GL23-1)



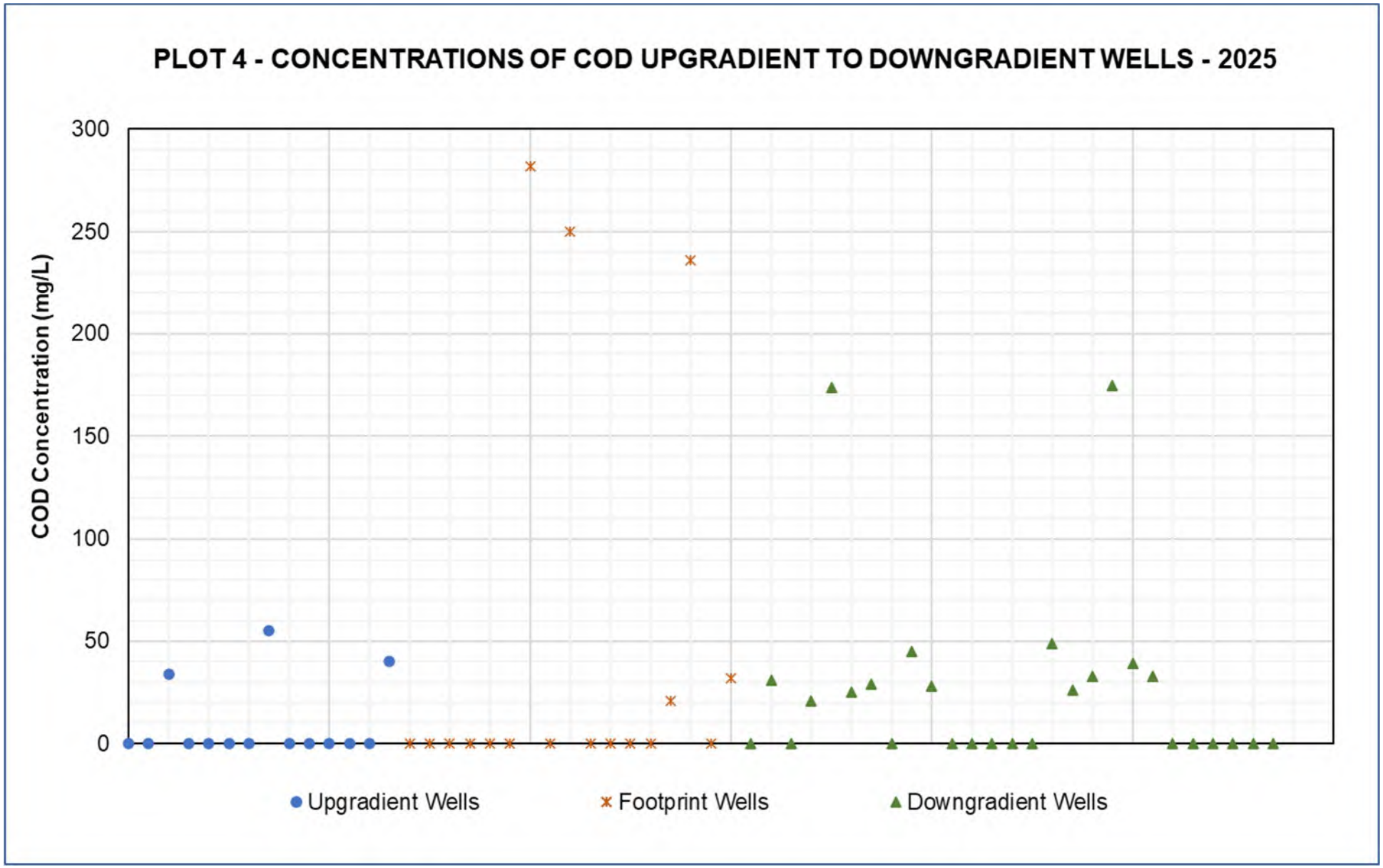
Note: Plotted symbols represent concentrations in Q1 through Q4 samples collected in 2025



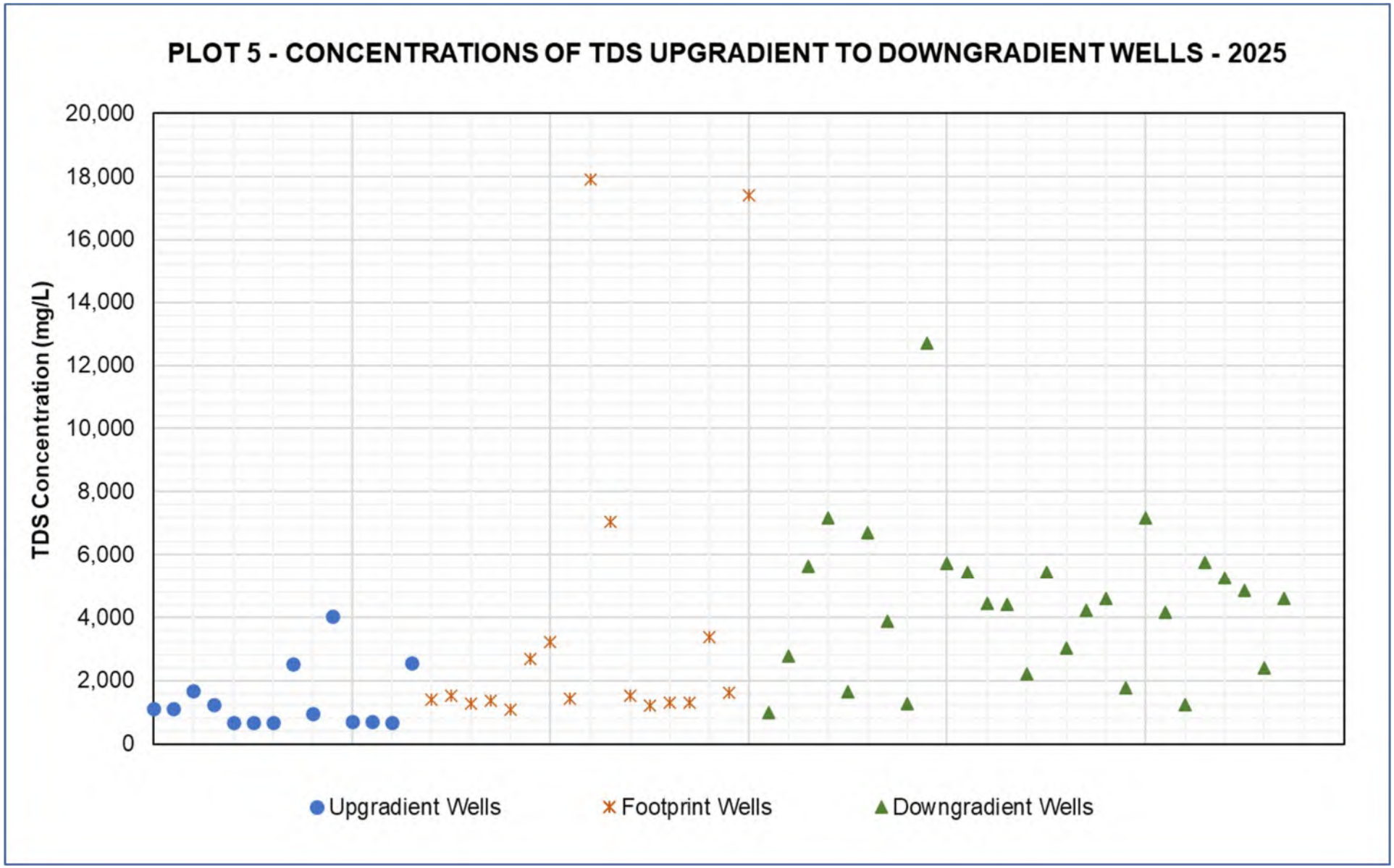
Note: Plotted symbols represent concentrations in Q1 through Q4 samples collected in 2025



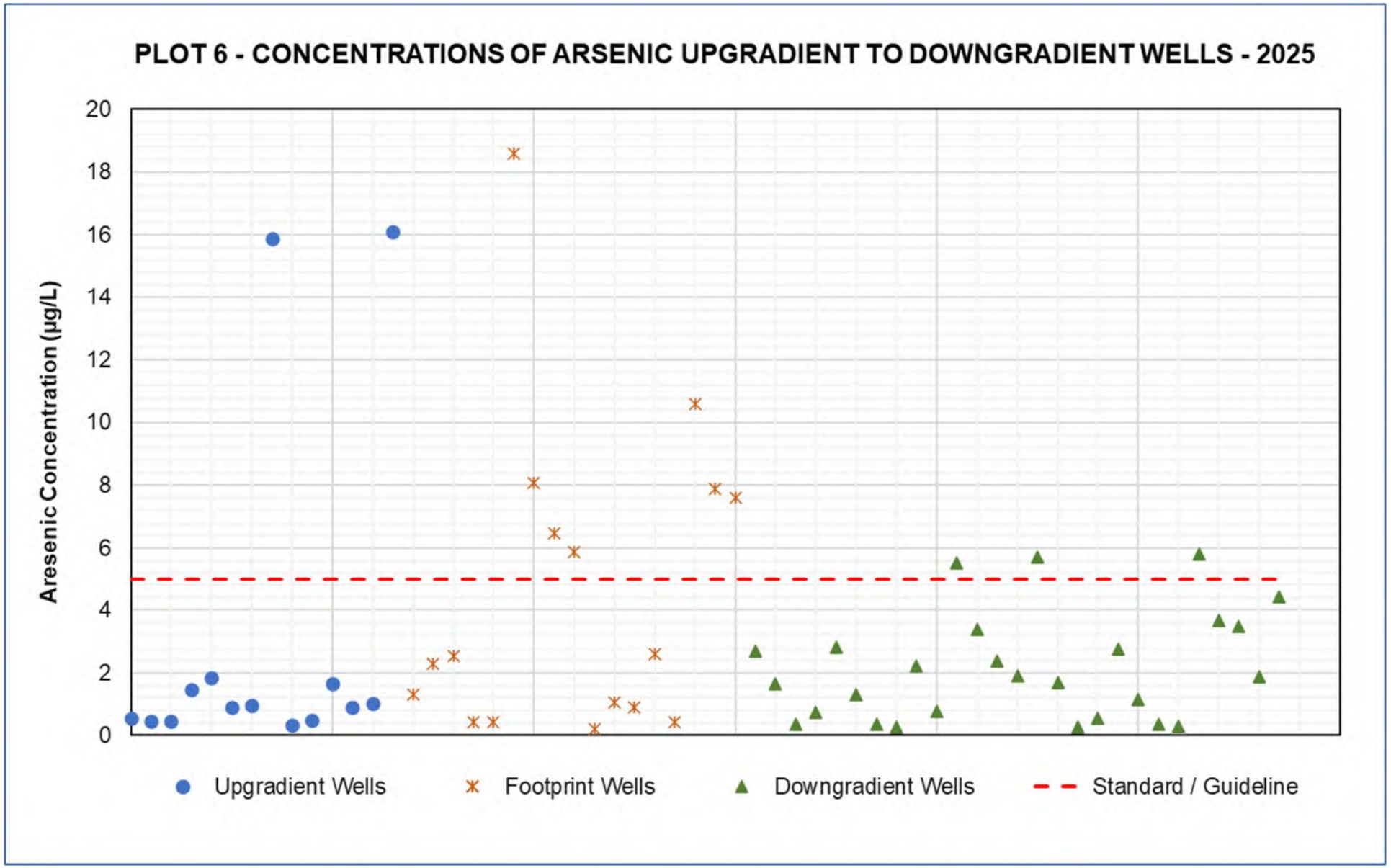
Note: Plotted symbols represent concentrations in Q1 through Q4 samples collected in 2025



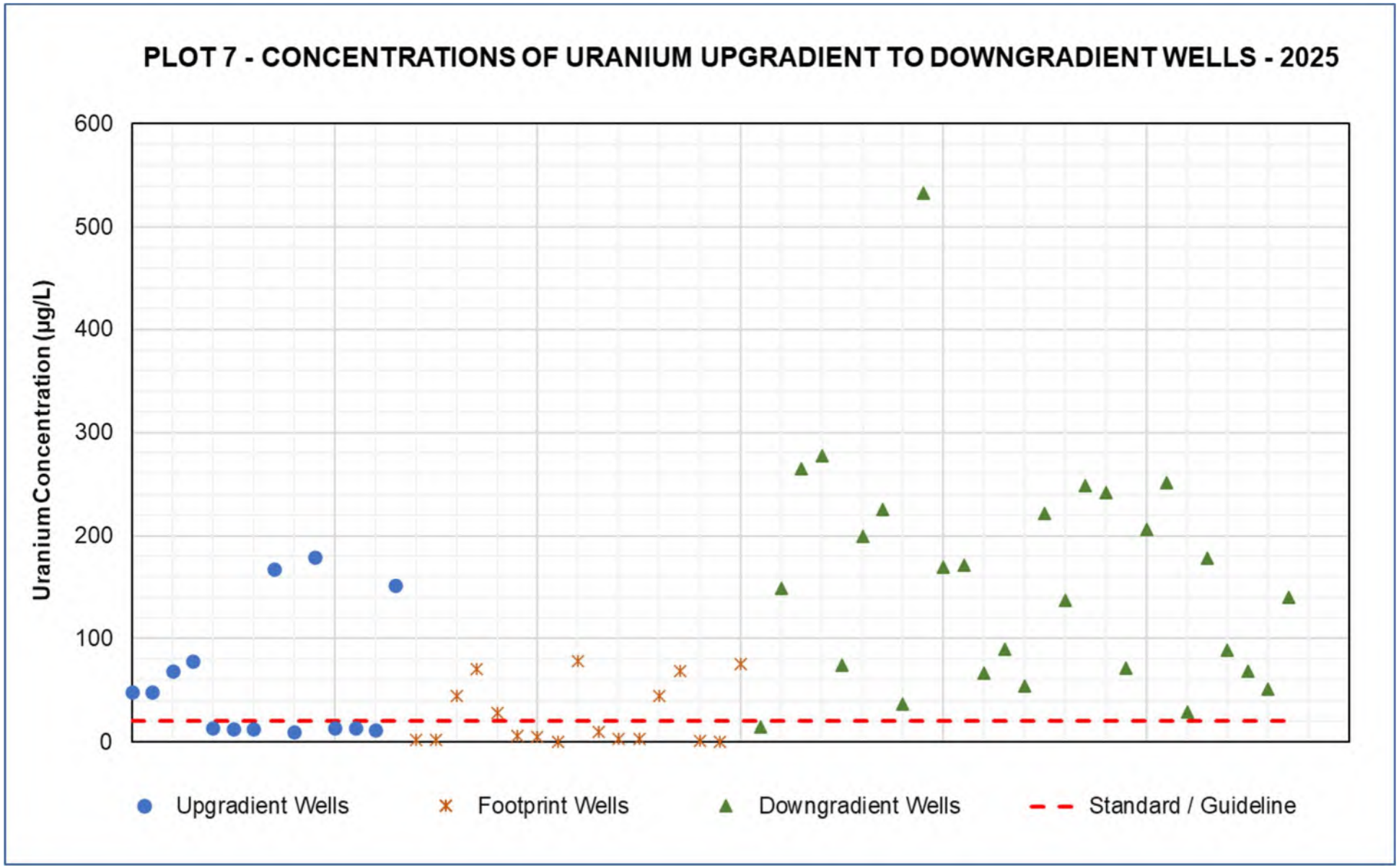
Note: Plotted symbols represent concentrations in Q1 through Q4 samples collected in 2025



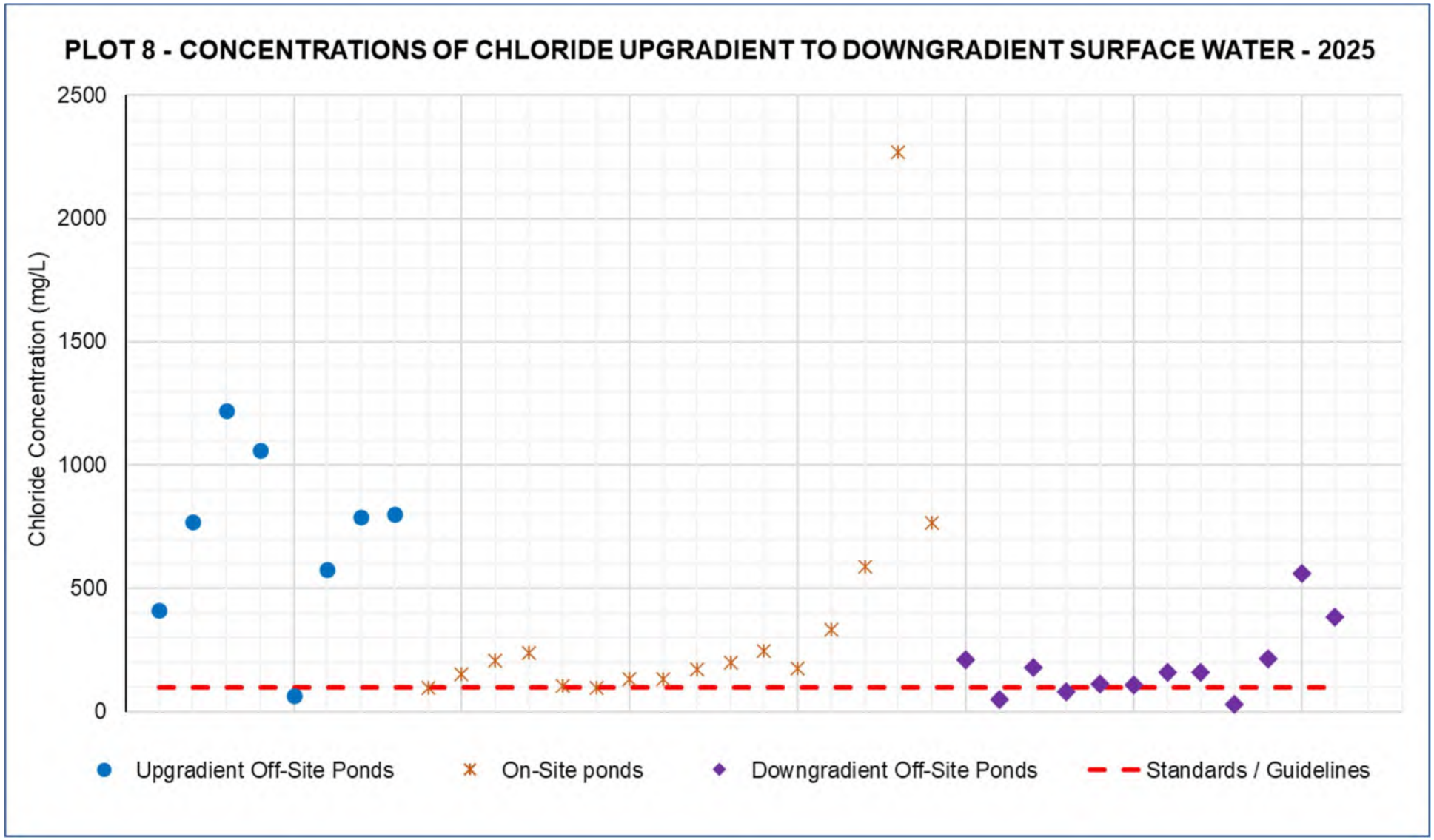
Note: Plotted symbols represent concentrations in Q1 through Q4 samples collected in 2025



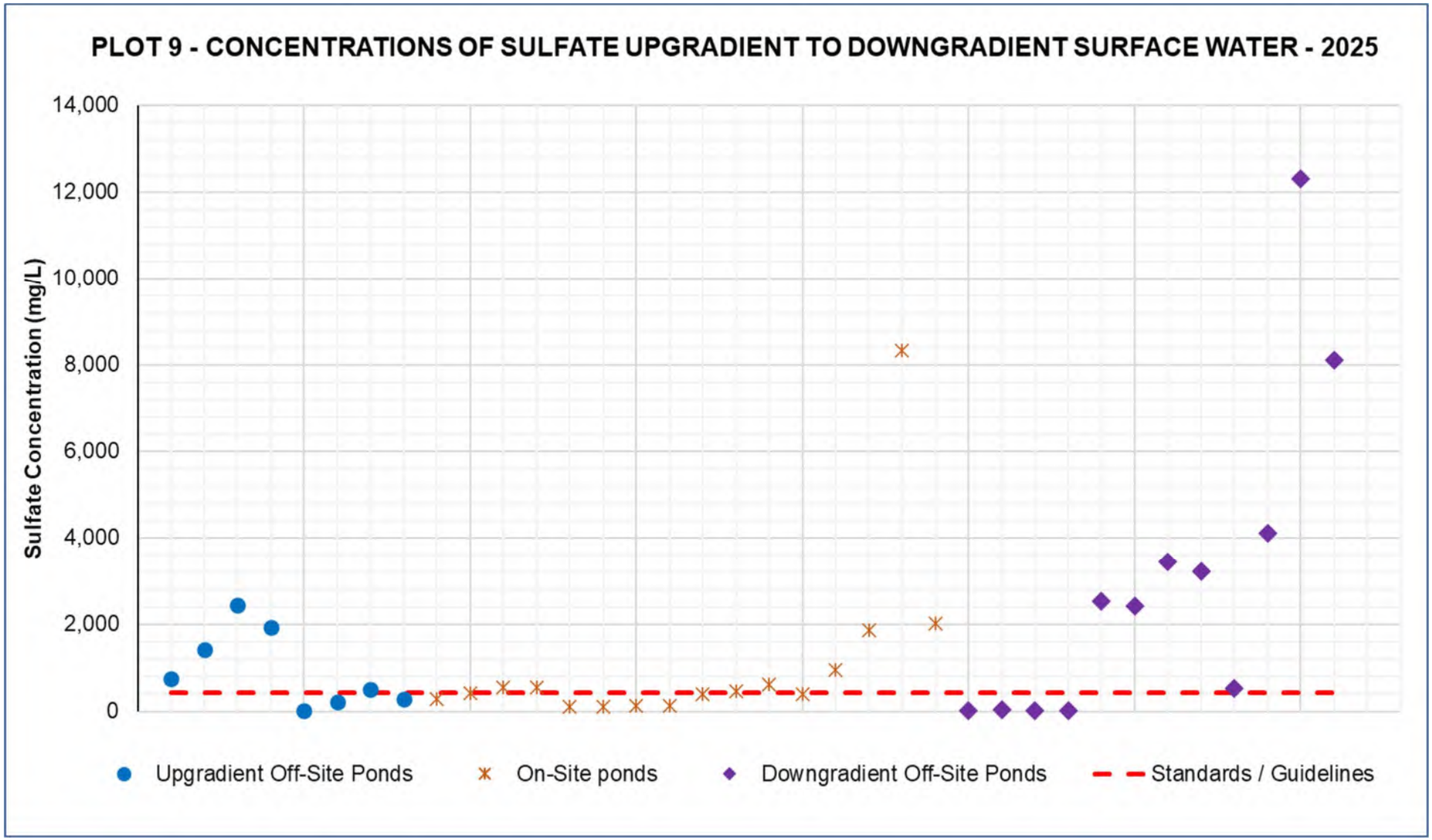
Note: Plotted symbols represent concentrations in Q1 through Q4 samples collected in 2025



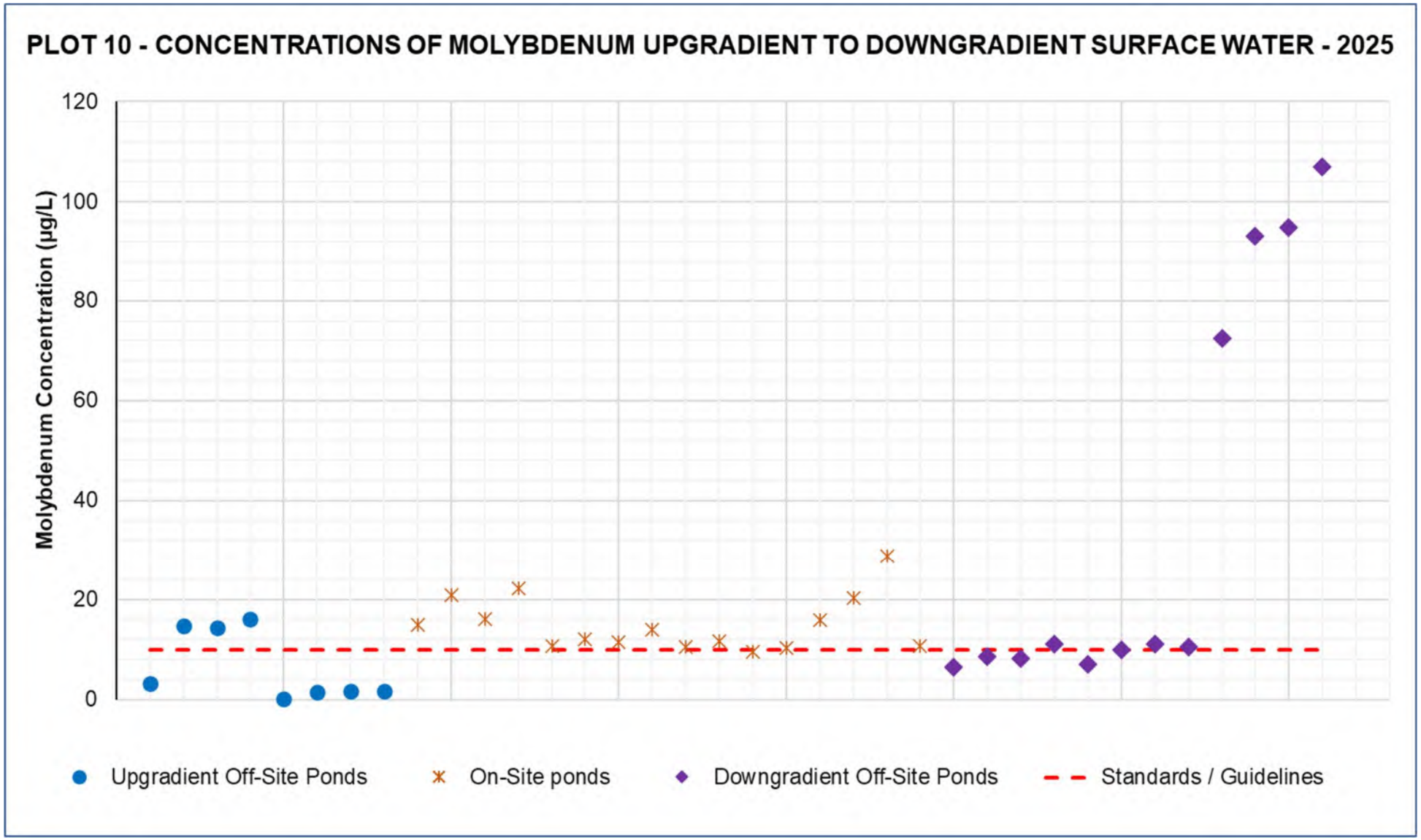
Note: Plotted symbols represent concentrations in Q1 through Q4 samples collected in 2025



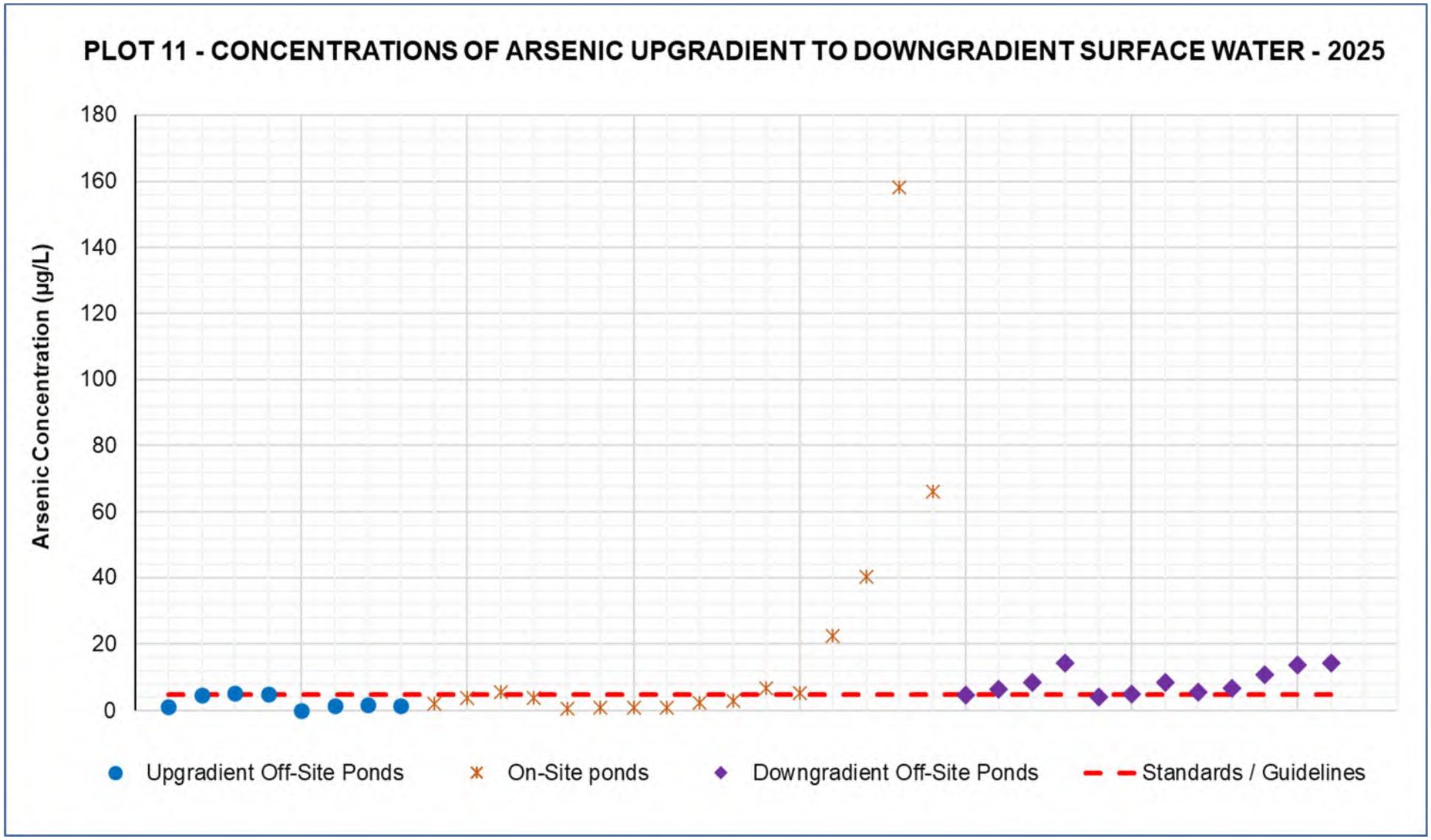
Note: Plotted symbols represent concentrations in Q1 through Q4 samples collected in 2025



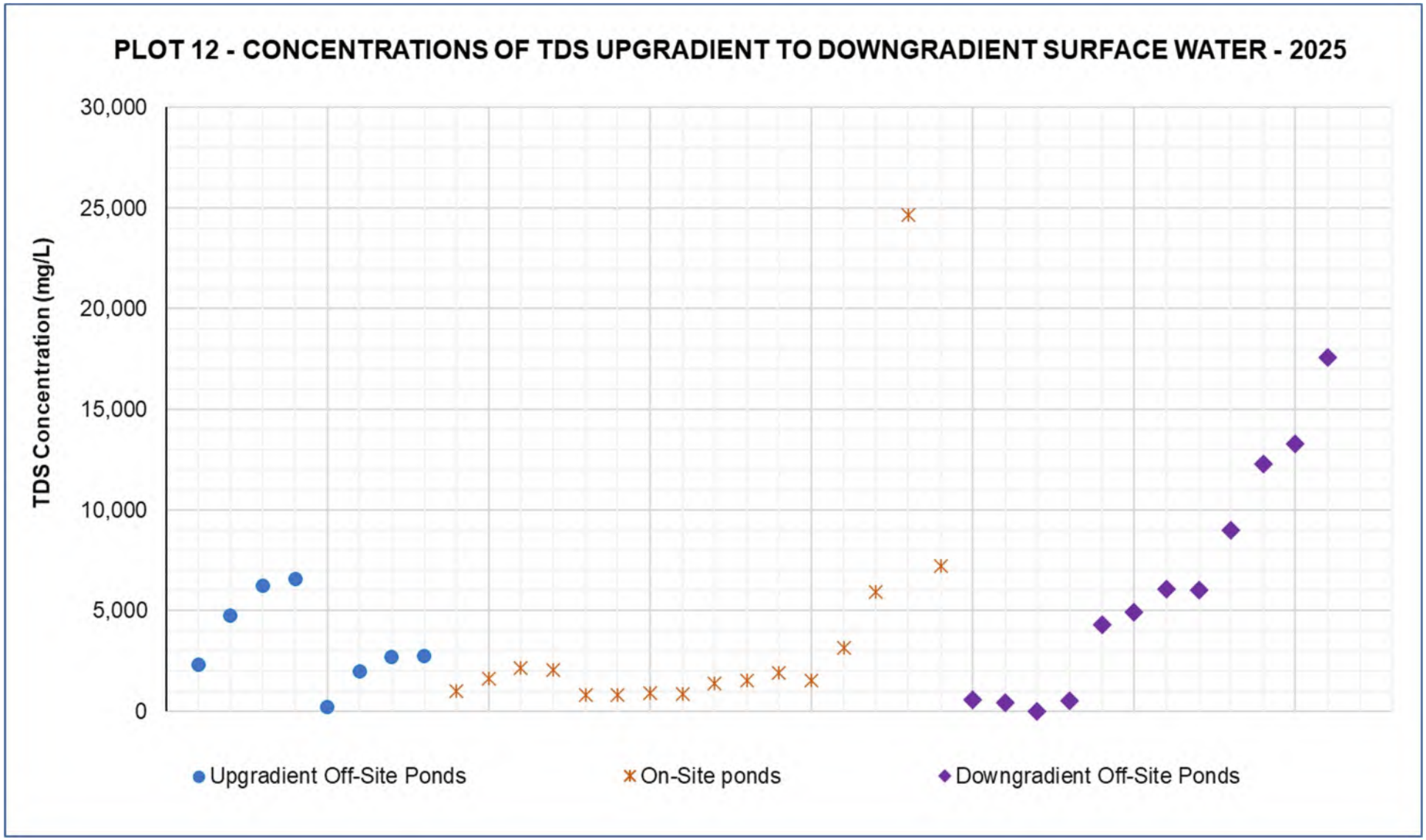
Note: Plotted symbols represent concentrations in Q1 through Q4 samples collected in 2025



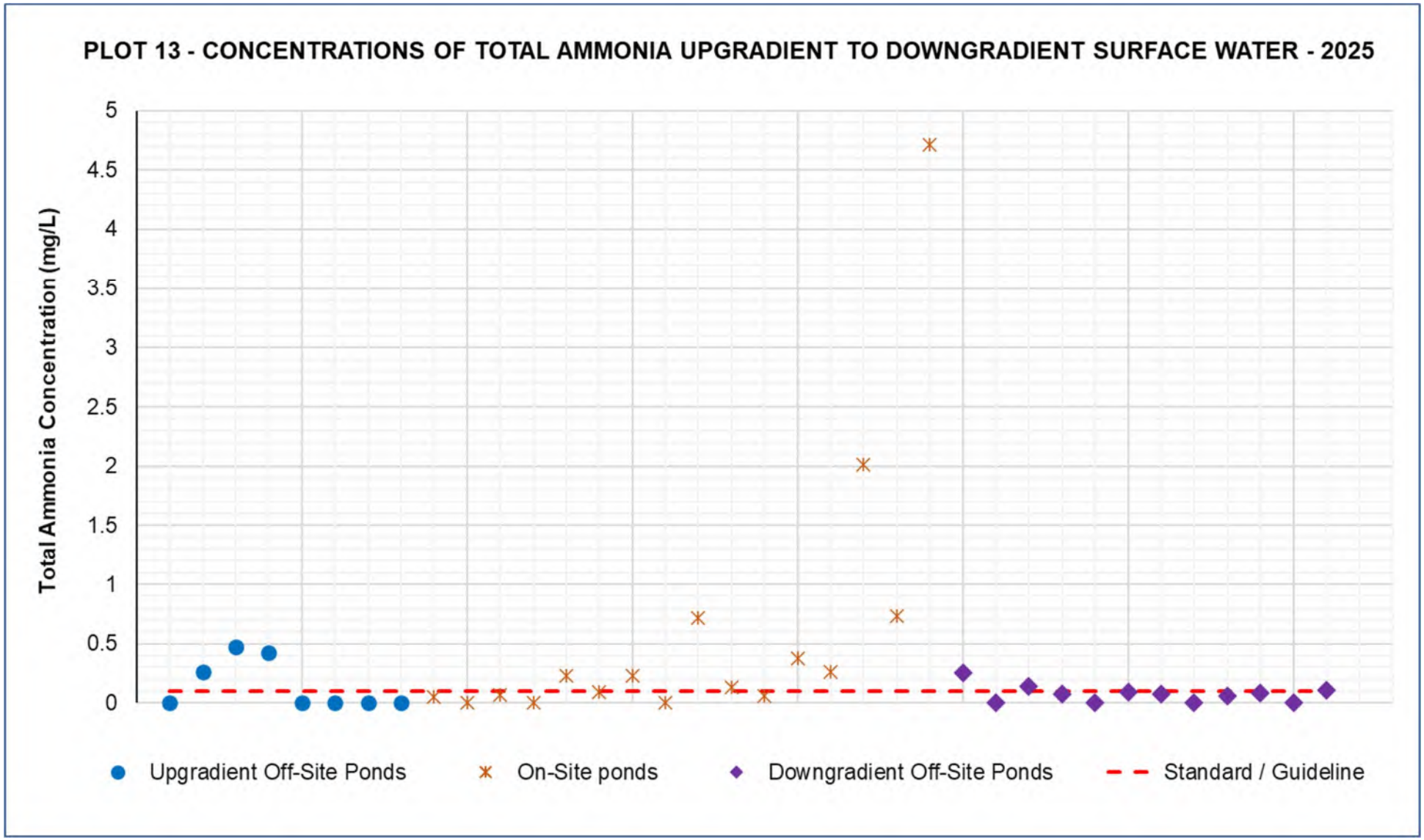
Note: Plotted symbols represent concentrations in Q1 through Q4 samples collected in 2025



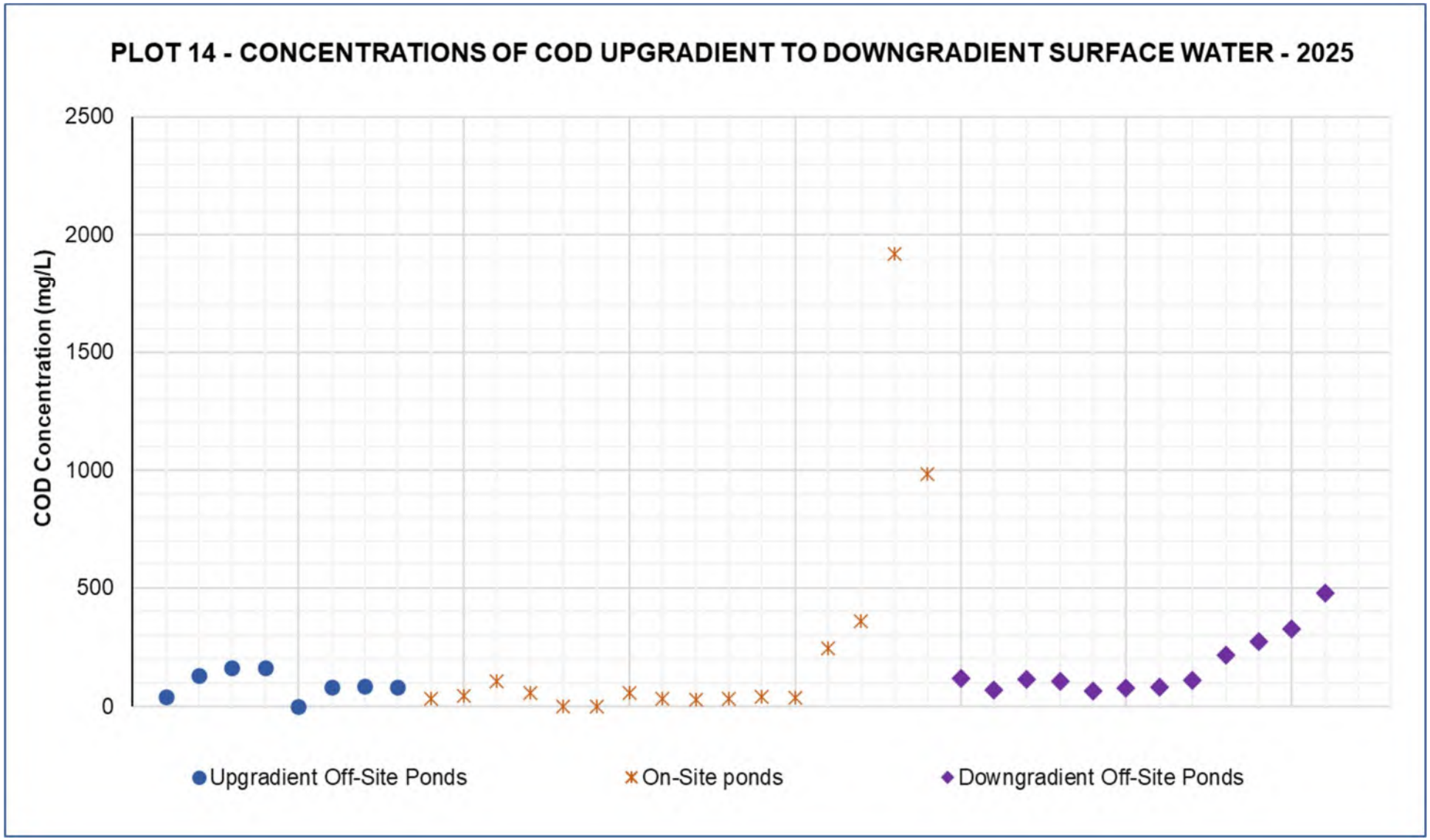
Note: Plotted symbols represent concentrations in Q1 through Q4 samples collected in 2025



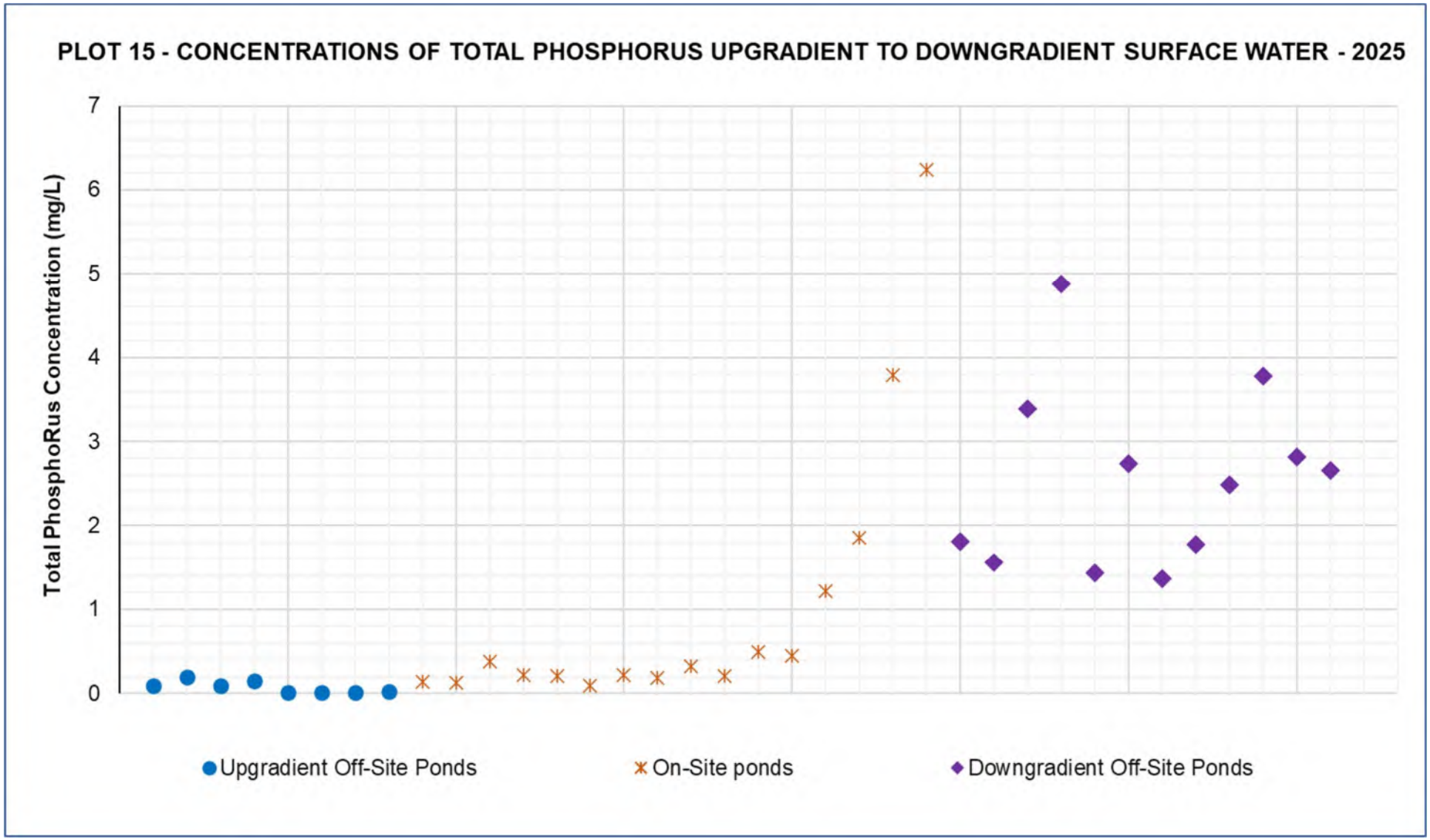
Note: Plotted symbols represent concentrations in Q1 through Q4 samples collected in 2025



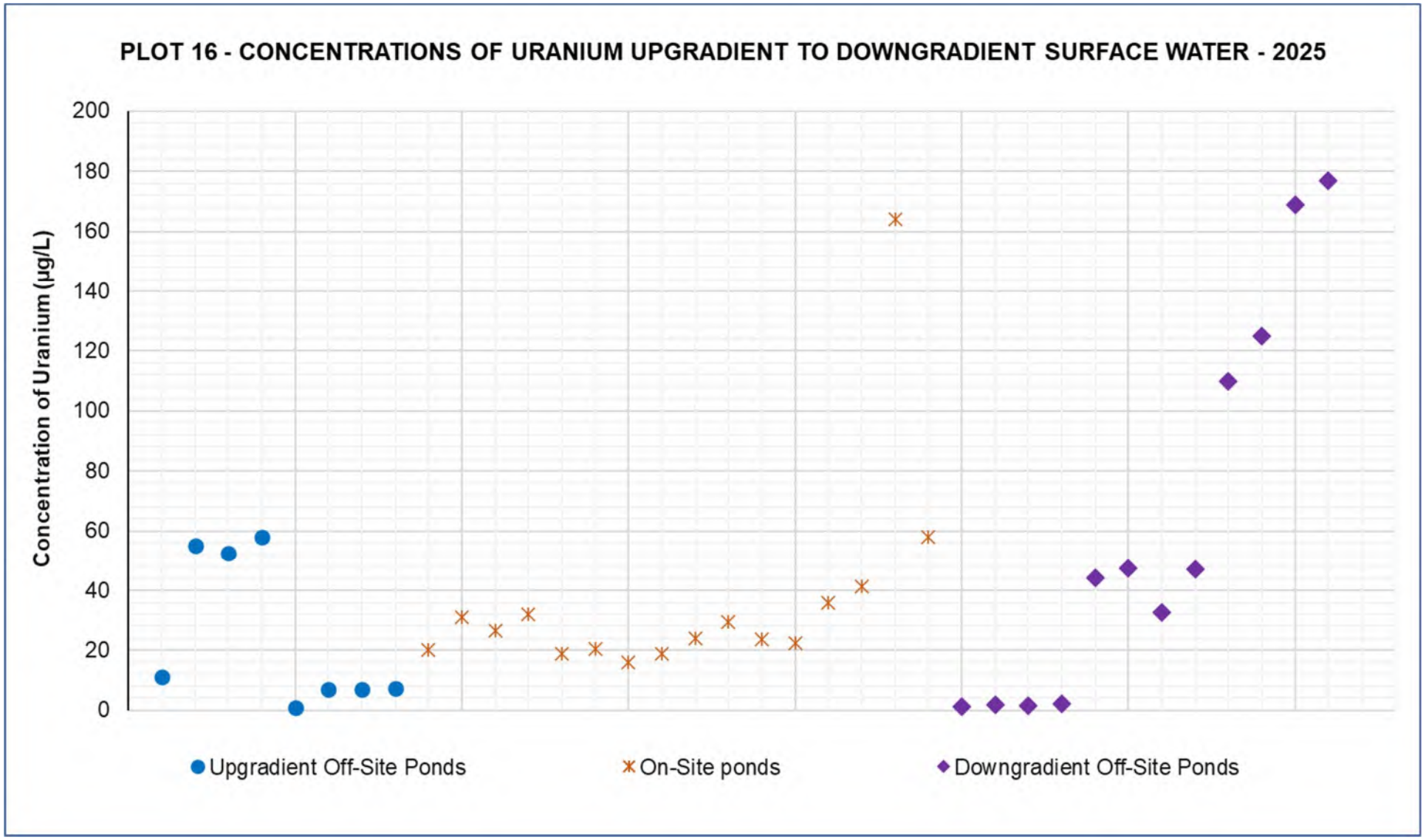
Note: Plotted symbols represent concentrations in Q1 through Q4 samples collected in 2025



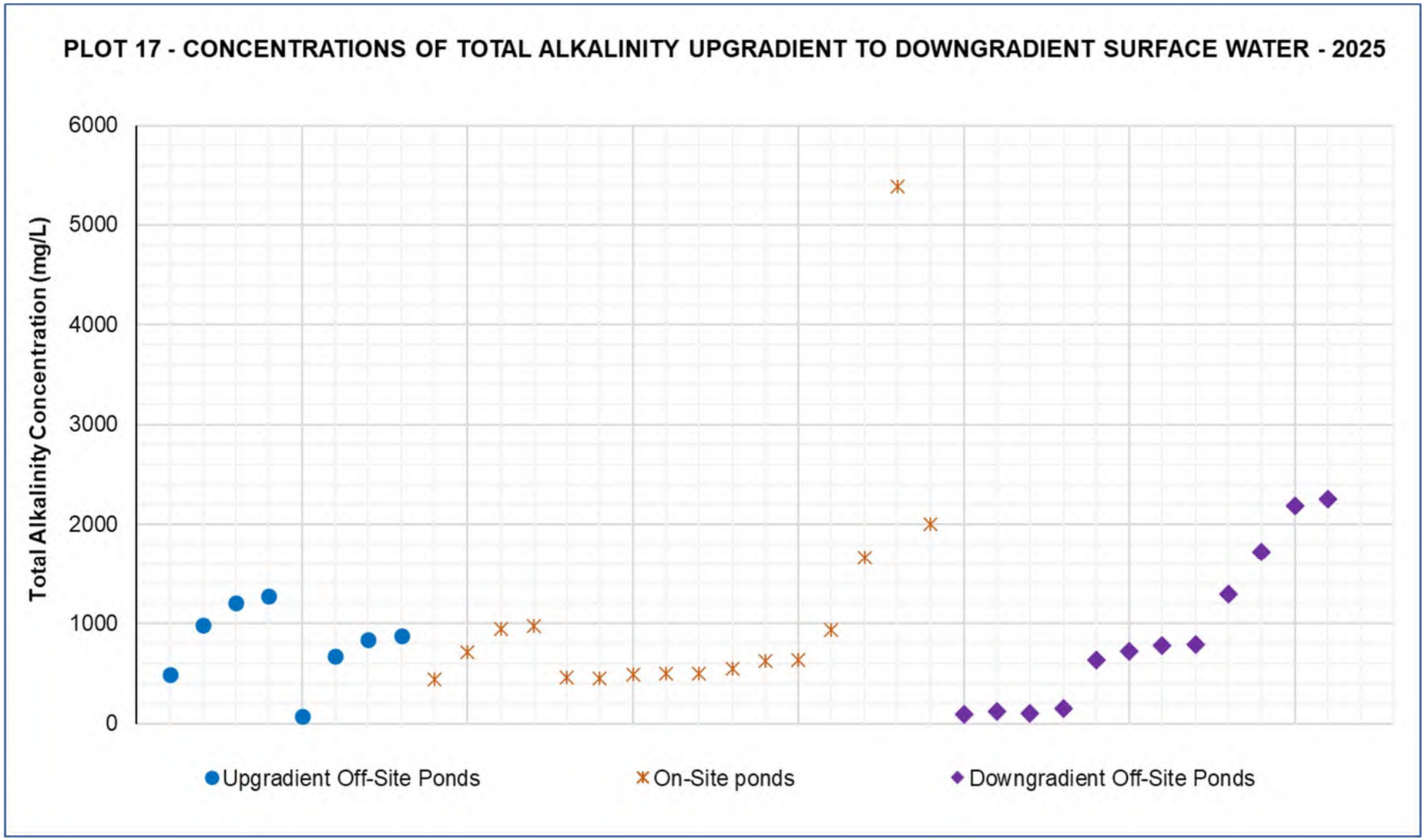
Note: Plotted symbols represent concentrations in Q1 through Q4 samples collected in 2025



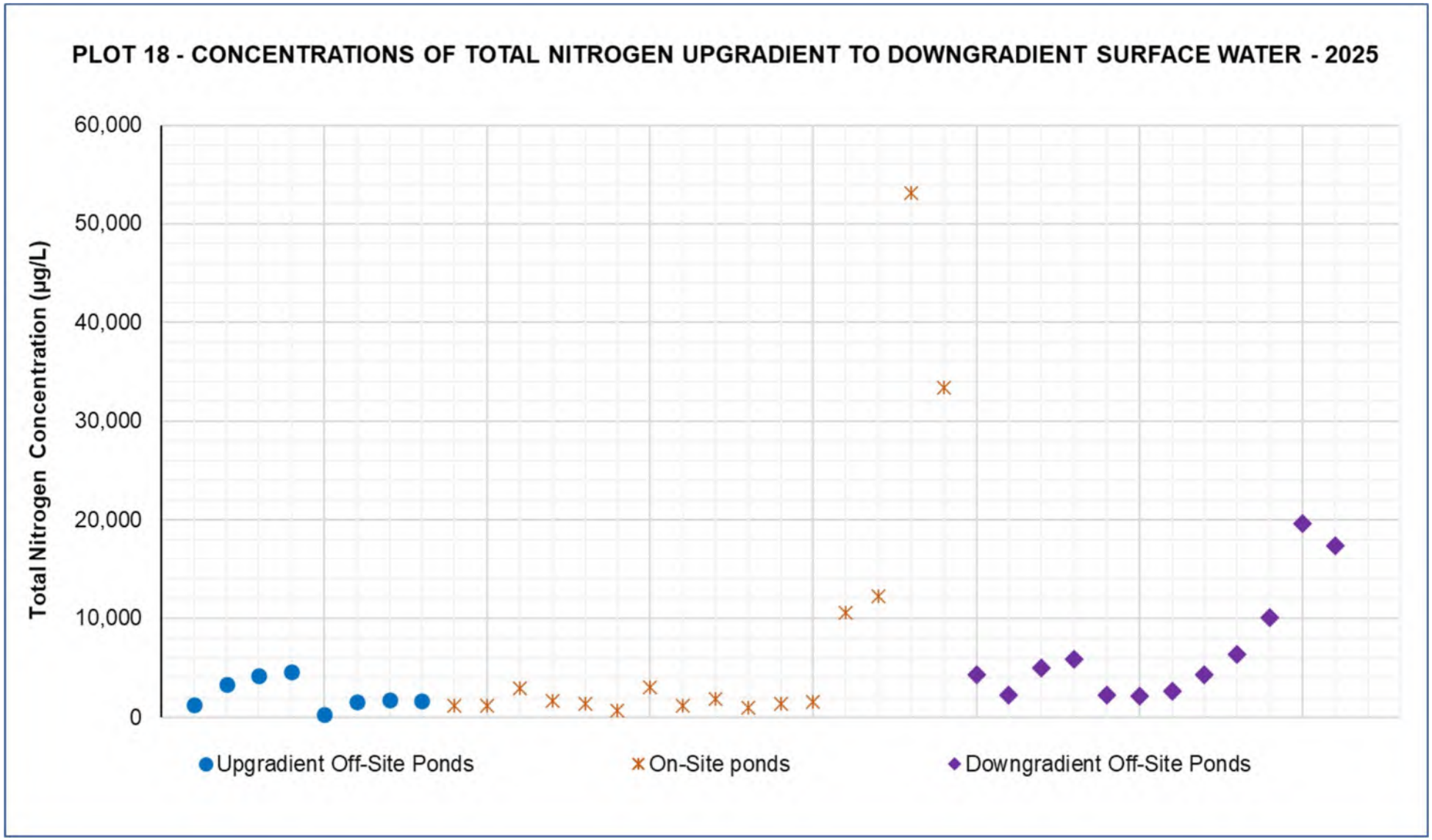
Note: Plotted symbols represent concentrations in Q1 through Q4 samples collected in 2025



Note: Plotted symbols represent concentrations in Q1 through Q4 samples collected in 2025



Note: Plotted symbols represent concentrations in Q1 through Q4 samples collected in 2025



Note: Plotted symbols represent concentrations in Q1 through Q4 samples collected in 2025

APPENDIX F

HISTORICAL DATA TABLES

Table H2: Summary of Groundwater Analytical Results - Total Metals - HISTORICAL to 2025

Well ID		09BH03						09BH04	09BH06-S					09BH06-D													BH11-18C
Sample ID		09BH03-20151105	09BH03-20170601	09BH03-180604	09BH03-190530	09BH03-200609	09BH03-220606	09BH04-20151105	09BH06-S-20131112	09BH06-S-20140602	09BH06-S-20141117	09BH06-S-20150610	09BH06-S-20151105	09BH06-D-20131112	09BH06-D-20140602	09BH06-D-20141117	09BH06-D-20150610	09BH06-D-20151105	09BH06-D-20170606	09BH06-D-180604	09BH06-D-190528	09BH06-D-200609	09BH06-D-210608	09BH06-D-220602	09BH06-D-230530	09BH06-D	09BH06-D	BH 11-18C-20120627
Sample Date		2015 11 05	2017 06 01	2018 06 04	2019 05 30	2020 06 09	2022 06 06	2015 11 05	2013 11 12	2014 06 02	2014 11 17	2015 06 10	2015 11 05	2013 11 12	2014 06 02	2014 11 17	2015 06 10	2015 11 05	2017 06 06	2018 06 04	2019 05 28	2020 06 09	2021 06 08	2022 06 02	2023 05 30	2024-05-28	2025 06 02	2012 06 27
Parameter	Unit	Analytical Results																									
Total Metals																											
Aluminum	µg/L	< 10	< 10	< 5.0	< 5.0	1.2	<2.0	< 10	< 10a	< 10a	< 10a	16	< 10	< 10a	< 10a	< 10a	< 10	< 10	< 10	< 5.0	< 5.0	< 1.0	< 1.0	1.4	3.7	1.0	<1.0	< 50a
Antimony	µg/L	< 0.50	< 0.50	< 0.20	< 0.20	0.064	<0.100	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.20	< 0.20	< 0.050	< 0.050	<0.050	<0.050	<0.050	<0.050	< 2
Arsenic	µg/L	< 1.0	< 1.0	0.63	< 0.50	0.5	0.373	5	2.2	2.2	2.5	3.3	2.5	2.7	2.6	2.6	2.6	2.5	2.9	3.06	2.8	2.85	3.73	3	3.14	3.00	2.7	19
Barium	µg/L	< 20	23	17.4	15.8	24.1	17.7	30	32	34	35	35	35	40	40	41	42	42	41	41.9	52.5	48.2	37.4	39.2	49.3	49.6	51.9	30
Beryllium	µg/L	< 5.0a	< 5.0a	< 0.10	< 0.10	< 0.010	<0.020	< 5.0a	< 5.0a	< 5.0a	< 5.0a	< 5.0a	< 5.0a	< 5.0a	< 5.0a	< 5.0a	< 5.0a	< 5.0a	< 5.0a	< 0.10	< 0.10	< 0.010	< 0.010	<0.010	<0.010	<0.010	<0.010	< 0.4
Bismuth	µg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.010	<0.010	-
Boron	µg/L	< 100	< 100	14.4	13	13.3	10.1	< 100	< 100	< 100	< 100	< 100	< 100	< 100	< 100	< 100	< 100	< 100	< 100	15	8.5	15	16.6	10.4	15.6	10.9	10.4	< 40
Cadmium	µg/L	< 0.050	< 0.050	0.045	0.039	0.0278	<0.0120	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	0.016	0.011	0.0048	0.0048	0.0041	<0.0080	<0.0100	<0.0040	< 0.1
Calcium	mg/L	87.9	132	156	129	184	116	147	56.5	56.6	56.5	56.9	57.8	60.5	58.9	60.4	64	62	60.1	62.2	69.2	70.1	57.4	44.9	59.3	72.7	80.5	207
Chromium	µg/L	11.1	11.5	21	18.8	34.1	10.9	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	0.55	0.91	< 0.10	< 0.10	0.1	<0.50	<0.50	<0.50	18
Cobalt	µg/L	< 0.50	< 0.50	0.17	0.12	0.145	0.093	1.12	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	0.13	0.22	0.19	0.143	0.136	0.182	0.182	0.214	11.1
Copper	µg/L	< 1.0a	1.7	8.16	1.24	1.96	2.06	< 1.0a	< 1.0a	< 1.0a	< 1.0a	< 1.0a	< 1.0a	< 1.0a	< 1.0a	< 1.0a	< 1.0a	< 1.0a	< 1.0a	1.63	0.63	< 0.10	0.11	0.63	0.25	<0.10	<0.10	40
Iron	µg/L	< 30	< 30	153	< 10	< 2.0	<4.0	10,100	131	152	195	485	220	371	351	359	385	374	395	526	431	459	405	378	533	519	532	4,440
Lead	µg/L	< 1.0	< 1.0	< 0.20	< 0.20	< 0.050	<0.100	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 0.20	< 0.20	< 0.050	< 0.050	<0.050	0.056	<0.050	<0.050	< 1
Lithium	µg/L	< 50	< 50	29.9	33.3	31	20.2	252	< 50	< 50	< 50	< 50	< 50	< 50	< 50	< 50	< 50	< 50	< 50	48.5	60.3	59.9	46.9	42.6	54.4	51.4	48.6	50
Magnesium	mg/L	107	149	179	147	197	147	183	51.4	52.5	51.7	50.7	49.7	53.6	53.2	53.6	54.7	51.9	51.9	56.1	63.5	60	46	47.3	64.4	62.7	74.1	992
Manganese	µg/L	< 10	< 10	< 0.20	3.51	0.089	<0.100	681	146	159	158	162	161	164	158	165	168	167	182	190	199	199	165	162	214	203	204	1,240
Mercury	µg/L	< 0.20	< 0.20	< 0.010	< 0.010	< 0.010	< 0.010	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	<0.010	<0.010	0.011	-
Molybdenum	µg/L	25.2	21.5	26.4	20.8	26.3	23.4	14.9	15	14.8	14.6	14.6	14.4	14.4	14.2	14.1	14.1	15.9	15.6	15.9	17	18	18.6	18.9	17.2	18.9	18.3	33
Nickel	µg/L	< 5.0	< 5.0	3.25	0.75	1.26	0.78	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	1.24	< 0.40	0.377	0.287	0.292	0.339	0.268	0.337	20
Phosphorus	µg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	26	27	-
Potassium	mg/L	5	6.4	6.95	5.53	7.9	6.08	14	4.3	4.2	4.2	4.2	4.3	4.3	4.2	4.1	4.3	4.2	4.3	4.52	4.69	4.73	4.08	3.79	4.64	5.09	5.34	41
Selenium	µg/L	15.3	45.8	44.8	26	52.4	46.1	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	1.07	< 0.50	< 0.10	< 0.10	<0.10	<0.10	<0.10	0.11	11
Silicon	µg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	11,900	11,000	-
Silver	µg/L	< 0.050	< 0.050	< 0.050	< 0.050	< 0.010	0.028	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.010	< 0.010	<0.010	<0.010	<0.010	<0.010	< 0.10
Sodium	mg/L	458	494	604	449	92.3	460	617	125	130	127	127	130	129	127	128	131	131	142	142	151	156	129	128	175	168	183	3,460
Strontium	µg/L	1,960	2,570	3,300	3,040	1,390	2560	3,080	1,290	1,270	1,280	1,270	1,320	1,390	1,330	1,360	1,430	1,420	1,440	1,480	1,740	1,650	1,150	1300	1800	1,730	2,010	10,900
Sulfur	µg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	138,000	159,000	-
Tellurium	µg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.050	<0.050	-
Thallium	µg/L	< 0.020	< 0.020	< 0.020	< 0.020	< 0.0040	<0.0080	< 0.020	< 0.20	< 0.20	< 0.20	< 0.010	< 0.010	< 0.20	< 0.20	< 0.20	< 0.010	< 0.010	< 0.010	< 0.020	< 0.020	0.0045	< 0.0040	<0.0040	0.0061	0.0059	0.0077	< 0.1
Thorium	µg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.010	<0.010	-
Tin	µg/L	< 30	< 30	< 0.20	< 0.20	< 0.050	<0.100	< 30	< 30	< 30	< 30	< 30	< 30	< 30	< 30	< 30	< 30	< 30	< 30	< 0.20	< 0.20	< 0.050	< 0.050	<0.050	<0.050	<0.050	<0.100	< 1
Titanium	µg/L	< 50	< 50	< 5.0	< 5.0	< 0.20	<0.40	< 50	< 50	< 50	< 50	< 50	< 50	< 50	< 50	< 50	< 50	< 50	< 50	< 5.0	< 5.0	< 0.20	< 0.20	<0.20	<0.20	<0.20	<0.20	< 100
Tungsten	µg/L	-	-	< 1.0	< 1.0	< 0.20	<0.40	-	-	-	-	-	-	-	-	-	-	-	-	< 1.0	< 1.0	< 0.20	< 0.20	<0.20	<0.20	<0.20	<0.20	-
Uranium	µg/L	130	124	168	161	207	140	48.5	8.48	8.2	7.83	7.26	7.72	9.62	9.13	8.87	9	9.32	6.31	8.62	11.6	10.2	6.03	5.81	10.3	11.9	14.6	28
Vanadium	µg/L	< 30	< 30	1.5	< 1.0	1.91	<2.00	< 30	< 30	< 30	< 30	< 30	< 30	< 30	< 30	< 30	< 30	< 30	< 30	< 1.0	< 1.0	< 0.20	< 0.20	<1.00	<1.00	<1.00	<1.00	6
Zinc	µg/L	< 5.0	< 5.0	< 4.0	< 4.0	1.1	<2.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 4.0	< 4.0	< 1.0	< 1.0	<1.0	<1.0	<1.0	<1.0	< 10
Zirconium	µg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.020	<0.020	-

Associated CARO files available upon

Associated Exova file(s): 622178, 653600, 712940, 714233, 714243, 756693, 756810, 757047, 811364, 811710, 812030, 812741, 812985, 846260, 878316, 879073, 909346, 909448, 909654.

Table H2: Summary of Groundwater Analytical Results - Total Metals - HISTORICAL to 2025

Well ID		BH11-31C		GL0-1										GL0-2										GL0-3				
Sample ID		BH11-31C-20111217	BH11-31C-20120625	GL0-1-20130625	GL0-1-20140603	GL0-1-20141124	GL0-1-20150608	GL0-1-20151103	GL0-1-20160524	GL0-1-20170524	GL0-1-180529	GL0-1-190523	GL0-1-200310	GL0-2-20130627	GL0-2-20140603	GL0-2-20141124	GL0-2-20150608	GL0-2-20151103	GL0-2-20160524	GL0-2-20170524	GL0-2-180529	GL0-2-190529	GL0-2-200310	GL0-3-20130627	GL0-3-20140603	GL0-3-20141124	GL0-3-20150608	GL0-3-20151103
Sample Date		2011 12 17	2012 06 25	2013 06 25	2014 06 03	2014 11 24	2015 06 08	2015 11 03	2016 05 24	2017 05 24	2018 05 29	2019 05 23	2020 03 10	2013 06 27	2014 06 03	2014 11 24	2015 06 08	2015 11 03	2016 05 24	2017 05 24	2018 05 29	2019 05 29	2020 03 10	2013 06 27	2014 06 03	2014 11 24	2015 06 08	2015 11 03
Parameter	Unit	Analytical Results																										
Total Metals																												
Aluminum	µg/L	< 500a	< 50a	38	< 10a	< 10a	< 10	< 10	< 10	< 10	< 5.0	< 5.0	< 5.0	< 10a	< 10a	< 10a	< 10	< 10	< 10	< 10	< 5.0	11.6	< 5.0	< 10a	< 10a	< 10a	< 10	< 10
Antimony	µg/L	100	< 2	1	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.20	< 0.20	< 0.20	0.53	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.20	< 0.20	< 0.20	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50
Arsenic	µg/L	300	3	4.8	3.2	3.3	3.2	3.3	3.3	3.1	2.87	3.23	3.44	1.6	3.4	2.9	4.6	3	3.9	3.8	3.45	1.6	3.78	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Barium	µg/L	< 100	20	92	66	60	58	54	50	47	37.1	39.9	39.9	93	61	58	56	61	53	54	46.5	64.3	51.5	33	27	27	26	24
Beryllium	µg/L	< 4a	< 0.4	< 5.0a	< 5.0a	< 5.0a	< 5.0a	< 5.0a	< 5.0a	< 5.0a	< 0.10	< 0.10	< 0.10	< 5.0a	< 5.0a	< 5.0a	< 5.0a	< 5.0a	< 5.0a	< 5.0a	< 0.10	< 0.10	< 0.10	< 5.0a	< 5.0a	< 5.0a	< 5.0a	< 5.0a
Bismuth	µg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Boron	µg/L	1,300	60	< 100	< 100	< 100	< 100	< 100	< 100	< 100	36.8	42.3	58.4	< 100	< 100	< 100	< 100	< 100	< 100	< 100	41.1	33.5	56.8	< 100	< 100	< 100	< 100	< 100
Cadmium	µg/L	8.1	< 0.10	0.059	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	0.038	0.118	0.019	< 0.050	< 0.050	0.067	< 0.050	< 0.050	< 0.050	< 0.050	< 0.010	0.037	0.021	0.096	0.185	0.087	0.149	0.132
Calcium	mg/L	8	265	71.2	63.9	66.8	64.6	66.2	63.6	64	58.1	54.9	58.4	83.9	75.3	80.2	78	83.8	76	79.9	76.2	86.4	73.1	117	114	123	120	118
Chromium	µg/L	250	12	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	0.77	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	0.87	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50
Cobalt	µg/L	< 2	0.9	1.82	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.10	< 0.10	< 0.10	1.14	0.54	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	0.26	0.43	0.24	1.79	2.32	3.55	1.67	1.71
Copper	µg/L	200	< 10a	< 1.0a	< 1.0a	< 1.0a	< 1.0a	< 1.0a	< 1.0a	< 1.0a	< 0.40a	0.58	0.12	< 1.0a	< 1.0a	< 1.0a	< 1.0a	< 1.0a	< 1.0a	< 1.0a	< 0.40a	0.95	< 0.10	< 1.0a	< 1.0a	44.9	3.4	2.2
Iron	µg/L	< 50	10,800	99	< 30	< 30	< 30	32	< 30	< 30	< 10	< 10	13	< 30	< 30	< 30	276	143	205	121	202	225	113	< 30	< 30	< 30	< 30	< 30
Lead	µg/L	< 10	< 1	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 0.20	< 0.20	< 0.20	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 0.20	< 0.20	< 0.20	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Lithium	µg/L	< 100	370	< 50	< 50	< 50	< 50	< 50	< 50	< 50	16.6	15.7	15.6	< 50	< 50	< 50	< 50	< 50	< 50	< 50	32	27	32	< 50	< 50	< 50	< 50	< 50
Magnesium	mg/L	264	505	60.6	62.3	65.3	63.5	62.6	64.2	62.7	65.5	59.8	62.9	71.9	67.4	71.9	68.9	70.7	67.5	68.6	68.7	80.2	66.4	114	112	119	115	111
Manganese	µg/L	< 10	480	763	135	160	108	160	100	29	19.5	13.9	25.7	432	169	146	228	234	183	126	156	177	179	29	< 10	13	< 10	< 10
Mercury	µg/L	-	-	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.010	< 0.010	< 0.010	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.010	< 0.010	< 0.010	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20
Molybdenum	µg/L	10	< 1	29.8	24.1	22.7	25.3	24.6	24.6	27.1	27.2	30.5	29.9	26.7	23	22.3	22.5	25.8	21.3	24.9	22.8	28.1	25.8	14.6	15.1	14.8	15.4	15.2
Nickel	µg/L	< 100	< 10	23.2	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	0.82	0.69	0.41	6.4	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	1.07	1.98	1.03	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0
Phosphorus	µg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Potassium	mg/L	400	46	11.4	10.2	10.7	10.5	10.4	10.4	10.6	10.3	9.85	9.93	10.6	10.1	10.8	10.8	10.3	10.6	11.2	10.4	9.99	10.4	11	10.2	11.3	10.7	10.2
Selenium	µg/L	< 60a	6	1.7	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 0.50	< 0.50	< 0.50	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 0.50	< 0.50	< 0.50	2.3	2.4	2.5	2.2	1.8
Silicon	µg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Silver	µg/L	< 1.0	< 0.10	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	0.07	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050
Sodium	mg/L	13,100	2,630	83.7	69.8	69.2	66.4	67.2	66.9	69.4	69.8	63.1	65.6	136	72.6	78.2	63.3	92.7	56.7	60.4	63.2	116	58.3	191	180	192	179	188
Strontium	µg/L	2,300	12,300	1,210	1,370	1,300	1,460	1,490	1,450	1,640	1,370	1,560	1,500	1,460	1,400	1,360	1,460	1,650	1,420	1,670	1,360	2,020	1,500	1,930	1,960	1,930	2,050	2,100
Sulfur	µg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Tellurium	µg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Thallium	µg/L	< 1	< 0.1	< 0.20	< 0.20	< 0.20	< 0.010	< 0.010	< 0.010	< 0.010	< 0.020	< 0.020	< 0.020	< 0.20	< 0.20	< 0.20	< 0.010	< 0.010	< 0.010	< 0.010	< 0.020	< 0.020	< 0.020	< 0.20	< 0.20	< 0.20	< 0.010	< 0.010
Thorium	µg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Tin	µg/L	130	< 1	< 30	< 30	< 30	< 30	< 30	< 30	< 30	< 0.20	< 0.20	< 0.20	< 30	< 30	< 30	< 30	< 30	< 30	< 30	< 0.20	< 0.20	< 0.20	< 30	< 30	< 30	< 30	< 30
Titanium	µg/L	< 100	< 100	< 50	< 50	< 50	< 50	< 50	< 50	< 50	< 5.0	< 5.0	< 5.0	< 50	< 50	< 50	< 50	< 50	< 50	< 50	< 5.0	< 5.0	< 5.0	< 50	< 50	< 50	< 50	< 50
Tungsten	µg/L	-	-	-	-	-	-	-	-	-	< 1.0	< 1.0	< 1.0	-	-	-	-	-	-	-	< 1.0	< 1.0	< 1.0	-	-	-	-	-
Uranium	µg/L	260	20	11.2	4.93	4.18	4.16	3.87	3.93	4.26	4.53	4.31	4.8	37.5	7.73	11	3.27	19.5	1.92	2.05	3.1	55.3	3.01	123	120	119	119	122
Vanadium	µg/L	80	6	< 30	< 30	< 30	< 30	< 30	< 30	< 30	< 1.0	< 1.0	< 1.0	< 30	< 30	< 30	< 30	< 30	< 30	< 30	< 1.0	< 1.0	< 1.0	< 30	< 30	< 30	< 30	< 30
Zinc	µg/L	< 100	10	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 4.0	< 4.0	< 4.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	6.6	5.1	< 4.0	< 4.0	< 5.0	< 5.0	26.9	18.7	12.3
Zirconium	µg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Associated CARO files available upon

Associated Exova file(s): 622178, 653600, 712940, 714233, 714243, 756693, 756810, 757047, 811364, 811710, 812030, 812741, 812985, 846260, 878316, 879073, 909346, 909448, 909654.

Table H2: Summary of Groundwater Analytical Results - Total Metals - HISTORICAL to 2025

Well ID		GL0-3					GL1-1									GL1-2									GL2-1			
Sample ID		GL0-3-20160524	GL0-3-20170524	GL0-3-180529	GL0-3-190529	GL0-3-200310	GL 1-1-20091109	GL1-1-20100810	GL1-1-20160531	GL1-1-20180927	GL1-1-180612	GL1-1-190917	GL1-1-200910	GL1-1-231023	GL1-1	GL 1-2-20091109	GL1-2-20100810	GL1-2-20160531	GL1-2-180612	GL1-2-20180927	GL1-2-190917	GL1-2-200910	GL1-2-231023	GL1-2	GL 2-1-20091109	GL2-1-20100810	GL2-1-20110629	GL2-1-20111217
Sample Date		2016 05 24	2017 05 24	2018 05 29	2019 05 29	2020 03 10	2009 11 09	2010 08 10	2016 05 31	2018 09 27	2018 06 12	2019 09 17	2020 09 10	2023 10 23	2025 05 23	2009 11 09	2010 08 10	2016 05 31	2018 06 12	2018 09 27	2019 09 17	2020 09 10	2023 10 23	2025 05 23	2009 11 09	2010 08 10	2011 06 29	2011 12 17
Parameter	Unit	Analytical Results																										
Total Metals																												
Aluminum	µg/L	< 10	< 10	< 5.0	< 5.0	< 5.0	78	< 50a	< 50	< 5.0	< 5.0	< 5.0	2.4	<1.0	4.2	66	< 50a	< 50	< 5.0	< 5.0	< 5.0	2.2	3.1	1.5	64	76	< 5	< 50a
Antimony	µg/L	< 0.50	< 0.50	< 0.20	< 0.20	< 0.20	< 2	< 2	< 1	< 0.20	< 0.20	< 0.20	0.095	0.066	0.126	< 2	< 2	< 1	< 0.20	< 0.20	< 0.20	0.087	0.068	0.06	< 2	< 2	< 0.2	< 2
Arsenic	µg/L	< 1.0	< 1.0	< 0.50	< 0.50	< 0.50	< 2	< 2	< 5	0.51	< 0.50	0.61	0.624	0.407	0.545	< 2	< 2	< 5	0.99	0.7	0.56	0.752	0.508	0.451	2	2	2.4	2
Barium	µg/L	23	24	21.7	30.4	28.3	40	40	50	41	42.6	45.7	43	43.2	41.6	40	40	< 50	64.4	47.1	47	49.8	43.6	42	120	100	118	110
Beryllium	µg/L	< 5.0a	< 5.0a	0.26	0.26	0.17	< 0.4	< 0.4	< 1	< 0.10	< 0.10	< 0.10	< 0.010	<0.010	<0.010	< 0.4	< 0.4	< 1	< 0.10	< 0.10	< 0.10	< 0.010	<0.010	<0.010	< 0.4	< 0.4	< 0.04	< 0.4
Bismuth	µg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.010	-	-	-	-	-	-	-	-	<0.010	-	-	-	-
Boron	µg/L	< 100	< 100	23.8	29.3	37.7	60	70	60	63.7	44.7	55.3	45.8	30.9	38.9	60	70	60	49.8	45.4	43.6	39.2	33.8	43.5	< 40	< 40	4	< 40
Cadmium	µg/L	0.216	< 0.050	0.028	0.059	0.046	< 0.1	< 0.10	< 0.1a	0.142	0.118	0.154	0.123	<0.0540	0.0708	< 0.1	< 0.1	< 0.1a	0.022	0.029	0.036	0.0328	<0.0260	0.0216	< 0.1	< 0.10	0.02	< 0.1
Calcium	mg/L	117	120	123	176	154	67.1	62	71.2	58.9	58.3	60	63.4	56.9	63.4	65.4	65	69.3	61.7	59.2	60.7	68.1	59.5	64.7	75.8	77	77.6	81.6
Chromium	µg/L	< 0.50	< 0.50	< 0.50	1.6	1.12	< 4	< 4	< 5	< 0.50	< 0.50	1.14	0.19	<0.50	<0.50	< 4	< 4	< 5	< 0.50	< 0.50	1.03	0.13	<0.50	0.63	< 4	< 4	1.1	5
Cobalt	µg/L	1.26	< 0.50	0.32	0.59	0.49	0.4	0.3	< 0.5	0.2	0.17	0.17	0.156	0.0899	0.126	0.3	0.4	< 0.5	< 0.10	0.1	< 0.10	0.143	0.111	0.084	0.5	0.3	1.39	< 0.2
Copper	µg/L	1.7	< 1.0a	1.79	3.11	2.43	< 10a	< 10a	< 2a	1.06	1.01	0.95	1.28	0.75	0.72	< 10a	< 10a	< 2a	1.83	0.95	0.88	1.24	0.75	0.8	< 10a	< 10a	< 1a	10
Iron	µg/L	< 30	< 30	< 10	< 10	64	< 100	< 100	< 100	< 10	< 10	< 10	3.4	<2.0	<2.0	< 100	< 100	< 100	< 10	< 10	< 10	< 2.0	6.4	<2.0	230	240	474	698
Lead	µg/L	< 1.0	< 1.0	< 0.20	< 0.20	< 0.20	< 1	< 1	< 1	< 0.20	< 0.20	< 0.20	0.078	<0.050	<0.050	< 1	< 1	< 1	< 0.20	< 0.20	< 0.20	< 0.050	<0.050	<0.050	< 1	< 1	< 0.1	< 1
Lithium	µg/L	< 50	< 50	41.1	52.3	50.1	40	40	49	38.9	41.8	43.7	39.7	39.8	40.2	50	40	49	38.1	38.5	42.7	40	41.2	55.5	10	10	12	10
Magnesium	mg/L	112	114	120	163	150	170	155	182	142	145	149	143	139	129	181	164	174	154	148	148	156	142	163	38.6	41	40.2	41
Manganese	µg/L	< 10	< 10	1.88	1.91	1.85	23	9	27	53	36.5	33.2	29.4	11.2	20.7	2	< 2	< 2	0.34	14.7	4.15	3.48	1.94	1.07	124	144	145	111
Mercury	µg/L	< 0.20	< 0.20	< 0.010	< 0.010	< 0.010	-	-	-	< 0.010	< 0.010	-	-	<0.010	<0.010	-	-	-	< 0.010	< 0.010	-	-	<0.010	<0.010	-	-	-	-
Molybdenum	µg/L	14.1	15.9	14.4	13.8	14.4	21	23	24	27.3	26.8	33.2	29.6	20.8	24.7	20	20	21	28	18.5	23	23.5	20.5	19	7	7	9.2	9
Nickel	µg/L	< 5.0	< 5.0	1.86	2.67	2.6	< 10	< 10	< 2	1.77	1.78	1.96	1.85	0.945	1.35	< 10	< 10	< 2	1.34	1.18	1.24	1.24	0.99	1.03	< 10	< 10	2	< 10
Phosphorus	µg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	<10	-	-	-	-	-	-	-	-	<10	-	-	-	-
Potassium	mg/L	10.2	10.4	10.4	12.4	11.9	10.2	10	-	9.78	9.94	9.61	9.46	10.3	11.8	10.2	10	-	10.8	10.6	9.95	10.8	11.5	12.1	3.6	3	3.2	3.2
Selenium	µg/L	2.2	1.3	1.14	10.8	6.33	< 6	< 6	< 5	1.02	1.71	< 0.50	0.41	2.51	3.13	< 6	< 6	< 5	0.78	1.59	0.75	0.26	1.79	5.13	< 6	< 6	< 0.6	< 6
Silicon	µg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	11,000	-	-	-	-	-	-	-	-	11,200	-	-	-	-
Silver	µg/L	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.10	< 0.1	< 0.5	< 0.050	< 0.050	< 0.050	< 0.010	<0.010	<0.010	< 0.10	< 0.1	< 0.5	< 0.050	< 0.050	< 0.050	< 0.010	<0.010	<0.010	< 0.10	< 0.1	< 0.01	< 0.10
Sodium	mg/L	179	180	187	239	230	147	140	174	154	155	164	153	143	165	144	132	161	169	149	147	157	139	149	75.2	74	75.7	73.8
Strontium	µg/L	1,930	2,160	1,910	2,980	2,800	3,120	3,010	3,410	2,830	2,890	3,160	3,120	2770	2,890	3,160	3,220	3,310	3,040	2,910	3,160	3,510	2860	2,900	2,470	2,710	3,410	3,100
Sulfur	µg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	96,800	-	-	-	-	-	-	-	-	89,800	-	-	-	-
Tellurium	µg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.050	-	-	-	-	-	-	-	-	<0.050	-	-	-	-
Thallium	µg/L	< 0.010	< 0.010	< 0.020	< 0.020	< 0.020	< 0.1	< 0.1	< 0.2	< 0.020	< 0.020	< 0.020	0.0073	0.0072	0.0057	< 0.1	< 0.1	< 0.2	< 0.020	< 0.020	< 0.020	< 0.0040	<0.0040	<0.0040	< 0.1	< 0.1	< 0.01	0.11
Thorium	µg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.010	-	-	-	-	-	-	-	-	<0.010	-	-	-	-
Tin	µg/L	< 30	< 30	0.4	0.57	< 0.20	< 1	< 1	-	< 0.20	< 0.20	< 0.20	< 0.050	<0.050	<0.100	< 1	< 1	-	< 0.20	< 0.20	< 0.20	< 0.050	<0.050	<0.100	< 1	< 1	< 0.1	< 1
Titanium	µg/L	< 50	< 50	< 5.0	< 5.0	< 5.0	< 10	< 100	< 50	< 5.0	< 5.0	< 5.0	0.2	<0.20	<0.20	< 10	< 100	< 50	< 5.0	< 5.0	< 5.0	0.26	<0.20	<0.20	< 10	< 100	< 10	< 10
Tungsten	µg/L	-	-	< 1.0	< 1.0	< 1.0	-	-	-	-	< 1.0	< 1.0	0.42	<0.20	0.35	-	-	-	< 1.0	-	< 1.0	< 0.20	<0.20	<0.20	-	-	-	-
Uranium	µg/L	111	124	130	198	178	36	48	56.3	48.9	49.6	55.1	54.6	47.6	48	36	46	49	61.6	49.8	58.1	59.8	49.8	48.5	6	8	6.3	7
Vanadium	µg/L	< 30	< 30	< 1.0	< 1.0	< 1.0	1	< 1	< 10	< 1.0	< 1.0	< 1.0	0.21	<1.00	<1.00	2	2	< 10	4.2	3.2	2.5	2.34	2.61	2.33	< 1	< 1	0.5	2
Zinc	µg/L	10.7	7.1	10.8	26.2	9.3	< 10	< 10	-	< 4.0	< 4.0	< 4.0	2.9	<1.0	<1.0	< 10	< 10	< 40	< 4.0	< 4.0	< 4.0	< 1.0	<1.0	<1.0	< 10	< 10	< 1	< 10
Zirconium	µg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	0.079	-	-	-	-	-	-	-	-	0.049	-	-	-	-

Associated CARO files available upon

Associated Exova file(s): 622178, 653600, 712940, 714233, 714243, 756693, 756810, 757047, 811364, 811710, 812030, 812741, 812985, 846260, 878316, 879073, 909346, 909448, 909654.

Table H2: Summary of Groundwater Analytical Results - Total Metals - HISTORICAL to 2025

Well ID		GL2-1																						GL2-2			
Sample ID		GL 2-1-20120627	GL2-1-20121204	GL2-1-20130626	GL2-1-20140603	GL2-1-20141124	GL2-1-20150608	GL2-1-20151103	GL2-1-20160524	GL2-1-20170524	GL2-1-180528	GL2-1-190523	GL2-1-200609	GL2-1-200820	GL2-1-201019	GL2-1-210512	GL2-1-211005	GL2-1-220530	GL2-1-220927	GL2-1-231024	GL2-1	GL2-1	GL2-1	GL2-1	GL 2-2-20091109	GL2-2-20100810	GL2-2-200826	GL2-2-201020
Sample Date		2012 06 27	2012 12 04	2013 06 26	2014 06 03	2014 11 24	2015 06 08	2015 11 03	2016 05 24	2017 05 24	2018 05 28	2019 05 23	2020 06 09	2020 08 20	2020 10 19	2021 05 12	2021 10 05	2022 05 30	2022 09 27	2023 10 24	2024-05-14	2024-09-13	2025 05 22	2025 08 29	2009 11 09	2010 08 10	2020 08 26	2020 10 20
Parameter	Unit	Analytical Results																									
Total Metals																											
Aluminum	µg/L	< 50a	< 50a	< 10a	< 10a	< 10a	< 10	< 10	< 10	< 10	< 5.0	< 5.0	< 1.0	1.6	< 1.0	< 1.0	7.5	1.5	<1.0	1.3	<1.0	<1.0	28	<1.0	417	< 50a	16.9	< 1.0
Antimony	µg/L	< 2	< 2.0	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.20	< 0.20	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.20	<0.050	< 2	< 2	< 0.050	< 0.050
Arsenic	µg/L	< 2	< 2.0	1.8	1.4	1.6	1	< 1.0	< 1.0	1.3	1.34	0.59	2.46	2.82	3.25	2.37	2.12	2.07	1.92	2.34	0.978	3.20	1.31	1.06	< 2	< 2	1.17	1.21
Barium	µg/L	100	110	113	119	120	127	119	117	112	103	103	92.7	88.1	76.5	72.9	73.5	60.6	70	60.7	76.6	51.3	69	53.1	70	60	90.3	109
Beryllium	µg/L	< 0.4	< 0.40	< 5.0a	< 5.0a	< 5.0a	< 5.0a	< 5.0a	< 5.0a	< 5.0a	< 0.10	< 0.10	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.10	<0.010	< 0.4	< 0.4	< 0.010	< 0.010
Bismuth	µg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.010	<0.010	<0.10	<0.010	-	-	-	-
Boron	µg/L	< 40	< 40	< 100	< 100	< 100	< 100	< 100	< 100	< 100	9.7	15.9	12.3	11.7	6.3	11	40.7	7.7	9.6	11.7	10.4	12.2	<50.0	11.3	< 40	< 40	9.4	6.6
Cadmium	µg/L	< 0.1	< 0.10	< 0.050	0.059	< 0.050	< 0.050	0.052	< 0.050	< 0.050	0.039	0.071	0.0075	0.0068	< 0.0020	0.005	0.0095	<0.0050	<0.0050	<0.0200	<0.0100	<0.0040	0.022	<0.0120	< 0.1	< 0.10	0.0636	0.232
Calcium	mg/L	81	74.8	91	89.4	92.4	97	95	98.9	103	83.5	109	124	106	125	119	134	115	136	143	131	141	135	153	70.2	70	81.7	108
Chromium	µg/L	< 4	< 4.0	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.10	0.15	< 0.10	0.17	0.15	0.14	0.14	<0.50	<0.50	<0.50	<0.50	<0.50	< 4	< 4	0.18	0.27
Cobalt	µg/L	< 0.2	10.7	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.10	< 0.10	0.0524	0.0583	0.0526	0.0343	0.0426	0.0241	0.0275	0.0367	0.0247	0.0266	<0.10	0.0437	0.6	< 0.2		
Copper	µg/L	< 10a	< 10a	< 1.0a	< 1.0a	< 1.0a	< 1.0a	< 1.0a	< 1.0a	< 1.0a	< 0.40a	< 0.40a	0.23	< 0.10	< 0.10	< 0.10	0.56	<0.10	0.64	5.17	<0.10	<0.10	<0.40	<0.10	< 10a	< 10a	0.38	0.27
Iron	µg/L	260	503	613	381	629	226	330	85	651	796	29	1,220	1,210	1,490	954	1,130	954	1020	1290	52.8	1,540	196	1,270	380	< 100	42.9	23.7
Lead	µg/L	< 1	< 1	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 0.20	< 0.20	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	<0.050	<0.050	0.11	<0.050	<0.050	<0.20	<0.050	< 1	< 1	< 0.050	< 0.050
Lithium	µg/L	10	< 10	< 50	< 50	< 50	< 50	< 50	< 50	< 50	11.5	15.6	14.1	12.8	11.2	13.6	13.8	14.8	14.8	14.1	13.5	15.5	13.6	16.5	10	10	9.73	10.2
Magnesium	mg/L	42	39.2	46.3	47.2	48.2	49.1	45.4	48.2	50.6	60.3	56.6	60	50.8	48.8	53	60.3	64	64.4	72.9	73	91	64.2	74.3	44.7	43	48.8	47.2
Manganese	µg/L	< 10	160	117	91	157	54	186	17	158	151	231	157	129	129	126	126	112	119	200	62.9	185	161	204	68	20	128	98.6
Mercury	µg/L	-	-	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	<0.010	<0.010	<0.010	<0.010	<0.010	-	-	< 0.010	< 0.010
Molybdenum	µg/L	5	7.64	9.6	9.8	8.7	9.5	8.8	8.7	11.4	11.1	12.9	14.3	13.8	14.9	14.1	15.4	15.3	15.9	18.4	10.8	18.6	14.4	20.8	5	5	9.21	10.4
Nickel	µg/L	< 10	< 10	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 0.40	< 0.40	0.127	0.077	0.087	0.093	0.084	0.066	0.073	2.88	0.089	0.054	<0.40	0.072	< 10	< 10	0.396	0.268
Phosphorus	µg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<10	10	<50	<10	-	-	-	-
Potassium	mg/L	2	3.3	3.6	3.6	3.7	3.7	3.7	3.7	3.7	4.12	4.2	4.45	3.92	4.18	4.24	4.4	4.22	4.49	4.94	4.56	4.98	5.11	5.39	3.8	3	3.59	3.96
Selenium	µg/L	< 6	< 6.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 0.50	< 0.50	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.50	<0.10	< 6	< 6	< 0.10	< 0.10
Silicon	µg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	9,410	9,430	9,300	9,460	-	-	-	-
Silver	µg/L	< 0.10	< 0.10	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	0.011	<0.010	<0.010	<0.010	<0.010	<0.050	<0.010	< 0.10	< 0.1	< 0.010	< 0.010
Sodium	mg/L	76	74.1	82.8	85	82.4	85.8	83	90.8	95.5	116	106	122	98.7	101	117	127	143	146	179	146	205	150	210	72.7	67	74.7	74.5
Strontium	µg/L	2,900	2,950	2,730	2,870	3,040	3,170	3,070	3,240	3,480	3,470	4,100	29	39	3,840	3,840	3,620	3,830	4,180	4220	4,090	4,670	4,330	4,620	2,430	2,480	3,280	4,010
Sulfur	µg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	197,000	278,000	219,000	277,000	-	-	-	-
Tellurium	µg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.050	<0.050	<0.50	<0.050	-	-	-	-
Thallium	µg/L	< 0.1	< 0.10	< 0.20	< 0.20	< 0.20	< 0.010	< 0.010	< 0.010	< 0.010	< 0.020	< 0.020	< 0.0040	< 0.0040	< 0.0040	< 0.0040	< 0.0040	<0.0040	<0.0040	<0.0040	<0.0040	<0.0040	<0.020	<0.0040	< 0.1	< 0.1	< 0.0040	< 0.0040
Thorium	µg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.010	0.038	<0.10	<0.010	-	-	-	-
Tin	µg/L	< 1	< 1.0	< 30	< 30	< 30	< 30	< 30	< 30	< 30	< 0.20	< 0.20	< 0.050	< 0.050	< 0.050	0.052	< 0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.20	<0.100	< 1	< 1	0.062	< 0.050
Titanium	µg/L	< 100	< 10	< 50	< 50	< 50	< 50	< 50	< 50	< 50	< 5.0	< 5.0	< 0.20	< 0.20	< 0.20	< 0.20	0.63	<0.20	<0.20	<0.20	<0.20	<0.20	<5.0	<0.20	< 10	< 100	1.15	< 0.20
Tungsten	µg/L	-	-	-	-	-	-	-	-	-	< 1.0	< 1.0	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<1.0	<0.20	-	-	< 0.20	< 0.20
Uranium	µg/L	7	8.8	6.78	6.15	6.28	6.16	6.09	5.48	5.58	5.11	5.3	5.07	4.13	4.03	4.14	3.82	3.33	3.61	3.23	2.10	2.61	2.16	2.68	< 4	8	4.38	4.14
Vanadium	µg/L	< 1	1.02	< 30	< 30	< 30	< 30	< 30	< 30	< 30	< 1.0	< 1.0	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	<1.00	<1.00	<1.00	<1.00	<1.00	<5.0	<1.00	1	< 1	0.61	< 0.20
Zinc	µg/L	< 10	< 10	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 4.0	< 4.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	<1.0	<1.0	2.8	<1.0	<1.0	<4.0	<1.0	< 10	< 10	< 1.0	1.8
Zirconium	µg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.020	<0.020	<0.10	<0.020	-	-	-	-

Associated CARO files available upon

Associated Exova file(s): 622178, 653600, 712940, 714233, 714243, 756693, 756810, 757047, 811364, 811710, 812030, 812741, 812985, 846260, 878316, 879073, 909346, 909448, 909654.

Table H2: Summary of Groundwater Analytical Results - Total Metals - HISTORICAL to 2025

Well ID		GL2-2									GL3-2				GL3-3					GL3-5					GL4-1			
Sample ID		GL2-2-210513	GL2-2-211005	GL2-2-220530	GL2-2-220927	GL2-2-231025	GL2-2	GL2-2	GL2-2	GL2-2	GL3-2-20080529	GL3-2-20081104	GL3-2-20091116	GL3-2-20100810	GL3-3-19990505	GL3-3-19990928	GL3-3-19991202	GL3-3-20080529	GL3-3-20081104	GL3-5-20130627	GL3-5 (2012)-20140609	GL3-5 (2012)-20141125	GL3-5 (2012)-20150609	GL3-5 (2012)-20151109	GL 4-1-20091110	GL4-1-20100810	GL4-1-20110629	GL4-1-20120625
Sample Date		2021 05 13	2021 10 05	2022 05 30	2022 09 27	2023 10 25	2024-05-14	2024-09-13	2025 05 21	2025 09 09	2008 05 29	2008 11 04	2009 11 16	2010 08 10	1999 05 05	1999 09 28	1999 12 02	2008 05 29	2008 11 04	2013 06 27	2014 06 09	2014 11 25	2015 06 09	2015 11 09	2009 11 10	2010 08 10	2011 06 29	2012 06 25
Parameter	**Unit**	**Analytical Results**																										
Total Metals																												
Aluminum	µg/L	< 1.0	< 1.0	<1.0	<1.0	2.5	2.8	1.2	<1.0	1	370	177	74	88	67	73	44	< 50a	25	< 10a	< 10a	< 10a	11	< 10	< 50a	< 50a	< 5	< 50a
Antimony	µg/L	0.055	< 0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	< 2	< 0.2	< 2	< 2	< 5	< 5	< 5	< 2	< 0.2	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 2	< 2	< 0.2	< 2
Arsenic	µg/L	1.15	1.36	1.01	1.4	1.58	1.56	1.06	2.28	0.898	6	5.1	6	4	< 10	< 10	< 10	< 2	1.7	< 1.0	< 1.0	1.7	2.4	1.3	4	< 2	5.9	< 2
Barium	µg/L	108	104	97.9	96.8	90.3	54.9	71.2	45.4	66.3	50	42	40	40	241	242	244	20	24	485	441	490	470	481	10	20	16	10
Beryllium	µg/L	< 0.010	< 0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	< 1	< 0.1	< 0.4	< 0.4	< 0.5	< 0.5	< 0.5	< 1	< 0.1	< 5.0a	< 5.0a	< 5.0a	< 5.0a	< 5.0a	< 0.4	< 0.4	< 0.04	< 0.4
Bismuth	µg/L	-	-	-	-	-	<0.010	<0.010	<0.010	<0.010	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Boron	µg/L	13.6	52.2	6.5	8.4	11.1	11.2	11.0	10.8	12.2	< 20	18	< 40	< 40	825	944	992	< 20	29	1,810	1,760	1,790	1,800	1,780	< 40	< 40	7	< 40
Cadmium	µg/L	0.0297	0.0544	0.0326	0.0699	0.0408	<0.0100	0.0311	<0.0080	0.0386	7	0.4	0.2	0.2	4.8	7	< 0.5a	< 0.1a	< 0.01	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.1	< 0.10	0.02	< 0.1
Calcium	mg/L	102	109	108	119	132	142	125	134	122	35.6	36	40.7	34	104	110	109	32.5	37.1	179	165	168	170	172	51	48	50.8	51
Chromium	µg/L	0.12	0.21	0.1	0.17	<0.50	<0.50	<0.50	<0.50	<0.50	< 5	0.8	< 4	< 4	< 0.8	< 0.8	< 0.8	< 5	0.6	0.68	0.55	0.7	1.03	0.73	< 4	< 4	3.1	< 4
Cobalt	µg/L			0.0236	0.0471	0.0657	0.0290	0.0391	0.0258	0.0278							5.5	< 1	0.2	3.12	3.86	3.36	7.3	3.82	0.3	0.3	0.44	0.7
Copper	µg/L	0.62	0.59	3.99	0.7	0.67	<0.10	0.21	<0.10	0.19	< 10a	1	< 10a	< 10a	2	1	2	< 10a	< 1a	< 1.0a	< 1.0a	< 1.0a	< 1.0a	< 1.0a	< 10a	< 10a	3	< 10a
Iron	µg/L	49.2	125	56.2	126	241	799	61.3	1,110	25.5	630	460	270	< 100	1,620	1,060	2,530	6,180	1,160	13,700	5,700	19,500	27,800	14,000	390	< 100	574	410
Lead	µg/L	< 0.050	< 0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	2	0.2	< 1	< 1	< 2	7	3	2	< 0.1	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1	< 1	< 0.1	< 1
Lithium	µg/L	12.6	12.4	13.5	12.7	13.8	15.2	15.0	13.5	14.8	< 10	11	< 10	10	33	37	40	< 10	12	< 50	< 50	< 50	< 50	< 50	40	40	34	30
Magnesium	mg/L	55.9	58.1	56.1	57.5	62.8	81.5	82.7	73.8	74.3	56.1	55.6	57.3	57	258	261	268	52.2	61.8	199	200	222	199	205	122	117	118	117
Manganese	µg/L	76.4	202	135	311	299	113	120	186	112	175	124	115	135	664	585	584	131	178	677	487	569	414	416	82	90	90	50
Mercury	µg/L	< 0.010	< 0.010	< 0.010	< 0.010	<0.010	<0.010	<0.010	<0.010	<0.010	-	-	-	-	-	-	-	-	-	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	-	-	-	-
Molybdenum	µg/L	9.93	14	11.4	15.6	15.7	16.5	11.6	19.6	16.5	30	37	34	31	< 1	< 1	< 1	20	30	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	30	31	19.2	20
Nickel	µg/L	0.113	0.354	0.131	0.601	0.521	0.098	0.198	0.122	0.215	< 5	1.8	< 10	< 10	2	5	3	< 5	1.7	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 10	< 10	< 1	< 10
Phosphorus	µg/L	-	-	-	-	-	<10	<10	<10	<10	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Potassium	mg/L	4.43	4.3	4.05	4.25	3.96	4.91	4.37	4.89	4.38	6.8	6.4	6.7	6	53.9	59.4	67.8	6	7.1	61.9	59.7	56.5	67.5	61.6	6.6	6	6.2	7
Selenium	µg/L	< 0.10	< 0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	2	< 0.2	< 6	< 6	< 4	< 4	< 4	< 2	< 0.2	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 6	< 6	9.8	< 6
Silicon	µg/L	-	-	-	-	-	9,250	9,270	9,410	8,330	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Silver	µg/L	< 0.010	< 0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	< 0.10	< 0.01	< 0.10	< 0.1	< 1a	< 1a	< 1a	< 0.10	< 0.01	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.10	< 0.1	< 0.01	< 0.10
Sodium	mg/L	97.6	99.8	111	111	123	193	130	213	151	161	156	171	162	335	321	330	151	158	237	229	232	243	229	205	206	186	188
Strontium	µg/L	3,370	3,450	3,680	3,840	4100	4,310	4,640	3,940	4,230	1,210	1,280	1,200	1,180	2,480	2,380	2,510	1,160	1,350	2,950	2,830	3,270	3,080	3,130	2,010	2,180	2,560	2,070
Sulfur	µg/L	-	-	-	-	-	246,000	194,000	298,000	191,000	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Tellurium	µg/L	-	-	-	-	-	<0.050	<0.050	<0.050	<0.050	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Thallium	µg/L	< 0.0040	< 0.0040	<0.0040	<0.0040	<0.0040	<0.0040	<0.0040	<0.0040	<0.0040	< 0.5	< 0.05	< 0.1	< 0.1	< 4a	< 4a	< 4a	< 0.5	< 0.05	< 0.20	< 0.20	< 0.20	< 0.010	< 0.010	< 0.1	< 0.1	< 0.01	< 0.1
Thorium	µg/L	-	-	-	-	-	<0.010	0.024	<0.010	<0.010	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Tin	µg/L	< 0.050	< 0.050	0.06	<0.050	<0.050	<0.050	<0.050	<0.100	<0.100	< 10	< 1	< 1	< 1	13	17	11	< 10	< 1	< 30	< 30	< 30	< 30	< 30	< 1	< 1	< 0.1	< 1
Titanium	µg/L	< 0.20	< 0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	31	17.2	< 10	< 100	< 0.4	< 0.4	< 0.4	10	8.4	< 50	< 50	< 50	< 50	< 50	< 10	< 100	< 10	< 100
Tungsten	µg/L	< 0.20	< 0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Uranium	µg/L	3.57	3.63	2.8	3.05	2.61	2.43	2.68	2.31	2.96	9	6.7	6	8	-	-	-	8	8.8	< 0.20	< 0.20	0.31	< 0.20	0.21	33	49	35.9	38
Vanadium	µg/L	< 0.20	< 0.20	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	2	0.7	< 1	< 1	< 0.1	3	1	< 1	0.6	< 30	< 30	< 30	< 30	< 30	< 1	< 1	1	< 1
Zinc	µg/L	< 1.0	< 1.0	<1.0	<1.0	<4.0	<1.0	<1.0	<1.0	<1.0	< 10	5	< 10	< 10	< 0.6	0.6	2.1	< 10	3	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	10	< 10	3	< 10
Zirconium	µg/L	-	-	-	-	-	<0.020	<0.020	<0.020	<0.020	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Associated CARO files available upon

Associated Exova file(s): 622178, 653600, 712940, 714233, 714243, 756693, 756810, 757047, 811364, 811710, 812030, 812741, 812985, 846260, 878316, 879073, 909346, 909448, 909654.

Table H2: Summary of Groundwater Analytical Results - Total Metals - HISTORICAL to 2025

Well ID		GL4-1																			GL4-2						
Sample ID		GL 4-1-20120626	GL 4-1-20120704	GL4-1-20121203	GL4-1-20130627	GL4-1-20140603	GL4-1-20141124	GL4-1-20150608	GL4-1-20151104	GL4-1-200814	GL4-1-201016	GL4-1-210511	GL4-1-211005	GL4-1-220530	GL4-1-220927	GL4-1-230523	GL4-1-231025	GL4-1	GL4-1	GL4-1	GL4-1	GL4-2-20091116	GL4-2-20100810	GL4-2-20110629	GL4-2-20120626	GL4-2-20121203	GL4-2-200814	GL4-2-201030
Sample Date		2012 06 26	2012 07 04	2012 12 03	2013 06 27	2014 06 03	2014 11 24	2015 06 08	2015 11 04	2020 08 14	2020 10 16	2021 05 11	2021 10 05	2022 05 30	2022 09 27	2023 05 23	2023 10 25	2024-05-13	2024-09-13	2025 05 26	2025 08 29	2009 11 16	2010 08 10	2011 06 29	2012 06 26	2012 12 03	2020 08 14	2020 10 30
Parameter	Unit	Analytical Results																										
Total Metals																												
Aluminum	µg/L	-	< 5	< 50a	< 10a	< 10a	< 10a	< 10	< 10	< 1.0	1.9	< 1.0	< 1.0	1.6	<1.0	3.2	<1.0	1.3	1.0	<1.0	<2.0	< 50a	< 50a	5	< 50a	< 50a	11.6	< 1.0
Antimony	µg/L	-	< 0.2	< 2	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.050	< 0.050	< 0.050	< 0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	< 2	< 2	< 0.2	< 2	< 2	< 0.050	0.129
Arsenic	µg/L	-	2.2	2.4	2.8	2.7	2.7	2.7	2.6	2.9	2.58	2.93	2.33	2.42	2.44	2.22	2.26	2.65	2.56	2.55	2.61	< 2	< 2	2	< 2	< 2.0	0.729	0.833
Barium	µg/L	-	14	10	< 20	< 20	< 20	< 20	< 20	16.5	16	14.9	15.7	14.2	16.2	17.4	18.9	16.9	16.7	16.9	16.6	40	40	35	40	40	44.9	38.3
Beryllium	µg/L	-	< 0.04	< 0.40	< 5.0a	< 5.0a	< 5.0a	< 5.0a	< 5.0a	< 0.010	< 0.010	< 0.010	0.02	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	< 0.4	< 0.4	< 0.04	< 0.4	< 0.40	< 0.010	< 0.010
Bismuth	µg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.010	<0.010	<0.010	<0.010	-	-	-	-	-	-	-
Boron	µg/L	-	15	< 40	< 100	< 100	< 100	< 100	< 100	17.7	15.8	20.9	47.7	11.4	12.4	14.4	14	15.0	15.6	11.4	13.9	< 40	< 40	6	< 40	< 40	29.3	23.1
Cadmium	µg/L	-	< 0.01	< 0.10	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	0.0079	0.0244	0.0316	0.022	<0.0140	<0.0100	<0.0220	<0.0080	<0.0080	<0.0080	<0.0120	<0.0120	< 0.1	< 0.10	0.12	< 0.1	< 0.10	0.143	0.0457
Calcium	mg/L	-	49	44.2	50.4	50.5	52.1	51.4	49.3	54.1	51.8	52.3	57.1	48.5	55.3	54	52.5	57.5	52.3	55.3	50.5	54.2	52	51.5	53	43	51.9	47.5
Chromium	µg/L	-	7.2	5.7	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	0.66	< 0.10	0.16	0.14	0.12	0.17	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	< 4	< 4	6.8	< 4	9.1	0.57	< 0.10
Cobalt	µg/L	-	0.14	< 0.20	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	0.0329	0.036	0.0701	0.037	0.045	0.0253	0.0547	0.0302	0.0369	0.0648	0.0354	0.0285	1.4	< 0.2	0.97	1.1	1.55	0.842	0.211
Copper	µg/L	-	< 1a	< 10a	< 1.0a	< 1.0a	< 1.0a	< 1.0a	< 1.0a	< 0.10	0.11	0.14	0.86	0.13	<0.10	0.32	0.14	<0.10	<0.10	<0.10	<0.10	< 10a	< 10a	3	< 10a	< 10a	2.95	0.9
Iron	µg/L	-	140	624	820	820	833	784	765	786	732	568	588	586	687	515	682	728	631	634	721	< 100	< 100	62	360	131	168	11
Lead	µg/L	-	< 0.1	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 0.050	< 0.050	< 0.050	< 0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	< 1	< 1	< 0.1	< 1	< 1.0	0.214	< 0.050
Lithium	µg/L	-	34	20	< 50	< 50	< 50	< 50	< 50	40.2	37.8	38.8	36.5	40.3	36.3	39.9	38.2	40.4	40.6	31.6	36.2	30	30	30	20	20	32.8	29.6
Magnesium	mg/L	-	112	106	121	114	125	121	114	123	118	118	119	117	116	127	117	126	144	117	129	220	216	213	210	210	174	157
Manganese	µg/L	-	50	78	92	89	93	90	85	85.7	81	77	75.7	75.5	72.7	68.5	72.4	85.8	80.3	78.3	79.2	44	42	170	230	208	197	47.9
Mercury	µg/L	-	-	-	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	-	-	-	-	-	< 0.010	< 0.010
Molybdenum	µg/L	-	7.4	37.6	38.1	38.3	35.9	35.6	35.1	35.6	33.6	30.6	30.1	30	29.2	27.8	27.4	28.9	24.8	28.6	27.7	80	72	72.6	61	69.2	72.2	98.3
Nickel	µg/L	-	< 1	< 10	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	0.387	0.356	0.327	0.31	0.292	0.255	0.335	0.285	0.283	0.504	0.303	0.271	< 10	< 10	4	< 10	< 10	3.68	2.1
Phosphorus	µg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	15	21	21	22	-	-	-	-	-	-	-
Potassium	mg/L	-	7	6.3	6.8	6.4	7.1	6.8	6.4	7.03	6.73	7.57	7.1	6.41	6.66	7.34	6.21	7.32	6.75	7.26	7.77	9	8	7.8	8	7.7	9.14	8.63
Selenium	µg/L	-	16.5	< 6.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 0.10	< 0.10	< 0.10	< 0.10	<0.10	<0.10	<0.10	0.11	<0.10	<0.10	<0.10	<0.10	< 6	< 6	9.6	< 6	< 6.0	0.22	0.86
Silicon	µg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	11,600	11,000	10,200	11,300	-	-	-	-	-	-	-
Silver	µg/L	-	< 0.01	< 0.10	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.010	< 0.010	< 0.010	< 0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	< 0.10	< 0.1	< 0.01	< 0.10	< 0.10	< 0.010	< 0.010
Sodium	mg/L	-	186	192	206	199	209	200	192	207	198	202	205	195	196	214	201	212	197	199	216	194	202	183	191	181	258	231
Strontium	µg/L	-	2,440	2,190	2,070	2,040	1,960	2,190	2,000	2,470	2,380	2,210	2,400	2,170	2420	2400	2430	2,400	2,620	2,490	2,360	3,060	3,140	3,980	3,030	3,020	3,410	2,910
Sulfur	µg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	198,000	180,000	174,000	182,000	-	-	-	-	-	-	-
Tellurium	µg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.050	<0.050	<0.050	<0.050	-	-	-	-	-	0.26	< 0.20
Thallium	µg/L	-	< 0.01	< 0.10	< 0.20	< 0.20	< 0.20	< 0.010	< 0.010	< 0.0040	< 0.0040	< 0.0040	< 0.0040	<0.0040	<0.0040	<0.0040	<0.0040	<0.0040	<0.0040	<0.0040	<0.0040	< 0.1	< 0.1	< 0.01	< 0.1	< 0.10	0.0071	< 0.0040
Thorium	µg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.010	0.055	<0.010	<0.010	-	-	-	-	-	-	-
Tin	µg/L	-	< 0.1	< 1.0	< 30	< 30	< 30	< 30	< 30	< 0.050	0.116	< 0.050	< 0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.100	<0.100	< 1	< 1	< 0.1	< 1	< 1.0	< 0.050	< 0.050
Titanium	µg/L	-	< 100	< 10	< 50	< 50	< 50	< 50	< 50	< 0.20	< 0.20	< 0.20	< 0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	< 10	< 100	< 10	< 100	< 10	0.79	0.25
Tungsten	µg/L	-	-	-	-	-	-	-	-	< 0.20	< 0.20	< 0.20	< 0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	-	-	-	-	-	0.26	< 0.20
Uranium	µg/L	-	37	47.4	45.4	42.3	41.9	41.4	41.2	45.9	44	41.8	39.8	40.1	45.6	44.4	39.3	45.2	39.6	44.9	44.2	101	103	86.8	69	84.8	78	86.2
Vanadium	µg/L	-	2	1.44	< 30	< 30	< 30	< 30	< 30	< 0.20	< 0.20	< 0.20	< 0.20	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	2	2	3.4	2	3.3	1.3	1.4
Zinc	µg/L	-	1	< 10	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 1.0	1.2	1.6	< 1.0	<1.0	<1.0	<1.0	<2.0	<1.0	<1.0	<1.0	<1.0	10	< 10	4	< 10	< 10	4.1	1.5
Zirconium	µg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.084	0.049	0.06	0.058	-	-	-	-	-	-	-

Associated CARO files available upon

Associated Exova file(s): 622178, 653600, 712940, 714233, 714243, 756693, 756810, 757047, 811364, 811710, 812030, 812741, 812985, 846260, 878316, 879073, 909346, 909448, 909654.

Table H2: Summary of Groundwater Analytical Results - Total Metals - HISTORICAL to 2025

Well ID		GL4-2										GL5-1			GL5-2													
Sample ID		GL4-2-210511	GL4-2-211005	GL4-2-220530	GL4-2-220927	GL4-2-230523	GL4-2-231025	GL4-2	GL4-2	GL4-2	GL4-2	GL5-1-20091116	GL5-1-20100810	GL5-2-20180528	GL5-2-20091116	GL5-2-20100810	GL5-2-20110704	GL 5-2-20120627	GL5-2-20121205	GL5-2-20130626	GL5-2-20131114	GL5-2-20140603	GL5-2-20141118	GL5-2-20150608	GL5-2-20151103	GL5-2-20160526	GL5-2-20170525	GL5-2-180528
Sample Date		2021 05 11	2021 10 05	2022 05 30	2022 09 27	2023 05 23	2023 10 25	2024-05-13	2024-09-13	2025 05 26	2025 08 29	2009 11 16	2010 08 10	2018 05 28	2009 11 16	2010 08 10	2011 07 04	2012 06 27	2012 12 05	2013 06 26	2013 11 14	2014 06 03	2014 11 18	2015 06 08	2015 11 03	2016 05 26	2017 05 25	2018 05 28
Parameter	Unit	Analytical Results																										
Total Metals																												
Aluminum	µg/L	< 1.0	< 1.0	1.2	<1.0	1.2	<1.0	10.4	<1.0	<1.0	1	< 50a	71	< 5.0	132	134	< 5	< 50a	52	< 10a	< 10a	< 10a	< 10a	< 10	< 10	< 10	< 10	< 5.0
Antimony	µg/L	< 0.050	< 0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	< 2	< 2	< 0.20	< 2	< 2	< 0.2	< 2	< 2.0	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.20
Arsenic	µg/L	0.747	0.604	0.489	0.55	0.504	0.644	0.510	0.575	0.434	0.44	< 2	< 2	< 0.50	< 2	< 2	0.5	< 2	< 2.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 0.50
Barium	µg/L	36.4	39.1	29.7	36.8	33.1	36.8	40.8	34.2	33.1	31.6	< 10	10	60.6	30	30	34	30	30	35	34	37	33	64	34	69	63	60.6
Beryllium	µg/L	< 0.010	< 0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	< 0.4	< 0.4	< 0.10	< 0.4	< 0.4	< 0.04	< 0.4	< 0.40	< 5.0a	< 5.0a	< 5.0a	< 5.0a	< 5.0a	< 5.0a	< 5.0a	< 5.0a	< 0.10
Bismuth	µg/L	-	-	-	-	-	-	<0.010	<0.010	<0.010	<0.010	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Boron	µg/L	30.1	55.7	19.2	21.7	19.4	22	21.7	20.8	16	19.2	< 40	40	30.8	< 40	< 40	33	< 40	50	< 100	< 100	< 100	< 100	< 100	< 100	< 100	< 100	30.8
Cadmium	µg/L	0.0228	0.0292	<0.0340	<0.0200	<0.0420	<0.0160	<0.0300	<0.0180	<0.0200	<0.0240	< 0.1	< 0.1	0.02	< 0.1	< 0.10	0.02	< 0.1	< 0.10	< 0.050	< 0.050	0.06	< 0.050	< 0.050	< 0.050	2.39	< 0.050	0.02
Calcium	mg/L	49.3	53.3	41.7	48.2	46.8	45.5	49.5	43.2	45.2	43.9	3.4	13	79.8	68	68	84.4	78	72.3	80.9	77.6	73.7	71.1	121	74.8	116	102	79.8
Chromium	µg/L	0.19	0.19	0.15	0.18	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	< 4	< 4	3.92	< 4	< 4	0.9	7	5.1	< 0.50	< 0.50	< 0.50	< 0.50	1.7	< 0.50	4.26	3.64	3.92
Cobalt	µg/L	0.116	0.674	0.0721	0.583	0.108	0.926	0.0875	0.660	0.044	0.5	< 0.2	< 0.2	< 0.10	0.2	0.4	0.45	< 0.2	< 0.20	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.10
Copper	µg/L	0.93	0.63	1.09	0.57	0.91	1.35	0.61	0.33	0.48	0.14	< 10a	< 10a	1.03	< 10a	< 10a	< 1a	< 10a	< 10a	< 1.0a	< 1.0a	< 1.0a	< 1.0a	< 1.0a	< 1.0a	< 1.0a	< 1.0a	1.03
Iron	µg/L	5	94.6	6.3	57.1	6.8	155	10.4	97.4	2.6	96.1	< 100	840	< 10	180	< 100	6	100	97	< 30	< 30	< 30	< 30	< 30	< 30	< 30	< 30	< 10
Lead	µg/L	< 0.050	< 0.050	<0.050	<0.050	0.057	0.082	<0.050	<0.050	<0.050	<0.050	< 1	1	< 0.20	< 1	< 1	< 0.1	< 1	< 1	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 0.20
Lithium	µg/L	30.6	28.2	29.4	28	27.7	28.2	32.0	28.9	23.4	26.1	580	750	39.3	40	40	45	40	50	< 50	< 50	51	< 50	68	< 50	74	65	39.3
Magnesium	mg/L	169	169	161	153	160	157	171	188	150	150	16.6	20	115	105	113	138	126	116	127	120	114	111	159	106	143	128	115
Manganese	µg/L	21.5	193	19.6	228	31.9	270	16.9	242	7.68	281	4	34	0.44	12	10	4	< 10	< 10	10	11	< 10	12	< 10	< 10	< 10	< 10	0.44
Mercury	µg/L	< 0.010	< 0.010	< 0.010	< 0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	-	-	< 0.010	-	-	-	-	-	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.010
Molybdenum	µg/L	76.1	81.8	74.3	76.5	74.4	74.2	69.7	60.0	79.4	79.4	7	7	9.37	16	15	17.1	14	17.4	18.6	19.3	19.2	19.1	12.1	17.4	11.6	11.3	9.37
Nickel	µg/L	2.06	2.3	1.52	1.88	1.38	1.87	1.40	1.62	1.01	1.73	< 10	< 10	< 0.40	< 10	< 10	1	< 10	< 10	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 0.40
Phosphorus	µg/L	-	-	-	-	-	-	17	30	18	25	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Potassium	mg/L	8.96	9.26	7.86	8.2	8.56	7.36	9.05	9.31	8.48	8.25	10.6	9	7.77	7.6	8	8.6	8	7.7	8.9	8.8	8.1	8.1	10.4	8.1	10	9.1	7.77
Selenium	µg/L	0.3	0.12	0.14	0.11	0.19	0.12	0.32	0.10	0.2	<0.10	< 6	< 6	4.95	< 6	< 6	1.8	< 6	< 6.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	2.9	3.6	4.95
Silicon	µg/L	-	-	-	-	-	-	8,600	8,240	7,800	8,060	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Silver	µg/L	< 0.010	< 0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	< 0.10	< 0.1	< 0.050	< 0.10	< 0.1	< 0.01	< 0.10	< 0.10	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050
Sodium	mg/L	247	248	225	220	231	225	232	220	216	221	539	604	268	128	129	152	150	145	163	187	174	160	315	183	384	331	268
Strontium	µg/L	2,490	2,600	2400	2670	2540	2600	2,680	2,700	2,500	2,470	1,050	2,030	4,900	3,680	3,750	4,300	4,160	3,980	3,770	3,870	3,660	3,750	6,010	3,980	5,680	5,330	4,900
Sulfur	µg/L	-	-	-	-	-	-	178,000	165,000	164,000	166,000	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Tellurium	µg/L	-	-	-	-	-	-	<0.050	<0.050	<0.050	<0.050	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Thallium	µg/L	0.0057	0.0058	0.0065	<0.0040	0.0089	0.0057	0.0117	<0.0040	0.0057	0.0104	< 0.1	< 0.1	< 0.020	< 0.1	< 0.1	< 0.01	< 0.1	< 0.10	< 0.20	< 0.20	< 0.20	< 0.20	< 0.010	< 0.010	< 0.020	< 0.020	< 0.020
Thorium	µg/L	-	-	-	-	-	-	<0.010	0.053	<0.010	<0.010	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Tin	µg/L	< 0.050	< 0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.100	<0.100	< 1	< 1	< 0.20	< 1	< 1	< 0.1	< 1	< 1.0	< 30	< 30	< 30	< 30	< 30	< 30	< 30	< 30	< 0.20
Titanium	µg/L	< 0.20	0.24	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	< 10	< 100	< 5.0	20	< 100	< 10	< 100	< 100	< 50	< 50	< 50	< 50	< 50	< 50	< 50	< 50	< 5.0
Tungsten	µg/L	< 0.20	0.25	<0.20	0.26	<0.20	0.3	0.23	0.21	<0.20	0.31	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	< 1.0
Uranium	µg/L	73.6	78.3	69.6	83.1	74.7	65.2	70.2	54.2	70.3	68.4	< 4	< 4	20	26	27	24.3	23	27.7	28.1	27.9	26.7	27.2	24.1	26.9	20.7	20.7	20
Vanadium	µg/L	0.99	0.92	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	< 1	< 1	3.7	5	4	7.4	5	5.28	< 30	< 30	< 30	< 30	< 30	< 30	< 30	< 30	3.7
Zinc	µg/L	1.4	< 1.0	1.3	1.1	1.3	<2.0	<1.0	<1.0	<1.0	<1.0	< 10	50	< 4.0	< 10	< 10	< 1	< 10	< 10	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 4.0
Zirconium	µg/L	-	-	-	-	-	-	0.321	0.201	0.226	0.285	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Associated CARO files available upon

Associated Exova file(s): 622178, 653600, 712940, 714233, 714243, 756693, 756810, 757047, 811364, 811710, 812030, 812741, 812985, 846260, 878316, 879073, 909346, 909448, 909654.

Table H2: Summary of Groundwater Analytical Results - Total Metals - HISTORICAL to 2025

Well ID		GL5-2						GL5-3		GL6-1																		
Sample ID		GL5-2-190527	GL5-2-200611	GL5-2-210603	GL5-2-220602	GL5-2	GL5-2	GL5-3-20091116	GL5-3-20100810	GL6-1-19990505	GL6-1-19990928	GL6-1-19991202	GL6-1-20080529	GL6-1-20081104	GL 6-1-20091110	GL6-1-20110704	GL 6-1 (2011)-20120626	GL6-1 (2011)-20130627	GL6-1-20131114	GL6-1 (2011)-20140609	GL6-1 (2011)-20141127	GL6-1 (2011)-20150615	GL6-1 (2011)-20170530	GL6-1(2011)-20121205	GL6-1-180604	GL6-1 (2011)-190603	GL6-1-200611	GL6-1-210610
Sample Date		2019 05 27	2020 06 11	2021 06 03	2022 06 02	2024-05-14	2025 05 28	2009 11 16	2010 08 10	1999 05 05	1999 09 28	1999 12 02	2008 05 29	2008 11 04	2009 11 10	2011 07 04	2012 06 26	2013 06 27	2013 11 14	2014 06 09	2014 11 27	2015 06 15	2017 05 30	2012 12 05	2018 06 04	2019 06 03	2020 06 11	2021 06 10
Parameter	Unit	Analytical Results																										
Total Metals																												
Aluminum	µg/L	5.9	4.2	< 1.0	1.2	<1.0	1.1	74	61	60	< 8a	26	80	60	< 50a	123	214	107	85	86	< 60a	104	124	700	78.7	86.8	79.8	79
Antimony	µg/L	< 0.20	< 0.050	< 0.050	<0.050	<0.050	<0.050	< 2	< 2	25	13	36	10	30	7	2.3	5	1.2	< 2.0	1.5	< 2.0	< 1.0	< 1.0	< 20.0	0.91	1.1	1.7	0.81
Arsenic	µg/L	< 0.50	0.339	0.339	0.276	0.540	0.431	< 2	< 2	50	20	40	65	131	55	35.1	12	10.3	8.4	6.9	4.7	6.6	5.8	< 20.0	4.95	5.96	6.48	4.88
Barium	µg/L	66.8	48.2	59.8	45	24.6	31.9	120	120	37	21.3	28.3	90	120	30	329	290	356	337	309	290	312	449	200	376	321	367	398
Beryllium	µg/L	< 0.10	< 0.010	< 0.010	<0.010	<0.010	<0.010	< 0.4	< 0.4	< 0.5	< 0.5	< 0.5	< 1	< 1	< 0.4	< 0.04	< 0.4	< 25a	< 25a	< 25a	< 50a	< 15a	< 15a	< 4.0a	< 0.10	< 0.10	0.025	0.029
Bismuth	µg/L	-	-	-	-	<0.010	<0.010	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Boron	µg/L	38.8	24.9	42.2	24.8	23.8	29.7	< 40	< 40	470	230	377	1,410	2,100	630	3,430	2,850	3,090	2,810	2,600	2,600	2,460	3,110	3,400	2,660	2,660	2,180	3,510
Cadmium	µg/L	0.057	0.023	0.0228	0.0183	0.0193	0.0184	< 0.1	< 0.10	< 0.5a	< 0.5a	< 0.5a	< 0.1a	< 0.10a	< 0.1	0.01	< 0.1	< 0.50a	< 1.0a	< 0.50a	< 1.0a	< 0.050	< 0.050	< 1.00a	< 0.010	< 0.010	0.0081	0.0069
Calcium	mg/L	87.3	65.3	103	59.3	64.3	75.6	108	105	226	226	223	172	207	249	107	127	80.7	100	79.4	76.2	74.2	136	143	183	190	151	229
Chromium	µg/L	2.09	0.37	1.42	0.32	<0.50	<0.50	< 4	< 4	13.8	3.5	8.7	47	167	20	418	53	24.3	23	19.9	18	22	22.3	61.9	15.4	16.7	18.1	14.2
Cobalt	µg/L	< 0.10	0.0245	0.029	0.0178	0.0126	0.0138	0.5	0.4	5.3	4.3	4.3	6	11	2.5	26.7	26.1	28.8	23	19.4	10.1	27.3	30.2	< 2.0	25.7	21.7	22.2	20.3
Copper	µg/L	3.18	0.47	0.99	0.61	0.38	0.29	< 10a	< 10a	< 1a	< 1a	< 1a	30	20	< 10a	3	20	< 5.0a	< 10a	< 5.0a	< 10a	< 2.0a	< 2.0a	< 100a	0.47	11.9	0.88	0.5
Iron	µg/L	< 10	< 2.0	< 2.0	<2.0	<2.0	<2.0	150	< 100	228	110	58	120	< 100	< 100	118	2,890	1,320	1,380	640	1,240	242	374	561	3,150	507	191	1,180
Lead	µg/L	< 0.20	< 0.050	< 0.050	<0.050	<0.050	<0.050	< 1	< 1	< 2	4	2	2	< 1	< 1	< 0.1	< 1	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 10	< 0.20	< 0.20	0.151	0.237
Lithium	µg/L	50.3	36.8	54.8	41.7	43.6	64.1	30	30	30	35	42	40	40	40	46	170	53	54	54	< 100	< 50	< 50	< 100	61	41.5	28.1	41.4
Magnesium	mg/L	102	82.1	110	89	102	111	79.5	81	812	829	738	485	594	706	232	290	243	339	268	337	206	223	394	351	192	142	160
Manganese	µg/L	0.75	0.187	0.061	0.23	2.34	2.82	9	97	740	675	580	567	470	1,130	218	500	293	495	299	319	243	334	690	618	412	295	439
Mercury	µg/L	< 0.010	< 0.010	< 0.010	< 0.010	<0.010	<0.010	-	-	-	-	-	< 0.1	< 0.1	-	-	-	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	-	< 0.010	< 0.010	< 0.010	< 0.010
Molybdenum	µg/L	12.2	12.5	11.9	13	10.8	13	8	6	45	20	25	30	80	31	3.4	< 1	2.9	6.2	2.3	1.9	2	1.4	37.5	5.86	1.44	1.31	1.02
Nickel	µg/L	0.52	0.325	0.31	0.232	0.246	0.186	10	< 10	6	6	8	20	45	20	42	40	36	30	27.8	23	28.7	35.1	< 100	23.6	19.3	23.7	17
Phosphorus	µg/L	-	-	-	-	<10	<10	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Potassium	mg/L	7.33	6.98	8.27	6.57	7.46	9.29	5.8	6	182	194	222	225	306	200	540	500	504	465	410	413	382	498	510	476	421	382	356
Selenium	µg/L	6.8	0.36	1.58	0.38	0.12	0.11	< 6	< 6	< 4	< 4	< 4	22	10	17	29.5	11	< 10	< 20	< 10	< 20	< 1.0	1.6	< 60a	0.92	0.5	0.86	1.22
Silicon	µg/L	-	-	-	-	8,440	10,100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Silver	µg/L	< 0.050	< 0.010	< 0.010	<0.010	<0.010	<0.010	< 0.10	< 0.1	< 1a	< 1a	< 1a	0.1	0.22	< 0.10	0.02	< 0.10	< 0.10	< 0.20	< 0.10	< 0.20	< 0.10	< 0.10	< 1.00	< 0.050	< 0.050	< 0.010	< 0.010
Sodium	mg/L	249	195	258	189	172	201	125	116	6,740	7,270	7,470	6,980	5,940	6,270	2,270	3,030	2,600	3,450	2,750	3,560	2,250	2,110	4,060	2,680	1,490	1,200	988
Strontium	µg/L	5,240	3,720	4,970	3,870	3,590	3,790	5,190	5,320	4,890	4,940	5,110	5,010	4,650	6,880	3,340	3,480	3,690	4,110	3,740	4,920	3,410	3,670	3,770	3,880	3,160	2,850	2,850
Sulfur	µg/L	-	-	-	-	98,200	119,000	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2.4	1.9	2.04	1.67
Tellurium	µg/L	-	-	-	-	<0.050	<0.050	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	4.2	3.1	3.61	2.69
Thallium	µg/L	< 0.020	< 0.0040	< 0.0040	<0.0040	<0.0040	0.004	< 0.1	< 0.1	< 4a	< 4a	< 4a	< 0.5	< 0.5	< 0.1	< 0.01	< 0.1	< 1.0	< 2.0	< 1.0	< 2.0	< 0.10	< 0.10	< 1.00	< 0.020	< 0.020	< 0.0040	< 0.0040
Thorium	µg/L	-	-	-	-	<0.010	<0.010	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Tin	µg/L	< 0.20	< 0.050	< 0.050	<0.050	<0.050	<0.100	< 1	< 1	17	11	8	20	40	10	2.9	8	< 150	< 150	< 150	< 300	< 90	< 90	< 10	4.94	4.82	4.82	3.19
Titanium	µg/L	< 5.0	< 0.20	< 0.20	<0.20	<0.20	<0.20	< 10	< 100	26.2	2.8	13	500	335	< 10	59	110	77	86	56	< 100	51	< 50	< 1,000	18.1	11.2	15.7	11.2
Tungsten	µg/L	< 1.0	< 0.20	< 0.20	<0.20	<0.20	<0.20	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2.4	1.9	2.04	1.67
Uranium	µg/L	23.1	28.8	31.1	28.5	23.1	28.3	19	20	-	-	-	29	33	34	1.3	53	9.94	87.5	12.1	15.1	3.43	0.92	257	122	19.2	1.95	0.228
Vanadium	µg/L	3.6	3.95	3.56	3.65	2.54	3.09	2	2	< 0.1	1	4	13	258	7	116	15	< 150a	< 150a	< 150a	< 300a	< 90	< 90	23.5	4.2	3.1	3.61	2.69
Zinc	µg/L	< 4.0	< 1.0	< 1.0	<1.0	<1.0	<1.0	< 10	< 10	< 0.6	< 0.6	2.9	20	20	< 10	3	< 10	< 25	< 25	< 25	< 50	< 15	< 15	< 100	< 4.0	< 4.0	1.8	2.3
Zirconium	µg/L	-	-	-	-	0.030	0.023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Associated CARO files available upon

Associated Exova file(s): 622178, 653600, 712940, 714233, 714243, 756693, 756810, 757047, 811364, 811710, 812030, 812741, 812985, 846260, 878316, 879073, 909346, 909448, 909654.

Table H2: Summary of Groundwater Analytical Results - Total Metals - HISTORICAL to 2025

Well ID		GL7-1									GL8-1				GL8-2													
Sample ID		GL7-1-20110704	GL7-1-20120625	GL7-1-20121205	GL7-1-20130626	GL7-1-20131114	GL7-1-20140604	GL7-1-20141125	GL7-1-20150609	GL7-1-20151109	GL8-1-20080529	GL8-1-20081104	GL 8-1-20091110	GL8-1-20100810	GL8-2-20080529	GL8-2-20081104	GL 8-2-20091110	GL8-2-20100810	GL8-2-20110627	GL8-2-20111217	GL 8-2-20120626	GL8-2-20121204	GL8-2-20130626	GL8-2-20131113	GL8-2-20140605	GL8-2-20141118	GL8-2-20150610	GL8-2-20151103
Sample Date		2011 07 04	2012 06 25	2012 12 05	2013 06 26	2013 11 14	2014 06 04	2014 11 25	2015 06 09	2015 11 09	2008 05 29	2008 11 04	2009 11 10	2010 08 10	2008 05 29	2008 11 04	2009 11 10	2010 08 10	2011 06 27	2011 12 17	2012 06 26	2012 12 04	2013 06 26	2013 11 13	2014 06 05	2014 11 18	2015 06 10	2015 11 03
Parameter	Unit	Analytical Results																										
Total Metals																												
Aluminum	µg/L	< 5	< 50a	54	< 10a	< 10a	< 10a	< 10a	< 10	< 10	70	210	86	158	< 50a	< 50a	< 50a	< 50a	< 50a	< 50a	< 50a	< 50a	< 30a	< 30a	< 30a	< 30a	< 10	< 10
Antimony	µg/L	< 0.2	< 2	< 2.0	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Arsenic	µg/L	36.4	13	22.5	19.8	22.3	21.7	22.8	26.7	13	6	5	8	3	23	23	16	13	7	13	6	8.3	2.3	4.2	2.2	4.6	2.5	3.1
Barium	µg/L	15	10	20	< 20	< 20	< 20	< 20	< 20	< 20	10	20	10	10	20	30	20	20	20	20	30	30	< 30	< 50	< 50	< 30	< 50	< 30
Beryllium	µg/L	2.2	1.6	2.64	< 5.0a	< 5.0a	< 5.0a	< 5.0a	< 5.0a	< 5.0a	< 1	< 1	< 0.4	< 0.4	< 1	< 1	< 0.4	< 0.4	< 0.4	< 0.4	< 0.4	< 0.40	< 15a	< 25a	< 25a	< 15a	< 25a	< 15a
Bismuth	µg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Boron	µg/L	148	160	160	120	110	120	110	110	< 100	40	70	40	40	130	200	170	160	140	150	200	150	< 300	< 500	< 500	< 300	< 500	< 300
Cadmium	µg/L	0.02	< 0.1	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.050	< 0.050	0.7	0.1	0.32	< 0.1	0.4	< 0.10a	0.39	< 0.1	0.51	0.58	0.27	0.18	< 0.50a	< 0.50a	< 0.50a	< 0.50a	0.124	< 0.050
Calcium	mg/L	176	164	159	162	160	164	144	151	155	93	86.9	20.4	74	63.5	40.6	32.5	33	40.9	26.4	42	22.4	76.5	36.4	41.7	25.5	35.8	26.3
Chromium	µg/L	62.9	7	12.2	< 1.0	< 1.0	< 1.0	< 1.0	< 0.50	< 0.50	< 5	< 5	< 4	< 4	9	63	26	5	6	18	10	22.5	< 5.0	< 5.0	< 5.0	< 5.0	< 1.0	< 1.0
Cobalt	µg/L	1.75	1.9	4.81	1.88	1.38	1.83	1.44	1.72	1.33	< 1	1	0.8	0.4	3	14	1.2	0.8	2	0.4	1	2.37	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Copper	µg/L	1	< 10a	< 10a	< 1.0a	< 1.0a	< 1.0a	< 1.0a	< 1.0a	< 1.0a	< 10a	< 10a	< 10a	< 10a	10	10	< 10a	20	< 10a	20	10	< 10a	< 5.0a	5.1	6	6.4	6.6	6.8
Iron	µg/L	5,590	12,600	5,360	4,850	5,290	7,030	5,600	7,710	3,030	200	180	< 100	120	660	160	190	340	322	74	2,420	86	< 90	150	< 150	< 90	< 150	< 90
Lead	µg/L	0.4	< 1	< 1.0	3.5	< 1.0	< 1.0	< 1.0	1	< 1.0	2	< 1	< 1	< 1	2	< 1	< 1	< 1	< 1	< 1	< 1	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Lithium	µg/L	266	260	300	292	263	342	273	284	291	150	160	140	140	180	180	140	120	140	130	70	100	159	121	109	101	106	98
Magnesium	mg/L	182	180	176	172	179	190	183	173	169	144	139	2.2	109	316	309	270	205	228	142	169	128	240	172	161	136	182	150
Manganese	µg/L	1,060	1,260	971	1,350	922	1,130	861	963	904	625	494	421	536	525	291	280	86	406	110	400	96	613	198	419	119	309	184
Mercury	µg/L	-	-	-	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	-	-	-	-	-	-	-	-	-	-	-	-	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20
Molybdenum	µg/L	56.3	42	60.2	56.7	60.6	38.6	50.4	40.7	44.6	40	40	40	44	160	280	294	227	191	300	104	228	146	225	132	211	121	170
Nickel	µg/L	9	< 10	< 10	7.5	7	7.6	6.6	7.3	7.3	< 5	6	< 10	< 10	27	34	30	20	20	20	20	20	13.2	15.4	20.4	13.7	16.3	14.4
Phosphorus	µg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Potassium	mg/L	21.4	20	18.7	21	20	20.6	18.8	19.5	19.7	15.2	14.9	2.4	14	32.2	34.6	34	30	23	19.8	38	19.6	25.7	24	21	22.4	22	23.1
Selenium	µg/L	19.8	< 6	< 6.0	< 2.0	< 2.0	< 2.0	< 2.0	< 1.0	< 1.0	< 2	< 2	< 6	< 6	14	9	< 6	10	< 6	< 6	7	8.2	< 10	< 10	< 10	< 10	< 1.0	1.3
Silicon	µg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Silver	µg/L	< 0.01	< 0.10	< 0.10	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.1	< 0.1	< 0.10	< 0.1	< 0.1	0.19	< 0.10	< 0.1	< 0.1	< 0.10	0.71	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Sodium	mg/L	492	509	496	526	509	502	471	478	464	832	746	19.6	622	3,100	3,410	150	2,340	2,320	2,120	1,330	2,170	2,160	2,150	2,050	2,070	2,030	2,230
Strontium	µg/L	4,680	4,580	4,440	3,860	4,150	4,190	4,030	4,050	3,840	12,300	11,900	10,800	11,200	7,890	7,210	5,390	5,360	5,310	4,460	3,930	4,870	5,800	4,150	4,280	3,390	4,310	3,530
Sulfur	µg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Tellurium	µg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Thallium	µg/L	< 0.01	< 0.1	< 0.10	< 0.20	< 0.20	< 0.20	< 0.20	< 0.020	< 0.020	< 0.5	< 0.5	< 0.1	< 0.1	< 0.5	< 0.5	< 0.1	< 0.1	< 0.1	0.43	< 0.1	< 0.10	< 1.0	< 1.0	< 1.0	< 1.0	< 0.10	< 0.10
Thorium	µg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Tin	µg/L	< 0.1	< 1	< 1	< 30	< 30	< 30	< 30	< 30	< 30	< 10	< 10	< 1	< 1	< 10	< 10	< 1	< 1	< 1	< 1	< 1	< 1.0	< 90	< 150	< 150	< 90	< 150	< 90
Titanium	µg/L	< 10	< 100	< 100	< 50	< 50	< 50	< 50	< 50	< 50	52	43	92	< 100	127	98	< 10	< 100	< 10	< 10	< 100	19	< 50	< 50	< 50	< 50	< 50	< 50
Tungsten	µg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Uranium	µg/L	80.8	74	85.6	79.4	79.5	62.4	69.8	65.4	65.1	12	10	7	11	172	152	119	131	111	134	74	126	147	125	92.2	107	87.9	92.2
Vanadium	µg/L	17.8	2	3.27	< 30	< 30	< 30	< 30	< 30	< 30	3	2	< 1	< 1	25	152	26	28	10	20	18	22	< 90	< 150a	< 150a	< 90	< 150a	< 90
Zinc	µg/L	11	20	10	33.3	89.8	55.8	36.1	61.6	45.4	10	10	10	< 10	10	< 10	110	< 10	< 10	< 10	< 10	< 10	< 15	< 25	< 25	< 15	< 25	< 15
Zirconium	µg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Associated CARO files available upon

Associated Exova file(s): 622178, 653600, 712940, 714233, 714243, 756693, 756810, 757047, 811364, 811710, 812030, 812741, 812985, 846260, 878316, 879073, 909346, 909448, 909654.

Table H2: Summary of Groundwater Analytical Results - Total Metals - HISTORICAL to 2025

Well ID		GL9-1																GL9-2										
Sample ID		GL 9-1-20091111	GL 9-1-20120627	GL9-1-20100810	GL9-1-20110628	GL9-1-20121204	GL9-1-20130626	GL9-1-20131114	GL9-1-20140604	GL9-1-20141125	GL9-1-20150609	GL9-1-20151109	GL9-1-20170530	GL9-1-180604	GL9-1-190530	GL9-1-200611	GL9-1-210611	GL9-2-20080529	GL9-2-20081104	GL 9-2-20091111	GL 9-2-20120627	GL9-2-20100810	GL9-2-20110628	GL9-2-20121204	GL9-2-20130626	GL9-2-20131113	GL9-2-20140605	GL9-2-20141125
Sample Date		2009 11 11	2012 06 27	2010 08 10	2011 06 28	2012 12 04	2013 06 26	2013 11 14	2014 06 04	2014 11 25	2015 06 09	2015 11 09	2017 05 30	2018 06 04	2019 05 30	2020 06 11	2021 06 11	2008 05 29	2008 11 04	2009 11 11	2012 06 27	2010 08 10	2011 06 28	2012 12 04	2013 06 26	2013 11 13	2014 06 05	2014 11 25
Parameter	Unit	Analytical Results																										
Total Metals																												
Aluminum	µg/L	< 50a	138	< 50a	< 5	56	< 10a	< 10a	< 10a	< 10a	< 10	< 10	< 10	< 5.0	9	< 1.0	1	< 50a	60	659	960	144	< 5	< 50a	< 150a	< 150a	< 150a	< 150a
Antimony	µg/L	< 2	< 2	< 2	< 0.2	< 2.0	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.20	< 0.20	< 0.050	< 0.050	< 2	< 2	< 2	< 2	< 2	< 0.2	< 2.0	< 5.0	< 5.0	< 5.0	< 5.0
Arsenic	µg/L	6	< 2	2	0.9	< 2.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	0.8	< 0.50	0.238	0.16	17	21	16	6	18	4.1	6.2	< 5.0	< 5.0	< 5.0	< 5.0
Barium	µg/L	10	10	20	4	< 10	< 20	< 20	< 20	< 20	< 20	< 20	< 20	7.7	7.8	28.6	27.3	< 10	< 10	< 10	10	< 10	12	10	< 200	< 100	< 200	< 100
Beryllium	µg/L	< 0.4	< 0.4	< 0.4	< 0.04	< 0.40	< 5.0a	< 5.0a	< 5.0a	< 5.0a	< 5.0a	< 5.0a	< 5.0a	< 0.10	< 0.10	0.07	0.25	< 1	< 1	< 0.4	< 0.4	< 0.4	< 0.04	< 0.40	< 100a	< 50a	< 100a	< 50a
Bismuth	µg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Boron	µg/L	< 40	40	40	38	50	< 100	< 100	< 100	< 100	< 100	< 100	< 100	44.3	38.8	36.3	51.1	< 20	< 20	< 40	< 40	< 40	< 4	< 40	< 2,000a	< 1,000a	< 2,000a	< 1,000a
Cadmium	µg/L	< 0.1	< 0.1	< 0.10	< 0.01	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.050	< 0.050	< 0.050	< 0.010	< 0.010	0.0022	< 0.0020	0.3	< 0.1a	0.14	0.2	< 0.1	0.3	0.34	< 2.5a	< 2.5a	< 2.5a	< 2.5a
Calcium	mg/L	57	26	101	20.4	22.8	19.7	12.5	9.15	12.8	7.76	8.97	9.1	49.8	28.2	100	128	294	290	79.5	408	345	398	394	378	406	412	396
Chromium	µg/L	7	5	< 4	1.1	6.8	< 1.0	< 1.0	< 1.0	< 1.0	< 0.50	< 0.50	< 0.50	< 0.50	0.77	0.11	< 0.10	< 5	10	4	6	4	1.3	9	< 25a	< 25a	< 25a	< 25a
Cobalt	µg/L	< 0.2	< 0.2	< 0.2	0.12	8.59	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.10	< 0.10	0.116	0.0096	4	2	2.3	1.2	2.8	2.57	2.95	< 5.0	< 5.0	< 5.0	< 5.0
Copper	µg/L	< 10a	< 10a	< 10a	< 1a	< 10a	< 1.0a	< 1.0a	< 1.0a	< 1.0a	< 1.0a	< 1.0a	< 1.0a	< 0.40a	< 0.40a	< 0.10	< 0.10	50	30	< 10a	20	10	18	10	< 25a	< 25a	< 25a	< 25a
Iron	µg/L	< 100	440	7,680	657	1,080	1,380	471	191	60	80	103	127	253	54	19,300	814	< 10	1,480	2,670	140	2,170	296	365	860	980	< 600a	450
Lead	µg/L	< 1	< 1	< 1	< 0.1	< 1	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 0.20	< 0.20	< 0.050	< 0.050	2	< 1	< 1	< 1	< 1	< 0.1	< 1.0	< 2.5	< 2.5	< 2.5	4.2
Lithium	µg/L	110	120	160	138	120	129	127	117	126	101	98	112	114	130	126	219	90	80	80	60	60	50	80	< 200	130	< 200	< 100
Magnesium	mg/L	89.2	87	88	78.6	81.3	89.5	91.9	85.3	90.3	75.9	73.7	82.7	86.3	81.8	80.9	103	1,760	1,740	2,200	1,800	1,490	1,780	1,800	1,630	1,680	1,720	1,630
Manganese	µg/L	203	40	366	48	66	70	32	25	15	19	25	27	104	20.5	411	303	313	289	473	370	500	296	407	440	590	380	381
Mercury	µg/L	-	-	-	-	-	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.010	< 0.010	< 0.010	< 0.010	-	-	-	-	-	-	-	< 0.20	< 0.20	< 0.20	< 0.20
Molybdenum	µg/L	7	< 1	2	0.9	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	1.2	1.7	2	2.04	0.37	0.743	0.621	80	90	88	100	93	101	108	104	99.5	89.6	92.1
Nickel	µg/L	< 10	< 10	< 10	< 1	< 10	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 0.40	< 0.40	0.166	0.063	< 5	23	20	10	20	14	10	< 25	< 25	< 25	< 25
Phosphorus	µg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Potassium	mg/L	14.2	13	15	11.4	12	14.1	14.1	13.9	13.8	12.9	12.9	13.7	13.8	13.4	14.8	17.7	84.2	79.3	110	91	104	85	66.3	79	82	84	80
Selenium	µg/L	< 6	< 6	< 6	< 0.6	< 6.0	< 2.0	< 2.0	< 2.0	< 2.0	< 1.0	< 1.0	< 1.0	< 0.50	< 0.50	< 0.10	< 0.10	11	5	8	20	11	24.4	18.5	< 50a	< 50a	< 50a	< 50a
Silicon	µg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Silver	µg/L	< 0.10	< 0.10	< 0.1	< 0.01	< 0.10	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.010	< 0.010	< 0.10	< 0.1	< 0.10	< 0.10	< 0.1	< 0.01	< 0.10	< 0.50	< 0.50	< 0.50	< 0.50
Sodium	mg/L	370	336	334	286	319	346	353	348	348	332	313	359	340	336	320	418	9,840	9,950	12,400	9,800	9,940	9,780	10,400	9,650	9,970	10,300	9,660
Strontium	µg/L	3,760	970	4,830	820	854	730	464	356	572	316	372	357	2,090	1,430	5,030	5,350	11,200	11,000	12,000	12,200	12,000	11,300	12,600	9,840	10,000	11,200	10,200
Sulfur	µg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Tellurium	µg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Thallium	µg/L	< 0.1	< 0.1	< 0.1	< 0.01	< 0.10	< 0.20	< 0.20	< 0.20	< 0.20	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.0040	< 0.0040	< 0.5	< 0.5	< 0.1	< 0.1	< 0.1	0.01	< 0.10	< 5.0a	< 5.0a	< 5.0a	< 5.0a
Thorium	µg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Tin	µg/L	< 1	18	< 1	< 0.1	< 1.0	< 30	< 30	< 30	< 30	< 30	< 30	< 30	< 0.20	< 0.20	< 0.050	< 0.050	< 10	< 10	< 1	< 1	< 1	< 0.1	< 1.0	< 600	< 300	< 600	< 300
Titanium	µg/L	< 10	< 100	< 100	< 10	< 10	< 50	< 50	< 50	< 50	< 50	< 50	< 50	< 5.0	< 5.0	< 0.20	0.28	814	603	< 10	< 100	< 100	< 10	< 100	< 200	< 100	< 200	< 100
Tungsten	µg/L	-	-	-	-	-	-	-	-	-	-	-	-	< 1.0	< 1.0	< 0.20	< 0.20	-	-	-	-	-	-	-	-	-	-	-
Uranium	µg/L	6	< 4	5	0.7	< 4.0	0.65	0.31	0.76	< 0.20	< 0.20	0.41	0.3	1.38	0.225	1.96	2.63	987	950	1,100	542	874	794	621	578	598	536	478
Vanadium	µg/L	2	1	< 1	0.4	1.91	< 30	< 30	< 30	< 30	< 30	< 30	< 30	< 1.0	< 1.0	0.23	< 0.20	4	4	2	2	3	1.2	3.37	< 600a	< 300a	< 600a	< 300a
Zinc	µg/L	40	< 10	150	3	< 10	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	17.6	< 4.0	< 1.0	< 1.0	30	40	30	10	20	13	< 10	< 100	< 50	< 100	< 50
Zirconium	µg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Associated CARO files available upon

Associated Exova file(s): 622178, 653600, 712940, 714233, 714243, 756693, 756810, 757047, 811364, 811710, 812030, 812741, 812985, 846260, 878316, 879073, 909346, 909448, 909654.

Table H2: Summary of Groundwater Analytical Results - Total Metals - HISTORICAL to 2025

Well ID		GL9-2		GL9-3																		GL10-1					
Sample ID		GL9-2-20150609	GL9-2-20151104	GL9-3-20080529	GL9-3-20081104	GL 9-3-20091111	GL9-3-20100810	GL9-3-20110628	GL 9-3-20120627	GL9-3-20121204	GL9-3-20130626	GL9-3-20131113	GL9-3-20140605	GL9-3-20141125	GL9-3-20150609	GL9-3-20151109	GL9-3-20160526	GL9-3-20170529	GL9-3-180528	GL9-3-190527	GL9-3-200608	GL9-3-210610	GL10-1-20091112	GL10-1-20100810	GL10-1-20110704	GL10-1-20120626	GL10-1-20121204	GL10-1-20130626
Sample Date		2015 06 09	2015 11 04	2008 05 29	2008 11 04	2009 11 11	2010 08 10	2011 06 28	2012 06 27	2012 12 04	2013 06 26	2013 11 13	2014 06 05	2014 11 25	2015 06 09	2015 11 09	2016 05 26	2017 05 29	2018 05 28	2019 05 27	2020 06 08	2021 06 10	2009 11 12	2010 08 10	2011 07 04	2012 06 26	2012 12 04	2013 06 26
Parameter	Unit	Analytical Results																									
Total Metals																											
Aluminum	µg/L	< 50	< 50	60	< 50a	723	80	< 5	< 50a	< 50a	< 150a	< 150a	< 150a	< 150a	< 50	< 50	< 50	< 50	< 5.0	13.7	159	3.3	< 50a	< 50a	< 5	< 50a	< 50a	< 150a
Antimony	µg/L	< 5.0	< 5.0	< 2	< 2	< 2	< 2	< 0.2	< 2	< 2	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 0.20	< 0.20	0.15	0.145	< 2	< 2	< 0.2	< 2	< 2	< 5.0
Arsenic	µg/L	< 5.0	< 5.0	27	23	19	18	2.9	5	7	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	5.1	0.89	1.16	1.19	0.746	17	32	1.1	10	9.6	< 5.0
Barium	µg/L	< 100	< 100	10	20	20	10	12	10	< 10	< 200	< 200	< 200	< 200	< 200	< 200	< 200	< 200	14.8	14.9	15.8	10.7	20	20	19	20	10	< 100
Beryllium	µg/L	< 50a	< 50a	< 1	< 1	< 0.4	< 0.4	< 0.04	< 0.4	< 0.40	< 100a	< 100a	< 100a	< 100a	< 100a	< 100a	< 100a	< 100a	< 0.10	< 0.10	0.021	< 0.010	< 0.4	< 0.4	< 0.04	< 0.4	< 0.40	< 50a
Bismuth	µg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Boron	µg/L	< 1,000a	< 1,000a	< 20	< 20	< 40	< 40	< 4	< 40	< 40	< 2,000a	< 2,000a	< 2,000a	< 2,000a	< 2,000a	< 2,000a	< 2,000a	< 2,000a	8.8	8.7	11.2	10.2	< 40	< 40	22	< 40	< 40	< 1,000a
Cadmium	µg/L	1.07	1.05	0.3	< 0.10a	0.35	< 0.1	0.21	0.1	< 0.10	< 2.5a	< 2.5a	< 2.5a	< 2.5a	< 0.25	< 0.25	< 0.25	< 0.25	0.302	0.212	0.145	0.133	0.23	< 0.1	0.12	< 0.1	< 0.10	< 2.5a
Calcium	mg/L	404	380	280	269	87	344	393	400	370	382	383	398	390	392	369	385	377	445	516	430	427	190	198	215	259	231	250
Chromium	µg/L	< 5.0	< 5.0	6	10	9	5	2.1	11	11.7	< 25a	< 25a	< 25a	< 25a	< 5.0	< 5.0	< 5.0	< 5.0	< 0.50	1.37	1.31	0.21	< 4	6	107	14	19.9	< 25a
Cobalt	µg/L	< 5.0	< 5.0	< 1	2	2.2	1.8	1.41	1.1	2.91	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	0.9	0.64	1.07	0.75	4.2	5	5.3	4.9	9.25	< 5.0
Copper	µg/L	< 10a	< 10a	60	40	10	20	22	20	20	< 25a	< 25a	< 25a	< 25a	< 10a	< 10a	< 10a	16	2.87	4.83	3.44	2.3	< 10a	20	11	10	10	< 25a
Iron	µg/L	570	480	40	20	380	580	< 5	150	< 50	< 600a	< 600a	< 600a	< 600a	< 600a	< 600a	< 600a	< 600a	12	16	19.3	2	460	480	558	1,150	247	1,050
Lead	µg/L	< 2.5	< 2.5	2	< 1	< 1	< 1	< 0.1	< 1	< 1	< 2.5	< 2.5	< 2.5	< 2.5	< 2.5	< 2.5	< 2.5	< 2.5	< 0.20	< 0.20	< 0.050	< 0.050	< 1	< 1	< 0.1	< 1	< 1.0	< 2.5
Lithium	µg/L	< 100	< 100	130	110	120	90	57	80	90	< 200	< 200	< 200	< 200	< 200	< 200	< 200	< 200	89.6	139	135	116	400	310	310	350	270	360
Magnesium	mg/L	1,610	1,560	2,440	2,530	< 0.1	2,330	2,760	2,500	2,300	2,280	2,310	2,380	2,300	2,280	2,140	2,350	2,470	2,480	2,760	2,230	2,350	1,590	1,440	1,890	1,970	1,890	1,720
Manganese	µg/L	134	211	66	116	378	377	68	110	35	< 100	110	110	< 100	< 100	< 100	< 100	140	271	153	217	137	1,820	2,120	1,830	1,940	1,760	1,810
Mercury	µg/L	< 0.20	< 0.20	-	-	-	-	-	-	-	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.010	< 0.010	< 0.010	< 0.010	-	-	-	-	-	< 0.20
Molybdenum	µg/L	96.7	98.7	70	80	96	82	75.1	74	86.2	72	78.7	75.7	74.4	75.4	83.5	75.9	116	98.4	112	110	91.3	98	91	82.3	71	76.2	61.5
Nickel	µg/L	< 25	< 25	< 5	30	20	20	11	10	10	< 25	< 25	< 25	< 25	< 25	< 25	< 25	< 25	5.9	5.29	6.26	4.96	50	60	56	60	50	35
Phosphorus	µg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Potassium	mg/L	75	74	108	98.9	148	130	103	114	97.2	110	116	114	121	113	112	118	121	165	167	238	132	46	57	46	46	38.4	44
Selenium	µg/L	< 2.5	< 2.5	19	15	10	20	32.1	16	22.1	< 50a	< 50a	< 50a	< 50a	< 2.5	< 2.5	< 2.5	< 2.5	1.39	1.24	1.94	0.49	7	12	88.9	24	29.6	< 50a
Silicon	µg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Silver	µg/L	< 0.50	< 0.50	< 0.10	< 0.1	< 0.10	< 0.1	< 0.01	< 0.1	< 0.10	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.050	< 0.050	0.016	0.012	< 0.1	0.26	0.1	< 0.10	< 0.10	< 0.50
Sodium	mg/L	9,660	9,170	12,600	12,800	14,000	12,700	12,900	11,900	12,000	11,500	11,300	11,800	11,600	11,300	10,800	11,900	12,800	12,600	13,900	12,900	12,100	7,710	7,660	7,700	7,670	7,800	7,920
Strontium	µg/L	10,300	9,750	13,100	11,200	11,700	13,400	12,900	12,800	13,700	10,800	11,000	11,700	11,400	11,400	10,600	11,200	10,700	15,300	12,900	13,000	11,800	17,400	19,200	18,600	20,300	19,500	15,200
Sulfur	µg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Tellurium	µg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Thallium	µg/L	< 0.50	< 0.50	< 0.5	0.5	0.52	0.24	0.34	0.24	0.47	< 5.0a	< 5.0a	< 5.0a	< 5.0a	< 0.50	< 0.50	< 0.50	< 0.50	0.44	0.429	0.409	0.37	0.6	0.21	0.23	0.22	0.3	< 5.0a
Thorium	µg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Tin	µg/L	< 300	< 300	< 10	< 10	< 1	< 1	< 0.1	< 1	< 1.0	< 600	< 600	< 600	< 600	< 600	< 600	< 600	< 600	< 0.20	< 0.20	< 0.050	< 0.050	< 1	< 1	< 0.1	< 1	< 1.0	< 300
Titanium	µg/L	< 100	< 100	1,040	809	< 10	< 100	< 10	< 100	< 100	< 200	< 200	< 200	< 200	< 200	< 200	< 200	< 200	< 5.0	< 5.0	0.83	< 0.20	< 10	< 100	< 10	< 100	< 100	< 100
Tungsten	µg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	< 1.0	0.5	0.39	-	-	-	-	-	-
Uranium	µg/L	483	496	1,760	1,370	1,480	1,550	1,510	1,190	1,680	1,450	1,470	1,510	1,400	1,380	1,440	1,410	1,430	1,680	1,620	1,780	1,430	2,540	2,190	2,470	2,230	2,490	1,930
Vanadium	µg/L	< 300a	< 300a	6	3	6	4	1.8	5	5.11	< 600a	< 600a	< 600a	< 600a	< 600a	< 600a	< 600a	< 600a	< 1.0	< 1.0	1.05	< 0.20	3	6	31.8	6	7.07	< 300a
Zinc	µg/L	< 50	< 50	50	60	20	20	15	20	10	< 100	< 100	< 100	< 100	< 100	< 100	< 100	< 100	< 4.0	< 4.0	1.5	1.4	10	10	9	20	< 10	< 50
Zirconium	µg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Associated CARO files available upon

Associated Exova file(s): 622178, 653600, 712940, 714233, 714243, 756693, 756810, 757047, 811364, 811710, 812030, 812741, 812985, 846260, 878316, 879073, 909346, 909448, 909654.

Table H2: Summary of Groundwater Analytical Results - Total Metals - HISTORICAL to 2025

Well ID						GL12-1																				
Sample ID		GL10-1-20140605	GL10-1-20141125	GL10-1-20150610	GL10-1-20151109	GL 12-1-20111218	GL12-1-20091112	GL12-1-20100811	GL12-1-20110629	GL12-1-20120625	GL12-1-20121204	GL12-1-20130626	GL12-1-20131113	GL12-1-20140604	GL12-1-20141118	GL12-1-20150609	GL12-1-20151104	GL12-1-20160524	GL12-1-20160921	GL12-1-20170529	GL12-1-20170926	GL12-1-180604	GL12-1-180919	GL12-1-190527	GL12-1-190919	GL12-1-200610	GL12-1-201102	GL12-1-210525
Sample Date		2014 06 05	2014 11 25	2015 06 10	2015 11 09	2011 12 18	2009 11 12	2010 08 11	2011 06 29	2012 06 25	2012 12 04	2013 06 26	2013 11 13	2014 06 04	2014 11 18	2015 06 09	2015 11 04	2016 05 24	2016 09 21	2017 05 29	2017 09 26	2018 06 04	2018 09 19	2019 05 27	2019 09 19	2020 06 10	2020 11 02	2021 05 25
Parameter	Unit	Analytical Results																								
Total Metals																										
Aluminum	µg/L	< 150a	< 150a	< 50	< 20	< 50a	77	< 50a	< 5	< 50a	< 50a	< 15a	< 15a	< 15a	< 15a	< 10	< 10	23	103	293	86	19.6	20.8	17.4	12.4	< 100a	15.9	9.8
Antimony	µg/L	< 5.0	< 5.0	< 5.0	< 2.0	7	< 2	< 2	0.6	< 2	< 2.0	< 0.50	0.55	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	0.66	< 0.50	< 0.20	< 0.20	< 0.20	< 0.20	< 5.00	0.114	0.089
Arsenic	µg/L	< 5.0	< 5.0	< 5.0	< 2.0	2	< 2	< 2	< 0.2	< 2	< 2.0	< 1.0	< 1.0	8.6	6.1	17.1	9.3	16.7	16.5	31.7	24.2	10.7	24	13.3	24.2	21	22	11.4
Barium	µg/L	< 100	< 100	< 100	< 100	10	< 10	< 10	10	10	10	< 20	< 20	< 20	< 30	22	< 20	25	32	37	40	39.4	45.8	37.2	35	48.7	43.9	33.5
Beryllium	µg/L	< 50a	< 50a	< 50a	< 50a	< 0.4	< 0.4	< 0.4	< 0.04	< 0.4	< 0.40	< 10a	< 10a	< 10a	< 15a	< 10a	< 10a	< 10a	< 10a	< 5.0a	< 10a	< 0.10	< 0.10	< 0.10	< 0.10	< 1.00	0.073	0.048
Bismuth	µg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Boron	µg/L	< 1,000a	< 1,000a	< 1,000a	< 1,000a	50	< 40	< 40	8	< 40	< 40	< 200	< 200	< 200	< 300	< 200	< 200	< 200	330	540	340	201	167	137	117	214	94.2	95.7
Cadmium	µg/L	< 2.5a	< 2.5a	< 0.25	< 0.10	0.4	0.1	< 0.1	0.12	0.15	0.33	0.31	0.36	0.47	< 0.25	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	0.03	0.017	0.026	< 0.010	< 0.200	0.0075	0.0078
Calcium	mg/L	214	217	231	228	420	411	400	435	473	472	472	489	493	467	503	451	497	481	378	449	469	521	474	500	583	642	512
Chromium	µg/L	< 25a	< 25a	< 5.0	< 2.0	6	< 4	< 4	3.2	< 4	6.8	< 2.5	< 2.5	< 2.5	< 2.5	0.83	< 0.50	1.8	3.26	12.8	6.58	3.31	3.34	2.99	2.53	< 10.0a	1.99	1.93
Cobalt	µg/L	< 5.0	< 5.0	< 5.0	3	0.9	0.7	0.9	0.84	1.6	2.43	0.51	1.03	6.31	30	13	10.6	9.8	5.4	4.08	4.92	3.43	4.79	4.6	4.91	4.54	5.17	7.35
Copper	µg/L	< 25a	< 25a	< 10a	4.1	30	10	< 10a	8	20	20	16.8	18.5	47.7	3.8	1.4	1.1	< 1.0a	< 1.0a	1	1.5	0.5	0.56	0.55	0.41	< 10.0a	0.5	0.53
Iron	µg/L	710	1,450	1,330	< 300	< 5	140	140	13	640	< 5	< 60	< 60	62	786	4,410	3,880	8,900	5,340	6,070	12,700	8,590	19,600	12,500	20,500	19,700	24,400	14,800
Lead	µg/L	< 2.5	< 2.5	< 2.5	< 1.0	< 1	< 1	< 1	< 0.1	< 1	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 0.20	< 0.20	< 0.20	< 0.20	< 5.00	< 0.050	0.054
Lithium	µg/L	310	320	290	290	160	130	120	123	140	140	177	262	213	192	185	161	179	188	137	133	118	143	128	126	144	133	161
Magnesium	mg/L	1,460	1,460	1,380	1,310	513	540	504	541	569	591	616	652	694	667	638	572	631	579	404	513	539	628	648	626	736	757	683
Manganese	µg/L	1,530	1,540	1,450	1,370	466	19	68	< 1	790	778	549	696	2,280	4,640	8,750	4,230	10,100	13,800	8,180	11,600	15,000	15,700	14,800	16,700	22,000	21,300	15,200
Mercury	µg/L	< 0.20	< 0.20	< 0.20	< 0.20	-	-	-	-	-	-	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010
Molybdenum	µg/L	66.8	66.4	64.3	67.2	30	16	18	24.2	23	27.6	30.4	35.6	48.4	47.6	41.5	33	30.4	15.6	10.6	14.9	24.2	29.3	30.7	28.5	21.2	21.4	27.8
Nickel	µg/L	39	26	28	25	30	10	20	14	20	20	12	14.9	32	30.7	39.2	27.7	29.5	28.6	25.2	23.4	17.6	21.3	20.9	20.3	27.1	24.7	27.6
Phosphorus	µg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Potassium	mg/L	39	40	35	36	17.6	18.6	17	17.9	21	19.2	23.5	24.8	55.7	42.8	32.7	32.1	57.3	87.8	195	145	87.9	79.2	66.6	61.4	85.1	82.4	70.6
Selenium	µg/L	< 50a	< 50a	< 2.5	< 1.0	< 6	< 6	< 6	18.1	< 6	< 6.0	< 5.0	< 5.0	< 5.0	< 5.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	0.5	< 0.50	< 0.50	< 0.50	< 10.0	0.51	0.42
Silicon	µg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Silver	µg/L	< 0.50	< 0.50	< 0.50	< 0.20	< 0.10	< 0.10	< 0.1	< 0.01	< 0.10	< 0.10	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 1.00	< 0.010	< 0.010
Sodium	mg/L	6,440	6,460	5,830	5,530	863	883	896	870	952	1,010	1,130	1,110	1,290	1,240	982	982	1,070	983	712	805	805	919	909	859	780	895	816
Strontium	µg/L	13,600	13,600	14,100	13,300	13,600	11,300	11,700	11,200	12,900	13,300	11,000	11,000	11,100	11,500	10,600	10,500	11,000	10,400	7,740	9,860	10,600	10,800	12,300	13,100	13,600	15,000	12,800
Sulfur	µg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Tellurium	µg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Thallium	µg/L	< 5.0a	< 5.0a	< 0.50	< 0.20	0.62	0.13	0.13	0.09	0.19	0.3	< 0.50	< 0.50	< 0.50	< 0.50	0.073	0.153	< 0.050	< 0.050	< 0.050	< 0.050	0.03	< 0.020	0.021	< 0.020	< 0.400	0.0204	0.0269
Thorium	µg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Tin	µg/L	< 300	< 300	< 300	< 300	2	< 1	< 1	< 0.1	< 1	< 1.0	< 60	< 60	< 60	< 90	< 60	< 60	< 60	< 60	< 30	< 60	< 0.20	< 0.20	< 0.20	< 0.20	< 5.00	< 0.050	0.052
Titanium	µg/L	< 100	< 100	< 100	< 100	< 10	< 10	< 100	< 10	< 100	< 10	< 50	< 50	< 50	< 50	< 50	< 50	62	< 50	< 50	< 50	5.9	7.8	< 5.0	< 5.0	< 20.0	2.44	1.36
Tungsten	µg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	< 1.0	< 1.0	< 1.0	< 1.0	< 20.0	< 0.20	< 0.20
Uranium	µg/L	1,770	1,640	1,660	1,660	272	250	206	205	210	272	325	332	278	343	312	263	204	207	120	127	151	205	225	227	288	260	250
Vanadium	µg/L	< 300a	< 300a	< 300a	< 300a	< 1	< 1	< 1	1.3	1	2.51	< 60	< 60	< 60	< 90	< 60	< 60	< 60	< 60	< 30	< 60	4.2	6	3	3.6	< 20.0	1.84	1.38
Zinc	µg/L	< 50	< 50	< 50	< 50	< 10	10	< 10	4	10	< 10	< 10	< 10	< 10	< 15	< 10	< 10	< 10	< 10	< 5.0	< 10	< 4.0	< 4.0	< 4.0	< 4.0	< 100	1.3	2.6
Zirconium	µg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Associated CARO files available upon

Associated Exova file(s): 622178, 653600, 712940, 714233, 714243, 756693, 756810, 757047, 811364, 811710, 812030, 812741, 812985, 846260, 878316, 879073, 909346, 909448, 909654.

Table H2: Summary of Groundwater Analytical Results - Total Metals - HISTORICAL to 2025

Well ID		GL12-1			GL13-1						GL14-1						GL15-1											
Sample ID		GL12-1-211005	GL12-1-220607	GL12-1-221005	GL13-1-20091117	GL13-1-20100811	GL13-1-20110627	GL13-1-20111217	GL13-1-20120625	GL13-1-20121204	GL14-1-20091116	GL14-1-20100811	GL14-1-20110704	GL14-1-20120627	GL14-1-20120704	GL14-1-20121204	GL15-1-20091117	GL15-1-20140604	GL15-1-20141117	GL15-1-20150610	GL15-1-20151103	GL15-1-20160920	GL15-1-20170925	GL15-1-180928	GL15-1-190924	GL15-1-201104	GL15-1-211007	GL15-1-221005
Sample Date		2021 10 05	2022 06 07	2022 10 05	2009 11 17	2010 08 11	2011 06 27	2011 12 17	2012 06 25	2012 12 04	2009 11 16	2010 08 11	2011 07 04	2012 06 27	2012 07 04	2012 12 04	2009 11 17	2014 06 04	2014 11 17	2015 06 10	2015 11 03	2016 09 20	2017 09 25	2018 09 28	2019 09 24	2020 11 04	2021 10 07	2022 10 05
Parameter	Unit	Analytical Results																										
Total Metals																												
Aluminum	µg/L	< 100	12.3	12.6	74	79	< 50a	< 50a	< 50a	< 50a	535	146	87	< 50a	-	659	< 50a	< 10a	< 10a	< 10	< 10	< 10	< 10	5.8	< 5.0	< 1.0	4.8	<3.0
Antimony	µg/L	< 5.00	<0.250	<0.250	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 0.2	< 2	-	< 2.0	< 2	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.20	< 0.20	0.261	0.107	<0.050
Arsenic	µg/L	20.5	10.2	16.5	3	3	2	4	< 2	< 2.0	3	3	2.2	< 2	-	< 2.0	< 2	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 0.50	< 0.50	0.633	0.443	0.333
Barium	µg/L	28	29.2	27.8	< 10	< 10	< 10	< 10	< 10	< 10	20	20	19	20	-	20	70	29	31	28	32	36	28	27.6	30.5	136	40.8	30.2
Beryllium	µg/L	< 1.00	<0.050	0.057	< 0.4	< 0.4	< 0.4	< 0.4	< 0.4	< 0.40	< 0.4	< 0.4	< 0.04	< 0.4	-	< 0.40	< 0.4	< 5.0a	< 5.0a	< 5.0a	< 5.0a	< 5.0a	< 5.0a	< 0.10	< 0.10	< 0.010	< 0.010	<0.010
Bismuth	µg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Boron	µg/L	115	68	57.1	< 40	< 40	< 40	< 40	< 40	< 40	190	200	185	200	-	210	< 40	< 100	< 100	< 100	< 100	< 100	< 100	9	14	16.1	9.6	7.9
Cadmium	µg/L	< 0.200	<0.0100	<0.0100	0.18	< 0.1	0.13	0.12	0.2	< 0.10	< 0.1	< 0.10	0.02	< 0.1	-	< 0.10a	0.2	0.339	< 0.050	0.136	< 0.050	0.363	0.141	0.038	0.02	0.528	0.0891	0.0571
Calcium	mg/L	521	484	456	278	308	326	292	305	284	5.8	5	7.3	6	-	5.36	101	31.9	32.3	32.7	32.8	36.3	31.9	31.3	31	220	45.3	34.1
Chromium	µg/L	< 10.0a	1.58	1.97	< 4	< 4	< 4	7	< 4	7.6	< 4	< 4	16.9	4	-	6.7	< 4	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	0.37	0.23	0.21
Cobalt	µg/L	5.87	6.16	5.84	1	0.9	1.4	0.4	0.7	8.8	0.5	0.4	0.36	< 0.2	-	9.04	0.4	< 0.50	0.5	< 0.50	1.69	< 0.50	< 0.50	< 0.10	< 0.10	0.526	0.0243	0.0056
Copper	µg/L	< 10.0	0.89	0.64	< 10a	< 10a	< 10a	10	< 10a	10	< 10a	< 10a	2	< 10a	-	< 10a	< 10a	< 1.0a	< 1.0a	< 1.0a	< 1.0a	< 1.0a	< 1.0a	< 0.40a	0.14	4.01	2.84	1.2
Iron	µg/L	23,100	15,500	21,000	200	340	47	< 5	< 50	< 50	490	150	72	330	-	483	< 100	< 30	< 30	< 30	73	< 30	< 30	< 10	< 10	5.9	2.5	<2.0
Lead	µg/L	< 5.00	<0.250	<0.250	< 1	< 1	< 1	< 1	< 1	< 1.0	< 1	< 1	< 0.1	< 1	-	< 1.0	< 1	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 0.20	< 0.20	< 0.050	0.051	<0.050
Lithium	µg/L	134	99	107	90	80	100	120	80	60	140	130	121	130	-	110	20	< 50	< 50	< 50	< 50	< 50	< 50	17.8	17.8	32.5	15.4	16.7
Magnesium	mg/L	689	609	553	689	675	762	673	684	664	6.2	6	7.2	6	-	5.35	109	62.1	63.1	62.4	61.7	71.3	59.8	61.8	60.6	238	86	63.1
Manganese	µg/L	14,000	13,700	12,400	325	138	207	46	520	23	42	32	41	< 10	-	26	21	67	148	88	210	24	20	32.8	45.2	52.1	0.375	0.794
Mercury	µg/L	< 0.010	< 0.010	< 0.010	-	-	-	-	-	-	-	-	-	-	-	-	-	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010
Molybdenum	µg/L	24	24.2	21.4	53	43	44	55	50	45.8	9	9	8.2	5	-	8.44	6	5.7	6	5.6	5.8	5.9	5.4	5.71	6.18	10.2	7.52	6.51
Nickel	µg/L	26.6	25	22.6	10	20	10	20	10	< 10	< 10	< 10	< 1	< 10	-	< 10	< 10	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 0.40	0.63	4.73	1.03	0.359
Phosphorus	µg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Potassium	mg/L	66.1	72.6	65	21	22	20.2	19	20	18.3	1.1	3	1.6	< 1	-	1.1	2.9	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	1.44	1.55	5.5	2.12	1.62
Selenium	µg/L	< 10.0	<0.50	<0.50	< 6	< 6	< 6	< 6	9	7.3	< 6	< 6	19	< 6	-	< 6.0	< 6	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 0.50	< 0.50	19.9	1.53	0.25
Silicon	µg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Silver	µg/L	< 1.00	0.114	<0.050	< 0.10	< 0.1	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.1	< 0.01	< 0.10	-	< 0.10	< 0.10	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.010	< 0.010	<0.010
Sodium	mg/L	882	708	606	1,640	1,660	1,760	1,610	1,670	1,660	381	399	413	424	-	418	163	176	178	191	189	182	175	177	173	437	212	172
Strontium	µg/L	12,200	13,000	11,900	7,550	8,060	8,180	9,590	8,250	8,720	1,470	1,470	1,390	1,490	-	1,510	5,710	3,260	3,440	3,550	3,700	3,850	3,480	3,470	3,690	12,900	4,920	3,790
Sulfur	µg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Tellurium	µg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Thallium	µg/L	< 0.400	<0.0200	0.0251	< 0.1	< 0.1	< 0.1	0.43	< 0.1	< 0.10	< 0.1	< 0.1	< 0.01	< 0.1	-	< 0.10	< 0.1	< 0.20	< 0.20	< 0.010	< 0.010	0.012	< 0.010	< 0.020	< 0.020	0.0152	0.0073	0.0061
Thorium	µg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Tin	µg/L	< 5.00	<0.250	<0.250	5	< 1	< 1	< 1	< 1	< 1.0	< 1	< 1	< 0.1	< 1	-	< 1.0	< 1	< 30	< 30	< 30	< 30	< 30	< 30	< 0.20	< 0.20	< 0.050	0.07	<0.050
Titanium	µg/L	< 20.0	<1.00	1.23	< 10	< 100	< 10	< 10	< 100	< 100	< 10	< 100	< 10	< 100	-	36	< 10	< 50	< 50	< 50	< 50	< 50	< 50	< 5.0	< 5.0	< 0.20	< 0.20	<0.20
Tungsten	µg/L	< 20.0	<1.00	<1.00	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	< 1.0	< 1.0	< 0.20	< 0.20	<0.20
Uranium	µg/L	211	212	212	142	128	178	193	124	194	< 4	< 4	1.3	< 4	-	< 4.0	31	5.16	5.76	5.13	5.66	6.74	5.97	5.67	6.04	95.8	13.6	6.35
Vanadium	µg/L	< 20.0	<5.00	<5.00	< 1	1	1	4	1	2.72	8	9	9.4	5	-	7.42	2	< 30	< 30	< 30	< 30	< 30	< 30	< 1.0	1	5.75	1.32	1.12
Zinc	µg/L	< 100	<5.0	<5.0	< 10	< 10	20	< 10	10	< 10	20	< 10	2	< 10	-	< 10	< 10	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 4.0	< 4.0	2.2	2.1	1.1
Zirconium	µg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Associated CARO files available upon

Associated Exova file(s): 622178, 653600, 712940, 714233, 714243, 756693, 756810, 757047, 811364, 811710, 812030, 812741, 812985, 846260, 878316, 879073, 909346, 909448, 909654.

Table H2: Summary of Groundwater Analytical Results - Total Metals - HISTORICAL to 2025

Well ID		GL15-1			GL15-2																	GL16-1					
Sample ID		GL15-1-231025	GL15-1	GL15-1	GL15-2-20110704	GL15-2-20120627	GL15-2-20121205	GL15-2-20130708	GL15-2-20140604	GL15-2-20141117	GL15-2-20150610	GL15-2-20151103	GL15-2-20160920	GL15-2-20170925	GL15-2-180928	GL15-2-190924	GL15-2-201104	GL15-2-211007	GL15-2-221005	GL15-2-231025	GL15-2	GL15-2	GL 16-1-20091111	GL 16-1-20111217	GL16-1-20100811	GL16-1-20110627	GL16-1-20120626	GL16-1-20121204
Sample Date		2023 10 25	2024-09-17	2025 08 21	2011 07 04	2012 06 27	2012 12 05	2013 07 08	2014 06 04	2014 11 17	2015 06 10	2015 11 03	2016 09 20	2017 09 25	2018 09 28	2019 09 24	2020 11 04	2021 10 07	2022 10 05	2023 10 25	2024-09-18	2025 09 16	2009 11 11	2011 12 17	2010 08 11	2011 06 27	2012 06 26	2012 12 04
Parameter	Unit	Analytical Results																									
Total Metals																											
Aluminum	µg/L	<1.0	2.2	1.8	< 5	< 50a	54	< 15a	< 15a	< 15a	< 10	< 10	< 10	< 10	< 5.0	< 5.0	1.1	8.7	<5.0	15.9	2.6	1.1	124	< 50a	379	< 50a	< 50a	< 50a
Antimony	µg/L	<0.050	0.055	<0.050	< 0.2	< 2	< 2.0	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.20	< 0.20	0.103	0.085	<0.250	<0.100	<0.100	<0.050	< 2	2	< 2	< 2	< 2	< 2.0
Arsenic	µg/L	0.336	0.349	0.336	1.3	< 2	< 2.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	0.73	0.72	0.95	0.84	0.641	0.643	0.542	0.497	15	5	6	4	21	23
Barium	µg/L	31.2	33.6	36.5	18	20	20	< 20	< 20	< 20	< 20	< 20	< 50	< 20	12.8	20.1	20.8	18.8	13.3	15	13.9	17.3	10	10	10	20	20	20
Beryllium	µg/L	<0.010	<0.010	<0.010	< 0.04	< 0.4	< 0.40	< 10a	< 10a	< 10a	< 10a	< 10a	< 25a	< 10a	< 0.10	< 0.10	< 0.010	< 0.010	<0.050	<0.020	<0.020	<0.010	< 0.4	< 0.4	< 0.4	< 0.4	< 0.4	< 0.40
Bismuth	µg/L	-	<0.010	<0.010	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.021	<0.010	-	-	-	-	-	-
Boron	µg/L	11.3	12.6	11.5	17	< 40	40	< 200	< 200	< 200	< 200	< 200	< 500	< 200	12.2	17	9.8	6.2	<10.0	9.3	13.5	14.8	60	80	70	80	50	70
Cadmium	µg/L	0.0424	0.108	0.141	0.15	< 0.1	0.1	< 0.25	< 0.25	0.55	0.276	0.129	0.06	0.061	0.041	0.045	0.0432	0.0516	0.0477	0.0452	0.0466	1.06	0.14	0.21	< 0.1	< 0.1	< 0.1	< 0.10
Calcium	mg/L	39.2	35.2	41.2	261	397	414	423	346	339	393	409	458	368	284	336	538	< 4	285	361	346	310	180	108	174	127	143	103
Chromium	µg/L	<0.50	<0.50	<0.50	17.8	7	9	5.9	5.5	4.2	6.68	6.98	9.67	8.64	4.77	5.62	22.4	17.9	6.69	8.25	3.53	1.48	< 4	7	< 4	< 4	< 4	9.6
Cobalt	µg/L	0.0624	0.0750	0.258	0.67	< 0.2	< 0.20	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	0.19	0.19	0.297	0.234	0.167	0.182	0.109	0.0669	2.6	< 0.2	2.2	0.2	1.9	1.77
Copper	µg/L	0.59	0.11	0.15	5	< 10a	< 10a	2.6	< 2.5a	2.6	2.3	2.7	2.8	3	2.92	2.61	4.75	5.05	3.21	2.36	1.73	1.17	< 10a	10	< 10a	< 10a	< 10a	< 10a
Iron	µg/L	99.7	38.6	4.8	10	400	< 5	< 60	< 60	< 60	< 60	< 60	< 150	< 60	< 10	< 10	< 2.0	3	<10.0	27.4	<4.0	<2.0	620	< 5	450	7	2,400	4,510
Lead	µg/L	<0.050	<0.050	<0.050	< 0.1	< 1	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 0.20	< 0.20	< 0.050	< 0.050	<0.250	<0.100	<0.100	<0.050	< 1	< 1	< 1	< 1	< 1	< 1
Lithium	µg/L	18.1	19.2	17.8	39	40	60	58	61	51	< 50	< 50	63	55	49.2	52.8	64.9	36.1	39.6	44.4	41.6	52	320	320	260	300	270	230
Magnesium	mg/L	68.5	71.8	75.1	350	562	618	696	588	584	661	703	938	795	629	638	1,190	< 0.5	581	581	524	366	339	174	307	216	220	186
Manganese	µg/L	66	85.6	103	< 1	< 10	< 1	< 10	< 10	< 10	< 10	< 10	< 25	< 10	< 0.20	0.28	0.088	0.258	1.18	1.04	0.208	0.939	960	40	1,060	58	900	1,020
Mercury	µg/L	<0.010	<0.010	<0.010	-	-	-	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	<0.010	<0.010	<0.010	-	-	-	-	-	-
Molybdenum	µg/L	6.26	5.06	6.47	11.7	7	12.7	13	12.2	13.1	12.5	14.1	14.1	15	17.8	17.4	21.3	24.2	19	18.8	16.6	13.7	15	15	12	15	12	10.6
Nickel	µg/L	0.458	0.573	1.4	23	< 10	< 10	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	1.69	1.66	2.8	2.19	1.89	1.53	1.33	1.51	10	< 10	10	< 10	< 10	< 10
Phosphorus	µg/L	-	20	19	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<20	10	-	-	-	-	-	-
Potassium	mg/L	1.5	1.75	1.7	10	10	9.1	14.1	12.5	13.2	13	13.3	16	15.1	13.9	13	20.3	19.7	11.4	11	11.8	11.5	28	18.4	27	21.1	23	18
Selenium	µg/L	0.19	0.10	0.26	49.8	32	34.9	47.3	36.4	30.3	41.9	44.1	62.8	51.9	19.3	28.3	82.1	51.1	12.3	21	12.5	6.58	< 6	< 6	< 6	< 6	< 6	< 6.0
Silicon	µg/L	-	11,000	9,950	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	10,700	11,100	-	-	-	-	-	-
Silver	µg/L	<0.010	<0.010	<0.010	< 0.01	< 0.10	< 0.10	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.010	< 0.010	<0.050	<0.020	<0.020	0.013	< 0.10	< 0.10	< 0.1	< 0.1	< 0.10	< 0.10
Sodium	mg/L	183	214	192	406	590	670	786	763	720	814	858	1,150	1,070	992	794	1,630	< 1	786	838	696	527	26.8	991	1,470	1,130	1,120	1,030
Strontium	µg/L	4210	4,170	4,760	7,230	9,840	10,400	8,850	7,560	7,680	8,660	9,520	11,400	8,810	6,020	8,810	14,900	< 10.0	6830	8430	7,710	8,310	21,100	20,600	19,800	20,600	23,200	20,800
Sulfur	µg/L	-	107,000	122,000	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1,260,000	1,020,000	-	-	-	-	-	-
Tellurium	µg/L	-	<0.050	<0.050	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.100	<0.050	-	-	-	-	-	-
Thallium	µg/L	<0.0040	<0.0040	0.0062	0.03	< 0.1	< 0.10	< 0.50	< 0.50	< 0.50	< 0.050	< 0.050	< 0.050	< 0.050	< 0.020	< 0.020	0.0104	0.0093	<0.0200	<0.0080	<0.0080	0.0077	< 0.1	0.34	< 0.1	< 0.1	< 0.1	< 0.10
Thorium	µg/L	-	<0.010	<0.010	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.020	<0.010	-	-	-	-	-	-
Tin	µg/L	<0.050	<0.050	<0.100	< 0.1	< 1	< 1.0	< 60	< 60	< 60	< 60	< 60	< 150	< 60	< 0.20	< 0.20	< 0.050	< 0.050	<0.250	<0.100	<0.100	<0.100	< 1	< 1	< 1	< 1	< 1	< 1.0
Titanium	µg/L	<0.20	<0.20	<0.20	< 10	< 100	< 1,000	< 50	< 50	< 50	< 50	< 50	< 50	< 50	< 5.0	< 5.0	< 0.20	0.22	<1.00	0.54	<0.40	<0.20	< 10	< 10	< 100	< 10	< 100	< 10
Tungsten	µg/L	<0.20	0.27	<0.20	-	-	-	-	-	-	-	-	-	-	< 1.0	< 1.0	0.32	0.68	<1.00	<0.40	2.38	2.23	-	-	-	-	-	-
Uranium	µg/L	7.97	7.00	9.72	149	258	332	393	336	316	349	383	511	423	318	355	549	453	329	362	260	179	5	12	13	13	10	9.2
Vanadium	µg/L	<1.00	<1.00	1.43	5.9	2	2.65	< 60	< 60	< 60	< 60	< 60	< 150a	< 60	2.1	2	2.84	2.47	<5.00	<2.00	<2.00	1.08	2	4	2	1	2	2.94
Zinc	µg/L	<1.0	<1.0	<1.0	6	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 25	< 10	< 4.0	< 4.0	< 1.0	1.3	<5.0	<2.0	<2.0	3	10	< 10	< 10	< 10	10	< 10
Zirconium	µg/L	-	0.033	0.055	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.124	0.061	-	-	-	-	-	-

Associated CARO files available upon

Associated Exova file(s): 622178, 653600, 712940, 714233, 714243, 756693, 756810, 757047, 811364, 811710, 812030, 812741, 812985, 846260, 878316, 879073, 909346, 909448, 909654.

Table H2: Summary of Groundwater Analytical Results - Total Metals - HISTORICAL to 2025

Well ID		GL16-1															GL17-1										
Sample ID		GL16-1-20130626	GL16-1-20131113	GL16-1-20140605	GL16-1-20141118	GL16-1-20150610	GL16-1-20151103	GL16-1-20160524	GL16-1-20170525	GL16-1-180604	GL16-1-190529	GL16-1-200608	GL16-1-210609	GL16-1-220602	GL16-1	GL16-1	GL17-1-20091112	GL17-1-20100811	GL17-1-20110628	GL17-1-20120625	GL17-1-20121204	GL17-1-20160526	GL17-1-20160919	GL17-1-20170531	GL17-1-20170926	GL17-1-180604	GL17-1-180919	GL17-1-190527
Sample Date		2013 06 26	2013 11 13	2014 06 05	2014 11 18	2015 06 10	2015 11 03	2016 05 24	2017 05 25	2018 06 04	2019 05 29	2020 06 08	2021 06 09	2022 06 02	2024-05-14	2025 05 13	2009 11 12	2010 08 11	2011 06 28	2012 06 25	2012 12 04	2016 05 26	2016 09 19	2017 05 31	2017 09 26	2018 06 04	2018 09 19	2019 05 27
Parameter	Unit	Analytical Results																									
Total Metals																											
Aluminum	µg/L	< 15a	< 15a	< 15a	< 15a	< 10	< 10	< 10	< 10	< 5.0	15.5	3.6	3	<5.0	<2.0	<2.0	72	< 50a	< 5	< 50a	< 50a	< 10	< 10	< 10	< 10	< 5.0	< 5.0	< 5.0
Antimony	µg/L	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.20	< 0.20	0.062	0.085	<0.250	<0.100	<0.100	< 2	< 2	< 0.2	< 2	< 2	< 0.50	< 0.50	< 0.50	< 0.50	< 0.20	< 0.20	< 0.20
Arsenic	µg/L	16.4	7.1	12.2	8.7	14.4	7.1	7.5	7.5	5.98	6.51	18.4	10.7	12.3	16.5	18.6	3	3	1.8	2	3.2	< 1.0	1.4	2.4	2.1	1.64	1.06	2.22
Barium	µg/L	< 20	< 20	< 20	< 20	< 20	< 20	< 20	< 20	13.4	16.2	13.6	15.1	16	14.6	16	10	10	16	220	220	231	178	216	212	198	185	220
Beryllium	µg/L	< 10a	< 5.0a	< 10a	< 5.0a	< 10a	< 5.0a	< 5.0a	< 5.0a	< 0.10	< 0.10	0.011	< 0.010	<0.050	<0.020	<0.020	< 0.4	< 0.4	< 0.04	< 0.4	< 0.40	< 5.0a	< 5.0a	< 5.0a	< 5.0a	< 0.10	< 0.10	< 0.10
Bismuth	µg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.020	<0.020	-	-	-	-	-	-	-	-	-	-	-	-
Boron	µg/L	< 200	< 100	< 200	< 100	< 200	< 100	< 100	< 100	71	71.1	65.3	71.2	76.5	74.2	70.4	< 40	< 40	14	40	40	< 100	< 100	< 100	< 100	81.8	74.7	87.1
Cadmium	µg/L	< 0.25	< 0.25	< 0.25	< 0.25	0.101	1.64	0.508	0.418	0.172	0.154	0.057	0.0338	0.0242	0.0367	0.0205	< 0.1	< 0.10	0.11	< 0.1	< 0.10	< 0.050	< 0.050	< 0.050	< 0.050	< 0.010	< 0.010	< 0.010
Calcium	mg/L	123	104	108	92.3	106	95.4	90.1	92.8	96.5	89.6	95.1	87.9	73.5	68.9	75.8	341	355	381	20	15.9	18.8	19.8	20	19.5	22	22.6	20.8
Chromium	µg/L	< 2.5	< 2.5	< 2.5	< 2.5	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	0.81	0.6	< 0.10	<0.50	<1.00	<1.00	< 4	< 4	1.1	4	11.2	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	0.85
Cobalt	µg/L	1.56	< 0.50	1.14	< 0.50	1.24	< 0.50	< 0.50	< 0.50	< 0.10	< 0.10	0.567	0.216	0.198	0.378	0.641	4.8	5.1	7.97	1	6.11	< 0.50	< 0.50	< 0.50	< 0.50	0.26	0.12	0.23
Copper	µg/L	< 2.5a	< 2.5a	< 2.5a	< 2.5a	< 1.0a	1.3	< 1.0a	< 1.0a	0.63	0.57	0.93	0.48	1.39	1.78	<0.20	< 10a	< 10a	4	< 10a	< 10a	< 1.0a	< 1.0a	< 1.0a	< 1.0a	< 0.40a	< 0.40a	< 0.40a
Iron	µg/L	1,380	91	860	256	1,020	< 30	< 30	< 30	< 10	< 10	424	78.9	235	889	871	4,680	920	2,170	880	643	961	836	1,680	1,430	1,250	626	1,450
Lead	µg/L	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 0.20	< 0.20	0.2	< 0.050	<0.250	<0.100	<0.100	< 1	< 1	< 0.1	< 1	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 0.20	< 0.20	< 0.20
Lithium	µg/L	267	256	266	268	260	256	250	276	256	259	249	285	278	229	250	110	90	94	200	170	243	184	227	227	231	206	237
Magnesium	mg/L	179	168	160	149	154	143	140	146	126	129	112	106	113	107	106	617	582	638	18	14.2	17.4	17.8	18.2	17.5	17.4	17.9	17.4
Manganese	µg/L	821	90	767	277	819	60	< 10	< 10	0.45	4.19	335	170	153	377	555	3,640	3,290	3,260	70	111	62	58	69	57	46.5	42.5	53.8
Mercury	µg/L	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	<0.010	<0.010	-	-	-	-	-	< 0.20	< 0.20	< 0.20	< 0.20	< 0.010	< 0.010	< 0.010
Molybdenum	µg/L	14.7	15.2	13.2	15.5	14.4	15.1	15.5	14.6	15.5	18	16.7	15.9	15.8	15.8	15.6	38	36	35	< 1	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	0.42	0.35	0.45
Nickel	µg/L	< 5.0	12.7	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 0.40	1.19	1.05	0.885	0.779	2.05	1.33	30	30	31	< 10	< 10	< 5.0	< 5.0	< 5.0	< 5.0	< 0.40	< 0.40	0.51
Phosphorus	µg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	59	96	-	-	-	-	-	-	-	-	-	-	-	-
Potassium	mg/L	20.9	19.9	19.5	19.5	19.1	18.7	18.7	19.7	18.1	18.5	19.9	17.9	16.5	17.5	18.4	20	22	17.3	15	13.2	14.9	14	15	14.9	14.4	13.7	14.2
Selenium	µg/L	< 5.0	< 5.0	< 5.0	< 5.0	< 1.0	< 1.0	< 1.0	< 1.0	< 0.50	< 0.50	< 0.10	< 0.10	<0.50	<0.20	<0.20	< 6	< 6	3.3	< 6	< 6.0	< 1.0	< 1.0	< 1.0	< 1.0	< 0.50	< 0.50	< 0.50
Silicon	µg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	5,470	5,950	-	-	-	-	-	-	-	-	-	-	-	-
Silver	µg/L	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	0.07	< 0.010	< 0.010	<0.050	<0.020	<0.020	< 0.10	< 0.1	< 0.01	< 0.10	< 0.10	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050
Sodium	mg/L	1,060	945	972	950	933	997	943	952	815	849	832	806	777	725	775	1,240	1,250	1,290	582	596	616	564	614	563	562	571	567
Strontium	µg/L	17,800	15,800	17,200	15,900	16,600	16,400	15,200	16,400	15,400	15,600	17,200	15,300	15,300	15,600	15,700	9,310	8,820	8,700	3,990	3,920	3,630	3,510	3,840	3,720	3,650	3,650	4,140
Sulfur	µg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	406,000	440,000	-	-	-	-	-	-	-	-	-	-	-	-
Tellurium	µg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.100	<0.100	-	-	-	-	-	-	-	-	-	< 1.0	< 1.0	< 1.0
Thallium	µg/L	< 0.50	< 0.50	< 0.50	< 0.50	< 0.050	< 0.050	< 0.050	< 0.050	< 0.020	0.037	0.0192	0.0206	<0.0200	0.0218	0.0233	< 0.1	< 0.1	0.01	< 0.1	< 0.10	< 0.050	< 0.010	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020
Thorium	µg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	0.090	<0.020	-	-	-	-	-	-	-	-	-	-	-	-
Tin	µg/L	< 60	< 30	< 60	< 30	< 60	< 30	< 30	< 30	< 0.20	< 0.20	< 0.050	0.06	<0.250	<0.100	<0.200	< 1	< 1	< 0.1	< 1	< 1.0	< 30	< 30	< 30	< 30	< 0.20	< 0.20	< 0.20
Titanium	µg/L	< 50	< 50	< 50	< 50	< 50	< 50	< 50	< 50	< 5.0	< 5.0	< 0.20	< 0.20	<1.00	<0.40	<0.40	11	< 100	< 10	< 100	< 10	< 50	< 50	< 50	< 50	< 5.0	< 5.0	< 5.0
Tungsten	µg/L	-	-	-	-	-	-	-	-	< 1.0	< 1.0	1.71	1.28	1.02	1.47	1.59	-	-	-	-	-	-	-	-	-	< 1.0	< 1.0	< 1.0
Uranium	µg/L	10.3	10	8.43	9.17	9.18	8.66	8.88	8.43	7.93	8.53	6.69	6.57	6.34	6.59	6.42	133	119	143	< 4	< 4.0	< 0.20	0.31	< 0.20	< 0.20	0.125	0.276	0.175
Vanadium	µg/L	< 60	< 30	< 60	< 30	< 60	< 30	< 30	< 30	< 1.0	< 1.0	< 0.20	< 0.20	<5.00	<2.00	<2.00	1	< 1	0.9	2	3.33	< 30	< 30	< 30	< 30	< 1.0	< 1.0	< 1.0
Zinc	µg/L	< 10	< 5.0	< 10	< 5.0	< 10	< 5.0	< 5.0	< 5.0	< 4.0	< 4.0	1.7	2.2	<5.0	<2.0	<2.0	10	< 10	9	< 10	< 10	< 5.0	< 5.0	< 5.0	< 5.0	< 4.0	< 4.0	< 4.0
Zirconium	µg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	0.353	0.319	-	-	-	-	-	-	-	-	-	-	-	-

Associated CARO files available upon

Associated Exova file(s): 622178, 653600, 712940, 714233, 714243, 756693, 756810, 757047, 811364, 811710, 812030, 812741, 812985, 846260, 878316, 879073, 909346, 909448, 909654.

Table H2: Summary of Groundwater Analytical Results - Total Metals - HISTORICAL to 2025

Well ID		GL17-1							GL17-2											GL18-2								
Sample ID		GL17-1-190923	GL17-1-200608	GL17-1-201020	GL17-1-210604	GL17-1-211006	GL17-1-220531	GL17-1-220928	GL17-2-20091112	GL17-2-20100811	GL17-2-20110628	GL17-2-20120625	GL17-2-20121204	GL17-2-20130626	GL17-2-20131113	GL17-2-20140605	GL17-2-20141118	GL17-2-20150608	GL17-2-20151104	GL 18-2-20091110	GL18-2-20100811	GL18-2-20110629	GL18-2-20120626	GL18-2-20121205	GL18-2-20130627	GL18-2-20131114	GL18-2-20140609	GL18-2-20141126
Sample Date		2019 09 23	2020 06 08	2020 10 20	2021 06 04	2021 10 06	2022 05 31	2022 09 28	2009 11 12	2010 08 11	2011 06 28	2012 06 25	2012 12 04	2013 06 26	2013 11 13	2014 06 05	2014 11 18	2015 06 08	2015 11 04	2009 11 10	2010 08 11	2011 06 29	2012 06 26	2012 12 05	2013 06 27	2013 11 14	2014 06 09	2014 11 26
Parameter	Unit	Analytical Results																										
Total Metals																												
Aluminum	µg/L	< 5.0	1.2	1.4	1.8	1.7	<2.0	2.1	4,020	130	13	< 50a	< 50a	< 30a	< 30a	< 30a	< 30a	< 10	< 10	< 50a	258	25	< 50a	53	< 30a	< 15a	< 30a	< 15a
Antimony	µg/L	< 0.20	< 0.050	< 0.050	0.06	< 0.050	<0.100	<0.100	< 2	< 2	< 0.2	< 2	< 2	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 2	< 2	1.8	8	< 2.0	< 1.0	< 0.50	< 1.0	< 0.50
Arsenic	µg/L	2.32	3.27	2.61	3.28	2.81	2.23	2.16	< 2	3	1.6	4	< 2.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	17	12	13.7	9	9.4	6.7	7.3	7.3	6.5
Barium	µg/L	215	218	277	212	224	205	235	190	210	222	20	20	< 30	< 50	< 20	< 30	< 30	< 30	10	20	21	10	10	< 20	< 20	< 20	< 20
Beryllium	µg/L	< 0.10	0.015	0.011	< 0.010	< 0.010	<0.020	<0.020	< 0.4	< 0.4	< 0.04	< 0.4	< 0.40	< 15a	< 25a	< 10a	< 15a	< 15a	< 15a	< 0.4	< 0.4	< 0.04	< 0.4	< 0.40	< 10a	< 10a	< 10a	< 10a
Bismuth	µg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Boron	µg/L	89	69.1	52.6	93.7	87.7	83.1	84.9	< 40	60	70	< 40	< 40	< 300	< 500	< 200	< 300	< 300	< 300	< 40	< 40	24	< 40	40	< 200	< 200	< 200	< 200
Cadmium	µg/L	< 0.010	0.0051	< 0.0020	< 0.0020	< 0.0020	<0.0040	<0.0040	< 0.1	< 0.10	< 0.01	< 0.10	0.26	< 0.50a	< 0.50a	< 0.50a	< 0.50a	0.338	0.144	< 0.1	< 0.10	0.06	< 0.1	< 0.10	< 0.50a	< 0.25	< 0.50a	< 0.25
Calcium	mg/L	21.9	22.6	23.9	24.3	20.8	17.9	21.5	20.6	19	18.8	318	394	404	427	346	367	378	383	99.7	281	315	314	286	288	284	280	283
Chromium	µg/L	< 0.50	0.74	0.23	0.24	0.28	<0.20	<0.20	5	< 4	4.7	< 4	7.2	< 5.0	< 5.0	< 5.0	< 5.0	< 1.0	< 1.0	< 4	< 4	1.2	< 4	< 4.0	< 5.0	< 2.5	< 5.0	< 2.5
Cobalt	µg/L	0.16	0.202	0.192	0.151	0.154	0.111	0.148	1.3	0.8	0.83	1.6	7.1	3.4	4.2	2.2	3.1	1.8	2.9	0.6	0.8	2.07	0.6	2.85	< 1.0	< 0.50	< 1.0	< 0.50
Copper	µg/L	< 0.10	0.49	< 0.10	10.2	0.15	<0.20	0.3	< 10a	< 10a	1	< 10a	< 10a	< 5.0a	< 5.0a	< 5.0a	< 5.0a	4.5	< 2.0a	< 10a	< 10a	4	< 10a	< 10a	< 5.0a	< 2.5a	< 5.0a	< 2.5a
Iron	µg/L	1,450	1,750	1,790	1,290	1,640	1,620	1870	2,560	770	364	6,180	569	< 90	390	585	938	442	183	940	1,640	294	1,210	2,330	1,600	1,560	1,640	1,550
Lead	µg/L	< 0.20	< 0.050	< 0.050	0.279	< 0.050	<0.100	<0.100	1	< 1	< 0.1	< 1	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1	< 1	< 0.1	< 1	< 1	< 1.0	< 1.0	< 1.0	< 1.0
Lithium	µg/L	252	197	199	245	225	225	231	220	220	235	70	70	101	179	104	93	95	101	10	< 10	12	10	10	< 50	< 50	< 50	< 50
Magnesium	mg/L	17.9	15.7	17.4	18.1	18.3	20.4	15.7	18.6	17	15.2	643	712	727	759	676	716	745	680	196	164	175	169	161	166	162	164	163
Manganese	µg/L	54.9	46.9	51.3	51.6	47.9	49.6	49.9	194	247	61	2,480	2,800	2,380	2,600	1,430	1,950	1,180	1,280	503	544	405	460	180	466	467	472	465
Mercury	µg/L	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	-	-	-	-	-	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	-	-	-	-	-	< 0.20	< 0.20	< 0.20	< 0.20
Molybdenum	µg/L	0.36	0.388	0.477	0.488	0.477	0.44	0.497	< 1	< 1	0.7	53	50.1	57.5	54.1	58.3	54.4	51.8	46	32	34	42.4	35	38.6	37.4	41.8	40.5	39.3
Nickel	µg/L	< 0.40	0.695	0.264	0.368	0.336	0.307	0.342	< 10	< 10	< 1	10	30	20.6	20.1	15.1	14.1	14.7	15.4	< 10	< 10	7	< 10	< 10	< 5.0	< 5.0	< 5.0	< 5.0
Phosphorus	µg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Potassium	mg/L	14.3	15.4	17.4	15.3	15.9	14.9	15.4	15.7	15	11.7	20	17.6	21.8	24	20.4	22.1	22.2	21.1	19	20	20.9	19	17.2	17.9	17.4	17.7	17.6
Selenium	µg/L	< 0.50	< 0.10	< 0.10	0.12	< 0.10	<0.20	<0.20	< 6	< 6	< 0.6	< 6	< 6.0	< 10	< 10	< 10	< 10	3.6	< 1.0	< 6	< 6	24	< 6	6.4	< 10	< 5.0	< 10	< 5.0
Silicon	µg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Silver	µg/L	< 0.050	< 0.010	< 0.010	< 0.010	< 0.010	<0.020	<0.020	< 0.10	< 0.1	< 0.01	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.1	< 0.01	< 0.10	< 0.10	< 0.10	< 0.050	< 0.10	< 0.050
Sodium	mg/L	583	629	531	637	694	656	565	554	562	580	1,580	1,520	1,700	1,710	1,690	1,670	1,710	1,550	22.4	1,460	1,500	1,550	1,380	1,620	1,550	1,540	1,540
Strontium	µg/L	4,040	4,080	4,180	4,150	3,820	3,810	4,110	3,520	3,570	3,940	8,300	9,920	8,720	9,350	7,610	7,930	7,910	8,190	4,990	4,840	6,800	4,970	4,890	4,230	4,120	4,160	4,230
Sulfur	µg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Tellurium	µg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Thallium	µg/L	< 0.020	< 0.0040	< 0.0040	< 0.0040	< 0.0040	<0.0080	<0.0080	< 0.1	< 0.1	< 0.01	< 0.1	< 0.10	< 1.0	< 1.0	< 1.0	< 1.0	< 0.10	< 0.10	< 0.1	< 0.1	< 0.01	< 0.1	< 0.10	< 1.0	< 0.50	< 1.0	< 0.50
Thorium	µg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Tin	µg/L	< 0.20	< 0.050	< 0.050	0.25	< 0.050	<0.100	<0.100	< 1	< 1	< 0.1	< 1	< 1.0	< 90	< 150	< 60	< 90	< 90	< 90	< 1	< 1	< 0.1	< 1	< 1.0	< 60	< 60	< 60	< 60
Titanium	µg/L	< 5.0	< 0.20	0.23	5.19	0.36	<0.40	<0.40	20	< 100	40	< 100	< 10	< 50	53	< 50	< 50	< 50	< 50	< 10	< 100	< 10	< 100	< 1,000	< 50	< 50	< 50	< 50
Tungsten	µg/L	< 1.0	0.38	0.44	0.4	0.35	<0.40	<0.40	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Uranium	µg/L	0.144	0.097	0.129	0.122	0.0992	0.112	0.0954	< 4	< 4	< 0.4	81	150	176	172	155	163	152	182	< 4	< 4	2.5	< 4	< 4.0	< 0.20	0.26	< 0.20	< 0.20
Vanadium	µg/L	< 1.0	< 0.20	< 0.20	< 0.20	< 0.20	<2.00	<2.00	6	2	1.5	< 1	2.44	< 90	< 150a	< 60	< 90	< 90	< 90	< 1	2	5.2	< 1	< 1.0	< 60	< 60	< 60	< 60
Zinc	µg/L	< 4.0	< 1.0	1.1	17.4	1.1	<2.0	<2.0	20	< 10	1	10	< 10	< 15	< 25	< 10	< 15	< 15	< 15	20	< 10	4	20	< 10	< 10	< 10	< 10	< 10
Zirconium	µg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Associated CARO files available upon

Associated Exova file(s): 622178, 653600, 712940, 714233, 714243, 756693, 756810, 757047, 811364, 811710, 812030, 812741, 812985, 846260, 878316, 879073, 909346, 909448, 909654.

Table H2: Summary of Groundwater Analytical Results - Total Metals - HISTORICAL to 2025

Well ID		GL18-2			GL20-1																				GL21-1		
Sample ID		GL18-2-20150615	GL18-2-20170529	GL18-2-180604	GL20-1-20091112	GL20-1-20100811	GL20-1-20110629	GL20-1-20111217	GL20-1-20120625	GL20-1-20121203	GL20-1-20130625	GL20-1-20140605	GL20-1-20141126	GL20-1-20150611	GL20-1-200826	GL20-1-201020	GL20-1-210511	GL20-1-210924	GL20-1-220531	GL20-1-220927	GL20-1-231024	GL20-1	GL20-1	GL20-1	GL20-1	GL21-1-20091117	GL21-1-20110705	GL21-1-20120625
Sample Date		2015 06 15	2017 05 29	2018 06 04	2009 11 12	2010 08 11	2011 06 29	2011 12 17	2012 06 25	2012 12 03	2013 06 25	2014 06 05	2014 11 26	2015 06 11	2020 08 26	2020 10 20	2021 05 11	2021 09 24	2022 05 31	2022 09 27	2023 10 24	2024-05-13	2024-09-13	2025 05 21	2025 08 26	2009 11 17	2011 07 05	2012 06 25
Parameter	Unit	Analytical Results																									
Total Metals																											
Aluminum	µg/L	< 10	< 10	< 5.0	124	209	13	1,340	120	< 500a	116	74	173	74	19.6	66.5	76.7	83.1	58.7	71.2	73.2	57.9	62.1	45.4	47.3	174	< 5	< 50a
Antimony	µg/L	< 1.0	< 1.0	< 0.20	< 2	< 2	< 0.2	< 20	3	< 20	2.5	3.9	1.6	4	0.198	0.678	0.624	0.729	0.483	0.495	0.554	0.286	0.379	0.322	0.35	< 2	0.3	< 2
Arsenic	µg/L	6.6	7.1	6.92	27	34	11.2	40	14	< 20.0	23.3	19.4	20.6	14.5	3.46	12.2	13.6	22.3	13.3	10.8	9.75	5.84	8.64	8.07	10.6	6	3.8	4
Barium	µg/L	< 20	< 30	9.7	290	410	31	300	280	300	250	117	374	122	58.9	280	255	246	183	200	195	150	151	158	168	20	21	20
Beryllium	µg/L	< 10a	< 15a	< 0.10	< 0.4	< 0.4	< 0.04	< 4a	< 0.4	< 4.0a	< 25a	< 25a	< 15a	< 25a	0.099	0.023	0.025	0.018	<0.050	<0.050	<0.050	<0.050	0.036	0.034	0.029	< 0.4	< 0.04	< 0.4
Bismuth	µg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.050	<0.020	<0.020	<0.020	-	-	-
Boron	µg/L	< 200	< 300	32.6	6,230	6,190	531	6,300	4,480	4,800	4,130	2,700	3,410	3,010	24.3	1,760	2,280	1,700	1890	2800	2170	1,790	1,960	1,690	2,080	< 40	6	< 40
Cadmium	µg/L	< 0.050	< 0.050	0.018	< 0.1	< 0.1	< 0.01	< 1a	< 0.1	< 1.00a	< 0.50a	0.56	< 0.50a	0.636	0.0021	0.0205	0.0091	0.0145	0.0118	0.0726	<0.0100	<0.0100	0.0054	0.0056	0.0098	0.13	0.2	0.14
Calcium	mg/L	284	282	306	145	132	14.5	128	133	102	87.4	65.4	93.8	64.3	5.1	88.1	68	43.9	61.2	62.9	49.8	52.5	47.1	49.1	46.6	216	201	219
Chromium	µg/L	< 1.0	< 1.0	< 0.50	35	44	5.3	80	52	92.1	35	16.9	34.2	16.9	5.18	25	19.3	25.2	12.5	15.2	18.7	14.1	14.1	10.9	13	8	22.6	26
Cobalt	µg/L	< 1.0	< 1.0	< 0.10	30.3	35.7	3.47	31	27	43.3	28.4	19.1	22.6	29.9	3.82	18.7	17.7	18.8	12.5	12.8	11.7	9.95	9.19	7.9	10.2	0.9	0.7	1.2
Copper	µg/L	< 2.0a	2.4	< 0.40a	< 10a	< 10a	7	< 100a	< 10a	< 100a	5.9	17.9	< 5.0a	19.2	< 0.10	0.36	1.26	0.74	1.9	0.6	0.59	<0.50	0.26	0.58	0.39	< 10a	15	10
Iron	µg/L	1,410	1,390	1,610	10,400	17,400	923	13,500	15,400	13,400	4,040	2,750	6,170	2,080	897	8,910	11,600	9,640	19,400	10,200	6880	8,650	6,300	10,900	11,700	140	10	< 50
Lead	µg/L	< 1.0	< 1.0	< 0.20	5	< 1	< 0.1	< 10	< 1	< 10	3.5	5	< 1.0	1.5	0.359	0.051	0.072	0.055	<0.250	<0.250	<0.250	<0.250	<0.100	<0.100	<0.100	< 1	< 0.1	< 1
Lithium	µg/L	< 50	< 50	11.6	90	70	8	< 100	70	< 100	69	69	61	86	0.614	65.4	86.6	47.1	77.4	79.9	77.4	58.7	71.8	69.2	78.9	140	120	120
Magnesium	mg/L	154	161	158	154	162	18.6	165	170	150	221	181	173	167	25.6	83.7	125	111	104	825	77.6	77.1	66.1	63	74.8	897	4	1,000
Manganese	µg/L	425	476	524	452	471	34	320	340	261	1,120	494	310	424	54.1	247	401	300	409	256	198	238	202	288	304	30	< 1	< 10
Mercury	µg/L	< 0.20	< 0.20	< 0.010	-	-	-	-	-	-	< 0.20	< 0.20	< 0.20	< 0.20	< 0.010	< 0.010	< 0.020	< 0.010	< 0.010	< 0.010	<0.010	<0.010	<0.010	<0.010	<0.010	-	-	-
Molybdenum	µg/L	37.4	41.1	41.5	10	6	1.2	< 10	1	< 10	10	27.4	11.6	29.3	1.01	3.93	4.62	8.91	6.17	3.49	4.97	3.39	3.18	3.19	2.78	68	61.4	63
Nickel	µg/L	< 5.0	< 5.0	< 0.40	60	60	7	< 100	60	< 100	76.4	54.9	45.8	87.6	8.64	32.7	37.6	40.9	30	25.2	22.1	13.9	16.1	13.2	13.7	20	16	10
Phosphorus	µg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2,380	2,440	2,300	2,640	-	-	-
Potassium	mg/L	17.3	16.9	17.7	390	490	400	520	420	547	390	229	275	236	40.5	173	175	178	136	136	126	120	109	106	120	37	< 1	36
Selenium	µg/L	< 1.0	< 1.0	< 0.50	< 6	< 6	24.6	< 60a	< 6	< 60a	< 10	< 10	< 10	2.4	< 0.10	0.27	0.88	0.97	0.67	0.7	<0.50	<0.50	0.54	0.61	0.47	< 6	43.8	10
Silicon	µg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	14,000	14,700	13,600	15,500	-	-	-
Silver	µg/L	< 0.10	< 0.10	< 0.050	< 0.10	< 0.1	< 0.01	< 1.0	< 0.10	< 1.00	< 0.10	< 0.10	< 0.10	0.2	< 0.010	< 0.010	< 0.010	< 0.010	<0.050	<0.050	<0.050	<0.050	<0.020	<0.020	<0.020	< 0.10	< 0.01	< 0.10
Sodium	mg/L	1,550	1,460	1,450	1,780	1,730	201	1,950	1,960	1,860	2,640	2,430	2,090	2,460	404	1,540	1,830	2,110	1,660	1,470	1,450	1220	1320	1,200	1,300	2,590	386	2,920
Strontium	µg/L	4,200	4,260	4,630	2,290	2,370	263	2,300	2,260	2,270	2,890	2,520	2,850	2,210	519	2,500	2,000	1,920	1,710	1,510	1230	1,230	1,120	1,220	1,090	12,700	13,600	14,600
Sulfur	µg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	11,500	16,600	34,100	15,700	-	-	-
Tellurium	µg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.250	<0.100	<0.100	<0.100	-	-	-
Thallium	µg/L	< 0.10	< 0.10	< 0.020	< 0.1	< 0.1	< 0.01	3.3	< 0.1	< 1.00	< 1.0	< 1.0	< 1.0	0.11	0.17	< 0.0040	< 0.0040	< 0.0040	<0.0200	<0.0200	<0.0200	<0.0200	<0.0080	<0.0080	<0.0080	0.36	0.18	0.13
Thorium	µg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.106	0.068	<0.020	<0.020	-	-	-
Tin	µg/L	< 60	< 90	< 0.20	8	9	0.8	< 10	8	< 10	< 150	< 150	< 90	< 150	0.865	3.94	3.52	4.53	2.68	3.46	4.11	2.56	3.33	2.31	2.77	< 1	< 0.1	< 1
Titanium	µg/L	< 50	< 50	< 5.0	93	< 100	< 10	< 100	< 100	< 100	104	< 50	95	< 50	12.5	88.8	90.6	86.9	42.4	59.9	66	46.5	58.6	50.9	58.5	16	< 10	< 100
Tungsten	µg/L	-	-	< 1.0	-	-	-	-	-	-	-	-	-	-	< 0.20	0.76	0.59	0.5	<1.00	<1.00	<1.00	<1.00	<0.40	<0.40	0.42	-	-	-
Uranium	µg/L	< 0.20	2.23	0.134	< 4	< 4	< 0.4	< 40a	4	< 40a	2.79	42.7	0.95	48.2	0.0021	2.55	7.02	1.41	14.2	5.86	2.62	2.89	1.35	4.76	1.32	792	848	799
Vanadium	µg/L	< 60	< 90	< 1.0	33	33	3	20	21	29.2	< 150a	< 150a	< 90	< 150a	2.43	22.3	20.6	21.7	14.8	16.1	18.8	11.2	14.6	13.3	15.4	3	4	4
Zinc	µg/L	< 10	< 15	< 4.0	< 10	< 10	8	< 100	10	< 100	32	< 25	< 15	< 25	< 1.0	1.2	1.7	1.5	<5.0	<5.0	<5.0	<5.0	<2.0	<2.0	<2.0	< 10	10	10
Zirconium	µg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	8.35	12.7	9.15	11	-	-	-

Associated CARO files available upon

Associated Exova file(s): 622178, 653600, 712940, 714233, 714243, 756693, 756810, 757047, 811364, 811710, 812030, 812741, 812985, 846260, 878316, 879073, 909346, 909448, 909654.

Table H2: Summary of Groundwater Analytical Results - Total Metals - HISTORICAL to 2025

Well ID		GL21-1	GL22-1		GL23-1																						
Sample ID		GL21-1-20121204	GL 22-1-20091110	GL22-1-20100811	GL 23-1-20091110	GL 23-1-20120627	GL23-1-20100811	GL23-1-20110704	GL23-1-20121203	GL23-1-20130627	GL23-1-20140603	GL23-1-20141124	GL23-1-20150608	GL23-1-20151104	GL23-1-20160526	GL23-1-20160531	GL23-1-20170525	GL23-1-180529	GL23-1-190523	GL23-1-190917	GL23-1-200617	GL23-1-200910	GL23-1-210513	GL23-1-220606	GL23-1-230523	GL23-1-231023	GL23-1	GL23-1
Sample Date		2012 12 04	2009 11 10	2010 08 11	2009 11 10	2012 06 27	2010 08 11	2011 07 04	2012 12 03	2013 06 27	2014 06 03	2014 11 24	2015 06 08	2015 11 04	2016 05 26	2016 05 31	2017 05 25	2018 05 29	2019 05 23	2019 09 17	2020 06 17	2020 09 10	2021 05 13	2022 06 06	2023 05 23	2023 10 23	2024-05-13	2025 05 23
Parameter	Unit	Analytical Results																									
Total Metals																											
Aluminum	µg/L	< 50a	109	395	< 50a	< 50a	< 50a	< 5	< 50a	< 10a	< 10a	< 10a	< 10	< 10	< 10	< 50	< 10	< 5.0	< 5.0	< 5.0	< 1.0	1.2	< 1.0	2.9	<1.0	2.1	1.8	<1.0
Antimony	µg/L	< 2.0	< 2	< 2	< 2	< 2	< 2	< 0.2	< 2	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 1	< 0.50	< 0.20	< 0.20	< 0.20	< 0.050	< 0.050	< 0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050
Arsenic	µg/L	4.4	6	3	3	< 2	2	1.2	< 2.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 5	< 1.0	< 0.50	0.56	0.52	0.581	0.561	0.685	0.478	0.452	0.461	0.511	0.466
Barium	µg/L	20	110	110	80	70	80	68	70	72	67	75	72	67	70	70	72	63	71.7	72.8	64.8	69.6	67.4	68.8	68.1	77.9	73.9	71.2
Beryllium	µg/L	< 0.40	< 0.4	< 0.4	< 0.4	< 0.4	< 0.4	< 0.04	< 0.40	< 5.0a	< 5.0a	< 5.0a	< 5.0a	< 5.0a	< 5.0a	< 1	< 5.0a	< 0.10	< 0.10	< 0.10	< 0.010	< 0.010	< 0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010
Bismuth	µg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.010	0.015	
Boron	µg/L	< 40	< 40	70	< 40	< 40	40	24	< 40	< 100	< 100	< 100	< 100	< 100	< 100	40	< 100	29.9	34.4	31	30.4	29.5	28.9	37.9	24.8	26.1	24.8	30.9	
Cadmium	µg/L	< 0.10	< 0.1	< 0.10	0.22	< 0.1	< 0.1	0.09	0.18	0.112	0.345	0.313	0.327	0.307	0.312	0.4	0.216	0.1	0.076	0.409	0.0823	0.321	0.0358	0.0486	0.049	0.136	0.136	0.0234	
Calcium	mg/L	206	95	82	88	81	77	87.1	72.4	82.6	75.8	87.1	82.6	79	78.4	84.8	82.6	86.2	87.3	85.2	85.7	101	82.7	86.3	92	92.9	96	103	
Chromium	µg/L	22.9	< 4	< 4	< 4	7	< 4	20.9	12	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 5	< 0.50	< 0.50	0.8	1.23	0.11	0.15	0.33	0.21	<0.50	<0.50	<0.50	<0.50	
Cobalt	µg/L	< 0.20	3.1	3.1	3.1	< 0.2	1.6	2.14	7.61	1.05	0.77	0.7	< 0.50	0.56	< 0.50	< 0.5	< 0.50	0.35	0.35	0.42	0.746	0.69	0.574	0.755	1.36	1.89	1.36	0.467	
Copper	µg/L	10	< 10a	< 10a	< 10a	< 10a	< 10a	2	< 10a	1.6	1.5	1.6	2.4	1.2	3	< 2a	3.5	20	1.95	2.72	1.97	3.02	1.68	4.25	2.07	2.63	2.27	1.16	
Iron	µg/L	< 50	< 100	600	< 100	60	160	25	17	35	< 30	39	< 30	< 30	< 30	< 100	< 30	< 10	< 10	< 10	< 2.0	< 2.0	< 2.0	4.5	<2.0	3.7	<2.0	<2.0	
Lead	µg/L	< 1.0	< 1	< 1	< 1	< 1	< 1	< 0.1	< 1	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1	< 1.0	0.6	< 0.20	< 0.20	< 0.050	< 0.050	< 0.050	<0.050	0.091	<0.050	<0.050	<0.050	
Lithium	µg/L	100	20	20	30	30	30	38	20	< 50	< 50	< 50	< 50	< 50	< 50	39	< 50	38.9	42.5	39.8	36.7	41.7	36.7	39.6	38.6	33.8	38.4	46.4	
Magnesium	mg/L	919	198	186	224	228	201	229	21.8	233	215	240	224	208	215	228	229	254	231	222	192	213	212	232	224	231	232	269	
Manganese	µg/L	< 10	951	1,260	951	80	638	368	454	253	185	208	19	642	77	25	33	19.3	5.34	455	316	870	165	309	437	888	363	74.5	
Mercury	µg/L	-	-	-	-	-	-	-	-	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	-	< 0.20	< 0.010	< 0.010	-	< 0.010	-	< 0.010	< 0.010	<0.010	<0.010	<0.010	<0.010	
Molybdenum	µg/L	64.3	14	14	15	17	16	19.9	19.9	16.5	18.6	16.8	15.8	17.3	13.8	17	13.6	12.4	13.6	16.7	15	17	13.8	14.4	13.4	16.8	14.8	12	
Nickel	µg/L	20	20	20	20	10	20	14	20	11.1	9.5	9.5	9	13.4	10.5	9	9.7	10	10.6	13.5	10.4	13.3	9.61	8.48	8.45	9.35	7.95	6.38	
Phosphorus	µg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<10	<10	
Potassium	mg/L	34.1	16.5	16	17.6	15	15	16.6	16.4	16.5	14.7	17.5	15.3	14.8	14.9	-	14.9	15	15.7	14.5	13.7	14.9	14.8	16.3	16.3	16.1	16.2	18.7	
Selenium	µg/L	11.2	< 6	< 6	< 6	< 6	< 6	2.5	< 6.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 5	< 1.0	< 0.50	< 0.50	< 0.50	0.34	0.26	0.29	0.2	0.23	0.21	0.31	0.33	
Silicon	µg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	12,100	12,500	
Silver	µg/L	< 0.10	< 0.10	< 0.1	< 0.10	< 0.10	< 0.1	< 0.01	< 0.10	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.5	< 0.050	< 0.050	< 0.050	< 0.050	< 0.010	< 0.010	< 0.010	0.022	0.016	<0.010	<0.010	<0.010	
Sodium	mg/L	2,940	166	139	222	231	207	238	233	238	219	249	211	194	203	205	191	201	199	191	178	189	191	197	193	194	192	211	
Strontium	µg/L	15,000	3,700	3,800	3,770	4,010	4,050	4,120	4,100	3,670	3,430	3,990	3,870	3,700	3,750	4,040	4,100	4,000	4,940	4,780	4,430	4,640	3,980	4,770	4680	4900	4,850	4,920	
Sulfur	µg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	196,000	208,000	
Tellurium	µg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.050	<0.050	
Thallium	µg/L	0.2	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.01	0.1	< 0.20	< 0.20	< 0.20	< 0.010	0.011	< 0.010	< 0.2	< 0.010	< 0.020	< 0.020	< 0.020	0.0073	0.0139	< 0.0040	<0.0040	0.0047	0.0104	0.0063	<0.0040	
Thorium	µg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.010	<0.010	
Tin	µg/L	< 1.0	< 1	< 1	< 1	2	< 1	< 0.1	11.2	< 30	< 30	< 30	< 30	< 30	< 30	-	< 30	0.82	< 0.20	< 0.20	< 0.050	< 0.050	< 0.050	0.065	<0.050	0.05	<0.050	<0.100	
Titanium	µg/L	< 100	< 10	< 100	< 10	< 100	< 100	< 10	< 10	< 50	< 50	< 50	< 50	< 50	< 50	< 50	< 50	< 5.0	< 5.0	< 5.0	< 0.20	< 0.20	< 0.20	0.29	<0.20	<0.20	<0.20	<0.20	
Tungsten	µg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	< 1.0	< 1.0	< 1.0	< 0.20	< 0.20	< 0.20	<0.20	<0.20	<0.20	<0.20	<0.20	
Uranium	µg/L	999	42	51	75	149	95	168	151	141	143	139	116	99.1	84.1	90	74.7	77.7	80.5	75.6	68.9	74.7	68.5	73.5	72	72	74.2	68.7	
Vanadium	µg/L	4.71	3	2	2	3	2	7.4	4.64	< 30	< 30	< 30	< 30	< 30	< 30	< 10	< 30	< 1.0	< 1.0	1.1	0.97	0.79	0.76	<1.00	<1.00	<1.00	<1.00	<1.00	
Zinc	µg/L	< 10	10	< 10	< 10	< 10	< 10	2	< 10	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 40	< 5.0	< 4.0	< 4.0	< 4.0	1.2	2.2	< 1.0	<1.0	<1.0	1.7	1.1	<1.0	
Zirconium	µg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.330	0.31	

Associated CARO files available upon

Associated Exova file(s): 622178, 653600, 712940, 714233, 714243, 756693, 756810, 757047, 811364, 811710, 812030, 812741, 812985, 846260, 878316, 879073, 909346, 909448, 909654.

Table H2: Summary of Groundwater Analytical Results - Total Metals - HISTORICAL to 2025

Well ID		GL24-1								GL25-1		GL26-1		GL26-2										GL26-3		GL27-1	
Sample ID		GL24-1-20100811	GL24-1-20160531	GL24-1-180612	GL24-1-20180927	GL24-1-190917	GL24-1-200910	GL24-1-231023	GL24-1	GL25-1-20091117	GL25-1-20100812	GL26-1-20091112	GL26-1-20100812	GL26-2-20091116	GL26-2-20100812	GL26-2-20110629	GL26-2-20120625	GL26-2-20121204	GL26-2-20130626	GL26-2-20131114	GL26-2-20140605	GL26-2-20141117	GL26-2-20150608	GL26-2-20151104	GL26-3-20091111	GL26-3-20100812	GL27-1-20091116	GL27-1-20100812
Sample Date		2010 08 11	2016 05 31	2018 06 12	2018 09 27	2019 09 17	2020 09 10	2023 10 23	2025 05 23	2009 11 17	2010 08 12	2009 11 12	2010 08 12	2009 11 16	2010 08 12	2011 06 29	2012 06 25	2012 12 04	2013 06 26	2013 11 14	2014 06 05	2014 11 17	2015 06 08	2015 11 04	2009 11 11	2010 08 12	2009 11 16	2010 08 12
Parameter	Unit	Analytical Results																									
Total Metals																											
Aluminum	µg/L	94	< 50	< 5.0	< 5.0	36.6	< 1.0	<1.0	1.1	< 50a	221	< 50a	< 50a	< 50a	83	< 5	< 50a	< 50a	< 10a	< 10a	< 10a	< 10a	< 10	< 10	< 50a	62	< 50a	129
Antimony	µg/L	< 2	< 1	< 0.20	0.21	< 0.20	0.148	0.14	0.177	< 2	< 2	2	< 2	< 2	< 2	< 0.2	< 2	< 2.0	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 2	< 2	< 2	< 2
Arsenic	µg/L	2	< 5	1.6	1.67	1.66	1.18	1.73	1.45	2	< 2	42	33	5	5	7	4	5.2	4.3	2.9	3	1.8	< 1.0	1.8	5	2	95	68
Barium	µg/L	80	70	61.7	83.3	46.1	35.2	40.3	36.3	80	50	20	20	90	60	58	50	50	37	33	37	32	32	28	100	70	410	440
Beryllium	µg/L	< 0.4	< 1	< 0.10	< 0.10	< 0.10	< 0.010	<0.010	<0.010	< 0.4	< 0.4	0.6	0.7	< 0.4	< 0.4	< 0.04	< 0.4	< 0.40	< 5.0a	< 5.0a	< 5.0a	< 5.0a	< 5.0a	< 5.0a	< 0.4	< 0.4	< 0.4	< 0.4
Bismuth	µg/L	-	-	-	-	-	-	-	<0.010	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Boron	µg/L	90	100	78.6	89.1	95.9	77.2	91.6	123	< 40	< 40	< 40	< 40	< 40	< 40	16	< 40	< 40	< 100	< 100	< 100	< 100	< 100	< 100	< 40	< 40	< 40	50
Cadmium	µg/L	0.19	< 0.1a	0.342	0.256	0.139	0.105	0.0788	0.0435	0.2	0.1	0.28	< 0.1	< 0.1	< 0.10	0.01	< 0.10	< 0.10	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	0.13	< 0.1	0.26	< 0.10
Calcium	mg/L	93	73.6	91.6	130	76.8	64.6	53.2	50.2	246	209	159	128	122	93.9	120	127	108	129	120	126	121	122	121	99.8	75.3	14.5	10
Chromium	µg/L	< 4	< 5	< 0.50	< 0.50	1.51	0.35	1.94	1.4	< 4	10	< 4	6	< 4	5	3.8	< 4	5.6	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 4	4	< 4	9
Cobalt	µg/L	1.4	< 0.5	1.95	2.12	0.9	0.555	0.549	0.247	6.7	5.3	7	0.8	4	2.6	2.26	1.6	7.16	1.09	0.69	0.67	0.54	0.58	< 0.50	11.7	2	< 0.2	< 0.2
Copper	µg/L	< 10a	< 2a	5.47	6.55	2.51	1.85	2.34	0.97	< 10a	< 10a	< 10a	< 10a	< 10a	< 10a	2	< 10a	< 10a	< 1.0a	< 1.0a	< 1.0a	< 1.0a	< 1.0a	< 1.0a	< 10a	< 10a	< 10a	< 10a
Iron	µg/L	190	< 100	< 10	< 10	23	< 2.0	<2.0	7.1	< 100	< 100	460	850	960	890	2,230	2,280	2,070	2,300	1,360	1,530	877	276	921	1,470	170	340	700
Lead	µg/L	< 1	< 1	< 0.20	< 0.20	< 0.20	< 0.050	<0.050	<0.050	< 1	< 1	< 1	< 1	< 1	< 1	< 0.1	< 1	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1	< 1	< 1	< 1
Lithium	µg/L	20	25	43.1	46.2	42.7	31.6	33.8	38.5	20	20	180	200	60	60	64	60	50	70	64	73	73	75	69	20	30	210	210
Magnesium	mg/L	242	203	260	349	220	169	169	177	223	233	62.7	50.5	78.8	62.3	81.4	86	73.6	85.5	82.2	85.1	81.7	82	76.2	105	84.9	14	10.2
Manganese	µg/L	1,400	7	342	810	104	24.7	133	1.6	3,030	2,330	1,730	1,800	2,440	1,130	1,140	1,060	883	731	679	698	658	615	597	3,960	1,090	243	123
Mercury	µg/L	-	-	< 0.010	< 0.010	-	-	<0.010	<0.010	-	-	-	-	-	-	-	-	-	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	-	-	-	-
Molybdenum	µg/L	38	11	24.9	22.6	24.2	23.6	14.6	12.5	20	7	275	56	25	24	16.4	11	14.1	19	19.5	18.3	20.4	17.9	22	24	40	243	174
Nickel	µg/L	20	3	15.1	19.8	8.71	4.64	5.62	2.46	20	20	30	< 10	< 10	< 10	4	< 10	< 10	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 10	< 10	< 10	< 10
Phosphorus	µg/L	-	-	-	-	-	-	-	146	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Potassium	mg/L	15	-	12.6	15.2	10.9	9.03	10.4	10.5	13.3	12.5	15.2	13.9	8.8	8.3	7.4	8	7.7	8.7	8.3	8.9	8.5	8.3	8.5	8.1	8	14.6	14.6
Selenium	µg/L	< 6	9	2.39	6.22	2.49	2.35	10.8	12.3	< 6	< 6	< 6	< 6	< 6	< 6	8.7	< 6	< 6.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 6	< 6	< 6	< 6
Silicon	µg/L	-	-	-	-	-	-	-	9,510	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Silver	µg/L	< 0.1	< 0.5	< 0.050	< 0.050	< 0.050	< 0.010	<0.010	<0.010	< 0.10	< 0.1	< 0.10	< 0.1	< 0.10	< 0.1	< 0.01	< 0.10	< 0.10	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.10	< 0.1	< 0.10	< 0.1
Sodium	mg/L	254	210	391	516	308	226	243	221	242	234	167	135	185	141	173	182	172	189	171	191	176	189	174	259	197	632	645
Strontium	µg/L	4,170	2,470	3,760	5,100	3,320	2,620	2320	2,140	7,760	7,640	1,670	1,670	1,550	1,590	2,120	1,720	1,700	1,610	1,570	1,610	1,610	1,620	1,620	1,710	1,700	2,970	2,920
Sulfur	µg/L	-	-	-	-	-	-	-	117,000	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Tellurium	µg/L	-	-	-	-	-	-	-	<0.050	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Thallium	µg/L	< 0.1	< 0.2	< 0.020	0.029	0.02	0.0154	0.0198	0.0067	0.18	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.01	< 0.1	< 0.10	< 0.20	< 0.20	< 0.20	< 0.20	< 0.010	< 0.010	< 0.1	< 0.1	< 0.1	< 0.1
Thorium	µg/L	-	-	-	-	-	-	-	<0.010	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Tin	µg/L	< 1	-	< 0.20	< 0.20	< 0.20	0.053	<0.050	<0.100	< 1	< 1	< 1	< 1	< 1	< 1	< 0.1	< 1	< 1.0	< 30	< 30	< 30	< 30	< 30	< 30	< 1	< 1	< 1	< 1
Titanium	µg/L	< 100	< 50	< 5.0	< 5.0	< 5.0	0.88	<0.20	<0.20	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 100	< 10	< 50	< 50	< 50	< 50	< 50	< 50	< 10	< 10	< 10	< 10
Tungsten	µg/L	-	-	< 1.0	-	< 1.0	< 0.20	<0.20	<0.20	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Uranium	µg/L	94	75.9	154	192	126	101	91.1	78.4	49	8	52	12	27	27	24.1	26	26.1	28.2	25.7	24.7	23.8	26.2	24.9	45	52	< 4	< 4
Vanadium	µg/L	2	< 10	2.8	3.3	3	0.84	3.04	2.47	< 1	4	< 1	2	1	2	1.2	< 1	1.63	< 30	< 30	< 30	< 30	< 30	< 30	1	3	3	4
Zinc	µg/L	< 10	< 40	< 4.0	< 4.0	45.2	1.1	<1.0	<1.0	10	< 10	< 10	10	< 10	< 10	2	< 10	< 10	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	30	< 10	< 10	20
Zirconium	µg/L	-	-	-	-	-	-	-	0.334	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Associated CARO files available upon

Associated Exova file(s): 622178, 653600, 712940, 714233, 714243, 756693, 756810, 757047, 811364, 811710, 812030, 812741, 812985, 846260, 878316, 879073, 909346, 909448, 909654.

Table H2: Summary of Groundwater Analytical Results - Total Metals - HISTORICAL to 2025

Well ID		GL27-1																									
Sample ID		GL27-1-20110629	GL27-1-20111217	GL 27-1-20120626	GL27-1-20121204	GL27-1-20130626	GL27-1-20131113	GL27-1-20140605	GL27-1-20141118	GL27-1-20150610	GL27-1-20151104	GL27-1-20160526	GL27-1-20160919	GL27-1-20170525	GL27-1-20170925	GL27-1-180815	GL27-1-180919	GL27-1-190527	GL27-1-190919	GL27-1-200608	GL27-1-201022	GL27-1-210602	GL27-1-210924	GL27-1-220531	GL27-1-220927	GL27-1-230525	GL27-1-231024	GL27-1
Sample Date		2011 06 29	2011 12 17	2012 06 26	2012 12 04	2013 06 26	2013 11 13	2014 06 05	2014 11 18	2015 06 10	2015 11 04	2016 05 26	2016 09 19	2017 05 25	2017 09 25	2018 08 15	2018 09 19	2019 05 27	2019 09 19	2020 06 08	2020 10 22	2021 06 02	2021 09 24	2022 05 31	2022 09 27	2023 05 25	2023 10 24	2024-05-21
Parameter	**Unit**																											
Total Metals		**Analytical Results**																										
Aluminum	µg/L	21	< 50a	< 50a	< 50a	< 15a	< 15a	< 10a	< 15a	< 10	< 10	< 10	< 10	< 10	< 10	< 5.0	< 5.0	7.8	< 5.0	2.8	< 1.0	< 1.0	1.3	<2.0	<2.0	2.3	1.3	1.5
Antimony	µg/L	1.7	2	< 2	< 2.0	0.63	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.20	< 0.20	< 0.20	< 0.20	< 0.050	< 0.050	< 0.050	0.065	<0.100	<0.100	<0.100	<0.050	<0.050
Arsenic	µg/L	44.9	59	38	32	51.3	35.5	34.8	28	26.5	20.5	17.4	17.8	33.1	17	28.7	23.7	18	16.4	17.7	8.73	14.9	12.2	10.1	9.06	10	9.72	7.15
Barium	µg/L	452	410	400	380	415	422	439	419	406	365	432	433	451	438	470	479	472	443	474	424	458	528	459	467	465	498	477
Beryllium	µg/L	< 0.04	< 0.4	< 0.4	< 0.40	< 5.0a	< 5.0a	< 5.0a	< 5.0a	< 5.0a	< 5.0a	< 5.0a	< 5.0a	< 5.0a	< 5.0a	< 0.10	< 0.10	< 0.10	< 0.10	0.025	0.028	0.015	0.023	0.033	0.036	0.038	0.049	0.054
Bismuth	µg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.010
Boron	µg/L	46	70	80	60	< 100	< 100	< 100	< 100	< 100	< 100	< 100	< 100	< 100	< 100	75	64.6	70	69.6	60.4	64.7	68.2	155	67.4	73.5	73.2	67.1	73.5
Cadmium	µg/L	0.07	0.13	< 0.1	< 0.10	< 0.25a	< 0.25a	< 0.10	< 0.25a	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	0.038	0.01	< 0.010	< 0.010	0.0051	0.0099	0.0027	< 0.0020	<0.0080	<0.0040	<0.0100	<0.0260	<0.0060
Calcium	mg/L	14	13.6	14	11.6	13.5	14.5	14.6	13.4	13.7	13.4	13.9	14.2	14.5	14.1	14.9	17.1	14.8	15.3	16.7	14.2	17.4	18.1	12.6	15.1	13.8	15.9	13
Chromium	µg/L	11	8	36	13.3	< 2.5	< 2.5	< 1.0	< 2.5	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	0.86	< 0.50	0.8	< 0.10	0.12	0.27	<0.20	0.23	<1.00	<0.50	<0.50
Cobalt	µg/L	0.43	< 0.2	< 0.2	3.62	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.10	< 0.10	< 0.10	< 0.10	0.0068	0.0068	0.0088	0.0151	<0.0100	<0.0100	<0.0100	0.0052	<0.0050
Copper	µg/L	1	< 10a	< 10a	< 10a	< 2.5a	< 2.5a	< 1.0a	< 2.5a	< 1.0a	< 1.0a	< 1.0a	< 1.0a	< 1.0a	< 1.0a	< 0.40a	< 0.40a	< 0.40a	< 0.10	0.46	< 0.10	< 0.10	0.19	<0.20	<0.20	<0.20	<0.10	<0.10
Iron	µg/L	1,400	1,140	1,500	482	988	852	1,080	882	878	39	662	695	713	690	521	633	630	560	636	551	112	533	683	625	707	500	479
Lead	µg/L	< 0.1	< 1	< 1	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 0.20	< 0.20	< 0.20	< 0.20	< 0.050	< 0.050	< 0.050	< 0.050	<0.100	<0.100	<0.100	<0.050	<0.050
Lithium	µg/L	187	230	190	160	220	219	222	207	204	198	221	204	233	220	217	228	216	212	194	200	241	231	211	216	213	200	266
Magnesium	mg/L	12.9	12	14	10.6	13.3	13.9	14.1	12.9	12.9	12.9	13.8	13.5	14.3	13.8	12.7	13.8	13	13.2	12.5	12.1	14.4	15	15.4	12.8	14.2	14	14.5
Manganese	µg/L	202	178	140	126	136	146	129	117	110	106	102	104	101	95	82.1	83.2	91.5	90.6	90.8	82.8	116	108	92.3	82.9	80.3	72.3	65.3
Mercury	µg/L	-	-	-	-	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	<0.010	<0.010	<0.010
Molybdenum	µg/L	54.1	68	48	43.2	72.6	56.6	44.5	34.9	42.6	36.2	43.2	37.2	79	44.9	51.2	29.2	20.9	7.11	16.7	13.4	14.5	9.23	29.9	34.4	35.7	36	25.0
Nickel	µg/L	< 1	< 10	< 10	< 10	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 0.40	< 0.40	< 0.40	< 0.40	0.067	< 0.040	< 0.040	0.08	0.144	<0.080	<0.080	0.309	0.408
Phosphorus	µg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	83
Potassium	mg/L	13.3	11.2	13	12.7	14.1	14.1	14.9	13	13.9	13.2	14.1	13.5	14.2	13.7	12.4	13	12.6	13.2	13.5	11	13.4	15	13.4	13	13.6	14.3	13.7
Selenium	µg/L	8.1	< 6	< 6	< 6.0	< 5.0	< 5.0	< 2.0	< 5.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 0.50	< 0.50	< 0.50	< 0.50	< 0.10	< 0.10	< 0.10	< 0.10	<0.20	1.46	0.21	<0.10	0.29
Silicon	µg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	5,580
Silver	µg/L	< 0.01	< 0.10	< 0.1	< 0.10	0.103	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.010	< 0.010	< 0.010	< 0.010	<0.020	<0.020	<0.020	<0.010	<0.010
Sodium	mg/L	622	604	655	648	665	704	704	619	706	626	708	633	710	645	584	650	602	605	712	566	672	721	700	611	632	637	594
Strontium	µg/L	3,230	3,180	3,020	3,040	2,670	2,960	3,060	2,900	2,930	2,770	2,900	2,970	3,120	2,960	3,200	3,180	3,220	3,070	3,320	2,880	3,060	2,900	2,980	3130	3050	3030	3,160
Sulfur	µg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	5,100
Tellurium	µg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.050
Thallium	µg/L	< 0.01	0.23	< 0.1	< 0.10	< 0.50	< 0.50	< 0.20	< 0.50	< 0.050	< 0.020	< 0.050	< 0.050	< 0.050	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.0040	< 0.0040	< 0.0040	< 0.0040	<0.0080	<0.0080	<0.0080	<0.0040	<0.0040
Thorium	µg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.010
Tin	µg/L	< 0.1	< 1	< 1	< 1.0	< 30	< 30	< 30	< 30	< 30	< 30	< 30	< 30	< 30	< 30	< 0.20	< 0.20	< 0.20	< 0.20	< 0.050	< 0.050	< 0.050	0.083	<0.100	<0.100	<0.100	<0.050	<0.050
Titanium	µg/L	< 10	< 10	< 100	< 10	< 50	< 50	< 50	< 50	< 50	< 50	< 50	< 50	< 50	< 50	< 5.0	< 5.0	< 5.0	< 5.0	0.24	< 0.20	< 0.20	0.28	<0.40	<0.40	<0.40	<0.20	<0.20
Tungsten	µg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	< 1.0	1.2	1.4	1.2	1.35	1.25	1.28	1.38	1.36	1.37	1.44	1.65	1.38
Uranium	µg/L	1	< 4	< 4	< 4.0	1.54	1.41	1.08	1.08	1.23	1.02	1.02	0.9	0.94	0.82	1.4	0.965	0.983	0.933	0.666	0.585	0.741	0.824	0.566	0.687	0.763	0.448	0.235
Vanadium	µg/L	3.8	2	4	4.14	< 30	< 30	< 30	< 30	< 30	< 30	< 30	< 30	< 30	< 30	< 1.0	< 1.0	< 1.0	< 1.0	0.31	0.27	< 0.20	< 0.20	<2.00	<2.00	<2.00	<1.00	<1.00
Zinc	µg/L	< 1	< 10	< 10	< 10	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 4.0	< 4.0	< 4.0	< 4.0	1	< 1.0	< 1.0	1	<2.0	<2.0	<2.0	<1.0	<1.0
Zirconium	µg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1.18

Associated CARO files available upon

Associated Exova file(s): 622178, 653600, 712940, 714233, 714243, 756693, 756810, 757047, 811364, 811710, 812030, 812741, 812985, 846260, 878316, 879073, 909346, 909448, 909654.

Table H2: Summary of Groundwater Analytical Results - Total Metals - HISTORICAL to 2025

Well ID		GL27-1			GL27-2			GL27-3																		
Sample ID		GL27-1	GL27-1	GL27-1	GL27-2-20091116	GL27-2-20100812	GL27-2	GL27-3-20091112	GL27-3-20100812	GL27-3-20110629	GL27-3-20111217	GL27-3-20120625	GL27-3-20121204	GL27-3-20130626	GL27-3-20131113	GL27-3-20140605	GL27-3-20141118	GL27-3-20150610	GL27-3-20151104	GL27-3-20160524	GL27-3-20170925	GL27-3-180815	GL27-3-190527	GL27-3-200608	GL27-3-210603	GL27-3-220531	GL27-3-230525	GL27-3
Sample Date		2024-09-17	2025 05 13	2025 08 27	2009 11 16	2010 08 12	2024-09-17	2009 11 12	2010 08 12	2011 06 29	2011 12 17	2012 06 25	2012 12 04	2013 06 26	2013 11 13	2014 06 05	2014 11 18	2015 06 10	2015 11 04	2016 05 24	2017 09 25	2018 08 15	2019 05 27	2020 06 08	2021 06 03	2022 05 31	2023 05 25	2024-05-21
Parameter	Unit	Analytical Results																								
Total Metals																										
Aluminum	µg/L	2.3	1.6	2	458	410	<5.0	< 50a	131	32	< 50a	< 50a	< 50a	< 60a	< 60a	< 60a	< 30a	< 20	< 10	< 20	< 10	< 5.0	< 5.0	1.4	2.2	<10.0	<20.0	<5.0
Antimony	µg/L	<0.050	<0.050	<0.050	< 2	< 2	<0.250	< 2	< 2	< 0.2	< 2	< 2	< 2.0	< 2.0	< 2.0	< 2.0	< 1.0	< 2.0	< 1.0	< 2.0	< 1.0	< 0.20	0.39	< 0.050	< 0.050	<0.500	<1.00	<0.250
Arsenic	µg/L	4.92	6.48	7.89	6	7	3.19	9	10	1.7	7	7	7.5	5.9	6.4	5.4	4.3	6	3.3	5	5.8	5.73	1.45	9.61	10.1	8.43	10.2	9.80
Barium	µg/L	541	496	517	60	40	20.3	20	20	14	< 10	10	20	< 50	< 50	< 50	< 50	< 50	< 50	< 50	< 50	14.6	9.1	9.77	11.4	7.79	12.1	9.75
Beryllium	µg/L	0.058	0.056	0.063	< 0.4	< 0.4	<0.050	< 0.4	< 0.4	< 0.04	< 0.4	< 0.4	< 0.40	< 25a	< 25a	< 25a	< 25a	< 25a	< 25a	< 25a	< 25a	< 0.10	< 0.10	0.014	< 0.010	<0.100	<0.200	<0.050
Bismuth	µg/L	<0.010	<0.010	0.013	-	-	<0.050	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.050
Boron	µg/L	81.5	70.6	75.9	< 40	60	71.5	< 40	< 40	15	< 40	< 40	< 40	< 500	< 500	< 500	< 500	< 500	< 500	< 500	< 500	42.9	34.9	33.7	30.4	32.4	70	42.7
Cadmium	µg/L	<0.0040	<0.0040	<0.0040	0.1	< 0.1	0.127	0.17	< 0.10	0.1	0.13	< 0.1	< 0.10	< 1.0a	< 1.0a	< 1.0a	< 0.50a	< 0.10	0.17	0.12	0.066	0.127	0.809	0.0349	0.0214	<0.0200	<0.0400	<0.0200
Calcium	mg/L	13.4	14.3	15.2	300	298	285	354	332	370	320	359	315	382	363	359	326	354	316	342	361	392	372	439	441	366	434	420
Chromium	µg/L	<0.50	<0.50	<0.50	< 4	8	<2.50	< 4	8	4.8	8	< 4	7.5	< 10a	< 10a	< 10a	< 5.0	< 2.0	< 1.0	< 2.0	< 1.0	< 0.50	1.4	0.58	0.27	<1.00	<10.0	<2.50
Cobalt	µg/L	<0.0050	<0.0050	0.0051	19.9	9.2	5.00	7	3.8	4.04	2.3	3.2	2.86	2.6	< 2.0	< 2.0	1.4	< 2.0	1.2	< 2.0	1.7	2.83	0.79	2.1	2.26	1.47	2.02	1.83
Copper	µg/L	<0.10	<0.10	<0.10	< 10a	< 10a	<0.50	< 10a	< 10a	6	10	< 10a	< 10a	< 10a	< 10a	< 10a	< 5.0a	< 4.0a	< 2.0a	< 4.0a	< 2.0a	< 0.40a	2.1	5.33	0.73	1.07	<2.00	<0.50
Iron	µg/L	361	525	846	2,420	690	2,470	1,440	2,440	1,690	1,270	2,190	2,540	2,600	2,880	1,840	1,620	2,190	1,190	2,060	2,630	2,260	< 10	4,610	4,450	3940	5480	4,830
Lead	µg/L	<0.050	<0.050	<0.050	< 1	< 1	0.279	< 1	< 1	< 0.1	< 1	< 1	< 1	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 0.20	< 0.20	< 0.050	< 0.050	<0.500	<1.00	<0.250
Lithium	µg/L	250	211	254	50	80	96.5	70	80	71	100	70	70	73	145	85	73	63	72	67	69	78.2	93.9	90.2	70.5	66.4	64.2	88.1
Magnesium	mg/L	16.2	13.9	17.2	731	679	655	1,200	940	1,030	900	1,010	897	1,050	967	1,030	910	997	873	970	1,010	1,090	1,070	1,080	1,210	1,390	1270	1320
Manganese	µg/L	75.2	71	91.3	5,380	1,940	1,700	996	588	374	270	350	253	563	372	479	331	438	298	357	435	688	203	555	582	466	635	542
Mercury	µg/L	<0.040	<0.010	<0.010	-	-	<0.010	-	-	-	-	-	-	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	<0.010	<0.010
Molybdenum	µg/L	14.7	24.1	22.1	59	53	76.6	51	53	64.4	69	58	62.3	58.4	59.1	56.7	58.6	52.9	57.6	53.5	49.8	67	73.8	69.3	64.8	56	54.4	63.3
Nickel	µg/L	<0.040	<0.040	<0.040	30	20	10.3	20	10	10	20	10	10	< 10	< 10	< 10	< 5.0	< 10	< 5.0	< 10	< 5.0	4.5	3.09	3.26	3.5	2.9	3.93	2.91
Phosphorus	µg/L	66	75	112	-	-	92	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	111
Potassium	mg/L	14.5	14.4	14.4	33	40	34.1	26	31	25.6	23.4	24	21.6	26	26	25	24	24	22	24	25	27.7	28.6	42	31.2	27.9	29.5	29.5
Selenium	µg/L	<0.10	0.21	<0.10	< 6	< 6	0.65	< 6	6	41.6	< 6	< 6	6.2	< 20	< 20	< 20	< 10	< 1.0	< 1.0	< 1.0	< 1.0	< 0.50	< 0.50	0.42	0.77	<1.00	<2.00	0.91
Silicon	µg/L	6,600	6,140	6,790	-	-	8,020	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	10,100
Silver	µg/L	<0.010	<0.010	<0.010	< 0.10	< 0.1	<0.050	< 0.10	< 0.1	< 0.01	< 0.10	< 0.10	< 0.10	0.25	< 0.20	< 0.20	< 0.10	< 0.20	< 0.10	< 0.20	< 0.10	< 0.050	< 0.050	< 0.010	< 0.010	0.153	<0.200	<0.050
Sodium	mg/L	747	654	739	2,720	2,900	2480	3,300	3,190	3,070	2,800	3,050	2,960	3,760	3,190	3,440	2,990	3,210	2,780	3,050	3,400	3,000	3,430	3,830	3,630	3,980	3820	3750
Strontium	µg/L	3,340	3,230	3,330	15,000	16,900	13,600	11,500	11,500	11,000	11,600	11,400	9,440	10,100	10,100	10,200	9,270	10,200	9,000	9,350	9,860	11,100	12,300	12,500	11,800	11,100	12000	12,600
Sulfur	µg/L	5,420	6,430	7,480	-	-	2,550,000	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	4,680,000
Tellurium	µg/L	<0.050	<0.050	<0.050	-	-	<0.250	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.250
Thallium	µg/L	<0.0040	<0.0040	<0.0040	0.28	0.17	<0.0200	0.22	< 0.1	0.02	0.43	< 0.1	< 0.10	< 2.0	< 2.0	< 2.0	< 1.0	< 0.20	< 0.10	< 0.20	< 0.10	< 0.020	< 0.020	0.0162	0.014	<0.0400	<0.0800	0.0210
Thorium	µg/L	<0.010	<0.010	<0.010	-	-	<0.050	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.892
Tin	µg/L	<0.050	<0.100	<0.100	< 1	< 1	<0.250	< 1	< 1	< 0.1	< 1	< 1	< 1.0	< 150	< 150	< 150	< 150	< 150	< 150	< 150	< 150	< 0.20	< 0.20	< 0.050	< 0.050	<0.500	<1.00	<0.250
Titanium	µg/L	<0.20	<0.20	0.21	15	15	<1.00	< 10	< 10	< 10	< 10	< 100	< 100	< 50	< 50	< 50	< 50	< 50	< 50	< 50	< 50	< 5.0	< 5.0	0.41	0.26	<2.00	<4.00	<1.00
Tungsten	µg/L	1.01	1.5	1.73	-	-	<1.00	-	-	-	-	-	-	-	-	-	-	-	-	-	-	< 1.0	< 1.0	< 0.20	< 0.20	<2.00	<4.00	<1.00
Uranium	µg/L	0.311	0.302	0.325	90	91	80.9	94	70	66	98	75	97.4	87.3	85.9	82.4	84	72.1	79.4	73.2	79.4	86.2	91.2	73.6	66.3	53.1	57.2	73.9
Vanadium	µg/L	<1.00	<1.00	<1.00	3	9	<5.00	1	3	1.8	6	1	2.16	< 150a	< 150a	< 150a	< 150a	< 150a	< 150a	< 150a	< 150a	< 1.0	< 1.0	0.23	< 0.20	<10.0	<20.0	<5.00
Zinc	µg/L	<1.0	<1.0	<1.0	< 10	< 10	<5.0	20	10	5	< 10	20	< 10	< 25	< 25	< 25	< 25	< 25	< 25	< 25	< 25	< 4.0	8.6	1.1	< 1.0	<10.0	<20.0	<5.0
Zirconium	µg/L	1.24	1.91	1.8	-	-	0.567	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1.31

Associated CARO files available upon

Associated Exova file(s): 622178, 653600, 712940, 714233, 714243, 756693, 756810, 757047, 811364, 811710, 812030, 812741, 812985, 846260, 878316, 879073, 909346, 909448, 909654.

Table H2: Summary of Groundwater Analytical Results - Total Metals - HISTORICAL to 2025

Well ID		GL27-3		GL27-4	GL28-1																					
Sample ID		GL27-3	GL27-3	GL27-4-20100812	GL28-1-20091116	GL28-1-20100812	GL28-1-20110627	GL28-1-20120626	GL28-1-20121203	GL28-1-20130708	GL28-1-20140603	GL28-1-20141117	GL28-1-20150611	GL28-1-20151105	GL28-1-20160524	GL28-1-20160920	GL28-1-20170711	GL28-1-20170926	GL28-1-180528	GL28-1-180925	GL28-1-190528	GL28-1-190919	GL28-1-200610	GL28-1-201104	GL28-1-210609	GL28-1-211007	GL28-1-220602	GL28-1-221006
Sample Date		2025 05 13	2025 08 27	2010 08 12	2009 11 16	2010 08 12	2011 06 27	2012 06 26	2012 12 03	2013 07 08	2014 06 03	2014 11 17	2015 06 11	2015 11 05	2016 05 24	2016 09 20	2017 07 11	2017 09 26	2018 05 28	2018 09 25	2019 05 28	2019 09 19	2020 06 10	2020 11 04	2021 06 09	2021 10 07	2022 06 02	2022 10 06
Parameter	Unit	Analytical Results																										
Total Metals																												
Aluminum	µg/L	<5.0	29.4	< 50a	< 50a	< 50a	< 50a	< 50a	< 50a	< 10a	< 10a	< 10a	< 10	< 10	< 10	< 10	< 10	< 10	< 5.0	< 5.0	< 5.0	< 5.0	< 1.0	< 1.0	2.2	6.7	1.3	<6.0
Antimony	µg/L	<0.250	<0.250	< 2	< 2	< 2	< 2	< 2	< 2.0	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.20	< 0.20	< 0.20	< 0.20	< 0.050	< 0.050	< 0.050	< 0.050	0.382	0.148
Arsenic	µg/L	5.87	7.59	12	3	3	2	< 2	3	3.2	3.4	3	3.2	3.1	3.9	3.5	2.6	3.3	1.01	1.49	2.3	2.36	3.37	2.9	2.44	2.68	1.08	0.865
Barium	µg/L	8.87	8.21	90	50	40	10	< 10	20	< 20	< 20	< 20	< 20	< 20	< 20	< 20	< 20	< 20	14.7	9.7	10.8	10	10.1	9.69	10	10.6	18.3	11.4
Beryllium	µg/L	<0.050	0.082	< 0.4	< 0.4	< 0.4	< 0.4	< 0.4	< 0.40	< 5.0a	< 5.0a	< 5.0a	< 5.0a	< 5.0a	< 5.0a	< 5.0a	< 5.0a	< 5.0a	< 0.10	< 0.10	< 0.10	< 0.10	0.014	0.022	0.013	0.014	<0.010	<0.020
Bismuth	µg/L	<0.050	0.094	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Boron	µg/L	45.6	43.7	190	< 40	< 40	< 40	< 40	< 40	< 100	< 100	< 100	< 100	< 100	< 100	< 100	< 100	< 100	18.3	20.2	14.5	18.8	18.6	16.4	17	12.3	15.1	17.9
Cadmium	µg/L	<0.0400	0.091	< 0.10	< 0.1	< 0.10	< 0.1	< 0.1	0.14	< 0.10	< 0.10	< 0.10	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	0.193	0.041	0.034	0.021	0.0107	0.0046	0.0057	0.0093	0.207	0.0613
Calcium	mg/L	433	424	420	211	171	148	130	181	204	188	197	192	190	197	194	193	189	201	207	195	193	214	237	220	195	193	221
Chromium	µg/L	<2.50	<2.50	31	< 4	7	< 4	< 4	6.1	< 1.0	< 1.0	< 1.0	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	1.04	< 0.50	0.14	< 0.10	0.15	0.19	0.2	<0.20
Cobalt	µg/L	1.35	1.72	6.2	5.4	3.2	0.7	0.4	7.37	1	0.77	0.63	0.6	0.5	0.58	0.6	< 0.50	0.55	0.48	0.7	0.64	0.6	0.536	0.589	0.565	0.598	0.633	0.984
Copper	µg/L	<0.50	0.67	< 10a	< 10a	< 10a	< 10a	< 10a	< 10a	< 1.0a	< 1.0a	< 1.0a	< 1.0a	< 1.0a	< 1.0a	< 1.0a	< 1.0a	< 1.0a	0.98	< 0.40a	< 0.40a	< 0.10	0.21	0.4	0.34	0.36	1.83	1
Iron	µg/L	2,860	3,690	3,510	390	660	6	180	1,110	1,440	1,420	1,540	1,520	1,600	1,750	1,800	1,680	1,720	333	1,220	1,720	1,710	1,720	1,770	1,670	1,830	6.8	190
Lead	µg/L	<0.250	0.273	< 1	< 1	< 1	< 1	< 1	1.1	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 0.20	< 0.20	< 0.20	< 0.20	< 0.050	< 0.050	< 0.050	< 0.050	<0.050	<0.100
Lithium	µg/L	91.5	88.5	20	80	90	60	10	70	105	99	91	81	88	93	87	90	88	81.1	85.9	91.1	80.7	83	82.5	82.9	61.1	78.6	73.2
Magnesium	mg/L	1190	1330	809	282	284	140	56	299	299	274	292	280	274	295	305	276	279	292	300	293	284	300	306	283	333	289	316
Manganese	µg/L	378	457	8,160	1,390	804	< 1	140	258	253	209	212	208	214	220	260	230	237	148	301	297	300	287	320	314	341	154	279
Mercury	µg/L	<0.010	<0.010	-	-	-	-	-	-	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010
Molybdenum	µg/L	65.8	65.1	2	14	11	35	33	14.8	12.5	13.4	13.2	14	13.9	14.2	12.5	12.2	12.4	12.4	12.9	13	12.4	12.6	13.3	12.1	14.5	12.3	12.3
Nickel	µg/L	2.95	3.23	20	10	< 10	< 10	< 10	< 10	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	1.96	1.85	1.66	1.71	0.871	1.79	1.76	1.98	3.49	2.61
Phosphorus	µg/L	63	91	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Potassium	mg/L	29.4	27.1	121	11.2	12.5	6.8	6	8.6	10.5	9.4	9.9	9.4	9.6	10.1	10.4	10	10.4	11.7	11.3	10.2	9.94	10.7	11.5	10.6	11.7	10.4	10.5
Selenium	µg/L	0.68	1.24	7	< 6	< 6	< 6	< 6	< 6.0	< 2.0	< 2.0	< 2.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	0.72	< 0.50	< 0.50	< 0.50	< 0.10	< 0.10	< 0.10	< 0.10	0.37	<0.20
Silicon	µg/L	10,900	11,000	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Silver	µg/L	<0.050	0.073	< 0.1	< 0.10	< 0.1	< 0.10	< 0.10	0.2	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.010	< 0.010	< 0.010	< 0.010	0.015	<0.020
Sodium	mg/L	3,670	3,750	2,480	550	571	562	284	560	549	537	559	518	553	561	557	560	519	536	553	489	448	461	454	407	442	392	386
Strontium	µg/L	12,300	11,100	10,400	6,000	6,310	3,090	1,710	6,850	5,560	5,370	5,700	5,370	5,850	5,710	5,790	5,500	5,480	5,950	6,000	6,420	6,190	6,210	7,000	5,950	5,590	5,540	6,100
Sulfur	µg/L	4,900,000	4,500,000	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Tellurium	µg/L	<0.250	<0.250	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Thallium	µg/L	<0.0200	0.0684	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	0.24	< 0.20	< 0.20	< 0.20	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	0.0044	0.0045	0.0041	< 0.0040	0.0243	0.013
Thorium	µg/L	<0.050	0.066	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Tin	µg/L	<0.500	<0.500	< 1	< 1	< 1	< 1	< 1	< 1.0	< 30	< 30	< 30	< 30	< 30	< 30	< 30	< 30	< 30	< 0.20	< 0.20	< 0.20	< 0.20	< 0.050	< 0.050	< 0.050	< 0.050	<0.050	<0.100
Titanium	µg/L	<1.00	<1.00	30	< 10	< 10	< 10	< 100	< 10	< 50	< 50	< 50	< 50	< 50	< 50	< 50	< 50	< 50	< 5.0	< 5.0	< 5.0	< 5.0	< 0.20	< 0.20	< 0.20	< 0.20	<0.20	<0.40
Tungsten	µg/L	<1.00	<1.00	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	< 1.0	< 1.0	< 1.0	< 1.0	< 0.20	< 0.20	< 0.20	< 0.20	<0.20	<0.40
Uranium	µg/L	77.9	75.3	20	113	62	97	15	120	122	116	118	131	122	121	123	109	107	123	115	119	120	112	118	110	123	122	133
Vanadium	µg/L	<5.00	<5.00	24	< 1	2	< 1	< 1	3.82	< 30	< 30	< 30	< 30	< 30	< 30	< 30	< 30	< 30	< 1.0	< 1.0	< 1.0	< 1.0	0.3	< 0.20	< 0.20	< 0.20	1.5	<2.00
Zinc	µg/L	<5.0	<5.0	< 10	10	20	< 10	< 10	< 10	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 4.0	< 4.0	< 4.0	< 4.0	1.3	1.4	1.2	< 1.0	1.8	<2.0
Zirconium	µg/L	0.365	0.34	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Associated CARO files available upon

Associated Exova file(s): 622178, 653600, 712940, 714233, 714243, 756693, 756810, 757047, 811364, 811710, 812030, 812741, 812985, 846260, 878316, 879073, 909346, 909448, 909654.

Table H2: Summary of Groundwater Analytical Results - Total Metals - HISTORICAL to 2025

Well ID		GL28-1						GL28-2																		
Sample ID		GL28-1-230530	GL28-1-231026	GL28-1	GL28-1	GL28-1	GL28-1	GL28-2-20091116	GL28-2-20160524	GL28-2-20160920	GL28-2-20170711	GL28-2-20170926	GL28-2-180528	GL28-2-180925	GL28-2-190528	GL28-2-190919	GL28-2-200610	GL28-2-201104	GL28-2-210609	GL28-2-211007	GL28-2-220602	GL28-2-221006	GL28-2-230530	GL28-2-231026	GL28-2	GL28-2	GL28-2	GL28-2
Sample Date		2023 05 30	2023 10 26	2024-05-28	2024-09-19	2025 05 26	2025 09 02	2009 11 16	2016 05 24	2016 09 20	2017 07 11	2017 09 26	2018 05 28	2018 09 25	2019 05 28	2019 09 19	2020 06 10	2020 11 04	2021 06 09	2021 10 07	2022 06 02	2022 10 06	2023 05 30	2023 10 26	2024-05-28	2024-09-19	2025 05 26	2025 09 02
Parameter	Unit	Analytical Results																										
Total Metals																												
Aluminum	µg/L	<1.0	1.1	<2.0	6.0	<1.0	2.4	< 50a	< 10	94	< 10	< 10	< 5.0	39.7	< 5.0	47.9	< 1.0	< 1.0	5	1.9	1.1	<6.0	<2.0	2.4	<2.0	3.7	<1.0	3.4
Antimony	µg/L	0.065	0.067	<0.100	<0.050	<0.050	<0.050	< 2	< 0.50	< 0.50	< 0.50	< 0.50	< 0.20	< 0.20	< 0.20	< 0.20	< 0.050	< 0.050	< 0.050	< 0.050	<0.050	<0.100	<0.100	<0.100	<0.100	<0.050	<0.050	<0.050
Arsenic	µg/L	1.03	1.44	1.55	1.59	1.64	1.69	< 2	< 1.0	< 1.0	< 1.0	< 1.0	< 0.50	< 0.50	< 0.50	< 0.50	0.466	0.414	0.341	0.487	0.367	0.326	0.309	0.328	0.415	0.378	0.365	0.282
Barium	µg/L	10.9	9.94	9.89	9.88	10.8	10.8	20	< 20	< 20	< 20	< 20	13.2	14.1	14	13.9	12.5	13.4	13.4	15.4	12.4	11.8	13.3	11.5	13.0	12.9	14	12.7
Beryllium	µg/L	0.013	0.012	<0.020	0.012	0.011	<0.010	< 0.4	< 5.0a	< 5.0a	< 5.0a	< 5.0a	< 0.10	< 0.10	< 0.10	< 0.10	< 0.010	< 0.010	< 0.010	< 0.010	<0.010	<0.020	<0.020	<0.020	<0.020	<0.010	<0.010	<0.010
Bismuth	µg/L	-	-	<0.020	<0.010	<0.010	<0.010	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.020	<0.010	<0.010	<0.010
Boron	µg/L	16.7	18.4	17.6	18.7	16.7	19.1	< 40	< 100	< 100	< 100	< 100	16.3	17.8	14.6	19.1	18.6	16.9	19.4	11.5	16.4	18.6	22	23	24.1	26.5	19.6	24.3
Cadmium	µg/L	0.0573	0.0229	0.0260	0.0152	0.0275	<0.0120	0.1	0.065	0.221	0.105	0.072	0.065	0.075	0.079	0.072	0.052	0.0582	0.0591	0.0505	0.0623	0.067	0.053	0.0644	0.0741	0.0678	0.0643	0.0715
Calcium	mg/L	237	237	222	246	244	222	245	308	306	284	317	303	382	352	340	301	397	327	387	277	319	314	384	423	424	428	409
Chromium	µg/L	<0.50	<0.50	<1.00	<0.50	<0.50	<0.50	< 4	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	1.02	0.3	28.2	0.19	0.24	0.21	0.21	<1.00	<1.00	<1.00	<0.50	<0.50	<0.50
Cobalt	µg/L	0.807	0.813	0.718	0.711	0.916	0.701	0.5	< 0.50	< 0.50	< 0.50	< 0.50	0.29	0.31	0.36	0.34	0.189	0.31	0.343	0.336	0.298	0.247	0.218	0.222	0.265	0.272	0.297	0.31
Copper	µg/L	0.37	1.06	<0.20	0.11	0.38	<0.10	< 10a	< 1.0a	< 1.0a	< 1.0a	1.3	0.69	1.06	0.85	0.71	0.58	1.13	0.75	1.02	0.88	4.05	0.71	1.49	0.59	0.55	0.77	0.63
Iron	µg/L	579	882	1,020	1,270	1,240	1,260	< 100	< 30	127	< 30	< 30	< 10	< 10	< 10	17	< 2.0	171	6.7	2.4	<2.0	<4.0	<4.0	<4.0	<4.0	<4.0	<2.0	<2.0	3.4
Lead	µg/L	<0.050	<0.050	<0.100	<0.050	<0.050	<0.050	< 1	< 1.0	< 1.0	< 1.0	< 1.0	< 0.20	< 0.20	< 0.20	< 0.20	< 0.050	< 0.050	< 0.050	< 0.050	<0.050	<0.100	<0.100	<0.100	<0.100	<0.050	0.06	<0.050
Lithium	µg/L	84	81.2	68.4	88.9	75.1	80.2	40	< 50	< 50	< 50	< 50	45.5	51	58.8	52.8	43.8	53.9	56.1	39.7	61.1	48.1	47.5	47.1	48.7	70.3	48.2	56.2
Magnesium	mg/L	313	316	308	332	306	311	224	261	255	236	275	278	322	312	286	237	293	264	363	299	284	249	285	312	337	270	299
Manganese	µg/L	358	344	343	355	403	374	62	33	19	12	18	17.4	20.4	21.5	20.2	8.74	19.2	23.6	22.4	20.4	15.5	14.4	17.8	23.2	22.5	22.2	23.7
Mercury	µg/L	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	-	< 0.20	< 0.20	< 0.20	< 0.20	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010
Molybdenum	µg/L	11	11.4	13.4	13.8	14.2	14.4	4	5.5	4.1	4.9	4.3	4.81	5.07	5.41	4.99	5.31	5.86	5.21	6.39	5.43	5.29	5.31	5.2	5.87	5.72	5.77	5.68
Nickel	µg/L	2.99	2.64	2.58	2.90	2.96	2.83	< 10	< 5.0	< 5.0	< 5.0	< 5.0	2.58	2.85	2.88	2.86	1.33	3.06	2.49	2.79	2.21	2.26	1.95	2.33	2.54	2.45	2.43	2.52
Phosphorus	µg/L	-	-	<20	14	15	15	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<20	<10	<10	<10
Potassium	mg/L	11.4	11.3	10.2	10.9	10.9	10.9	12	11.4	11.6	11	12	12.8	14.1	12.8	12.4	12	14.2	12.9	16.3	11.5	12.9	12.1	13.1	14	14.7	14.3	14.9
Selenium	µg/L	0.2	<0.10	<0.20	0.11	0.12	<0.10	< 6	1.6	2.2	1.7	1.8	1.49	1.33	1.18	1.57	0.6	1.05	0.67	1.02	0.62	0.6	0.76	0.49	0.52	0.67	0.54	0.5
Silicon	µg/L	-	-	10,400	12,000	11,400	11,500	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	12,700	15,500	12,800	13,700
Silver	µg/L	<0.010	<0.010	<0.020	<0.010	<0.010	<0.010	< 0.10	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.010	< 0.010	< 0.010	< 0.010	0.014	<0.020	<0.020	<0.020	<0.020	<0.010	<0.010	<0.010
Sodium	mg/L	412	410	387	407	379	394	561	698	743	751	714	735	862	820	762	657	955	775	957	886	806	661	661	804	901	779	898
Strontium	µg/L	6490	6310	6,200	6,180	6,630	6,210	4,940	5,890	6,160	5,460	6,300	7,280	7,980	8,620	7,880	6,550	8,600	7,000	8,080	7,270	7240	6850	7690*	8,670	7,980	8,980	8,430
Sulfur	µg/L	-	-	689,000	843,000	786,000	749,000	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1,150,000	1,400,000	1,270,000	1,280,000
Tellurium	µg/L	-	-	<0.100	<0.050	<0.050	<0.050	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.100	<0.050	<0.050	<0.050
Thallium	µg/L	0.012	0.0105	0.0118	0.0093	0.0106	0.0085	< 0.1	< 0.050	< 0.050	< 0.050	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	0.0053	0.0089	0.0085	0.0092	0.0072	<0.0080	<0.0080	<0.0080	<0.0080	0.0088	0.0113	0.008
Thorium	µg/L	-	-	<0.020	<0.010	<0.010	<0.010	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.020	<0.010	<0.010	0.013
Tin	µg/L	<0.050	0.057	<0.100	0.076	<0.100	<0.100	< 1	< 30	< 30	< 30	< 30	< 0.20	< 0.20	< 0.20	0.43	< 0.050	< 0.050	< 0.050	< 0.050	<0.050	<0.100	<0.100	<0.100	<0.100	<0.050	<0.100	<0.100
Titanium	µg/L	<0.20	<0.20	<0.40	0.31	<0.20	<0.20	< 10	< 50	< 50	< 50	< 50	< 5.0	< 5.0	< 5.0	< 5.0	< 0.20	< 0.20	0.21	< 0.20	<0.20	<0.40	<0.40	<0.40	<0.40	<0.20	<0.20	<0.20
Tungsten	µg/L	<0.20	<0.20	<0.40	<0.20	<0.20	<0.20	-	-	-	-	-	< 1.0	< 1.0	< 1.0	< 1.0	< 0.20	< 0.20	< 0.20	< 0.20	<0.20	<0.40	<0.40	<0.40	<0.40	<0.20	<0.20	<0.20
Uranium	µg/L	123*	118*	133	145	149	137	130	183	184	170	168	181	196	200	199	151	196	180	207	177	192	171*	206*	260	234	265	249
Vanadium	µg/L	<1.00	<1.00	<2.00	<1.00	<1.00	<1.00	1	< 30	< 30	< 30	< 30	< 1.0	1.1	1	< 1.0	1.15	1.15	0.78	1.03	<1.00	<2.00	<2.00	<2.00	<2.00	<1.00	<1.00	<1.00
Zinc	µg/L	1.4	2.3	<2.0	1.1	1.2	1.3	< 10	< 5.0	< 5.0	< 5.0	< 5.0	< 4.0	< 4.0	< 4.0	14	1.1	< 1.0	1.2	< 1.0	<1.0	<2.0	<2.0	<2.0	<2.0	<1.0	<1.0	<1.0
Zirconium	µg/L	-	-	0.143	0.152	0.141	0.151	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.064	0.059	0.057	0.072

Associated CARO files available upon

Associated Exova file(s): 622178, 653600, 712940, 714233, 714243, 756693, 756810, 757047, 811364, 811710, 812030, 812741, 812985, 846260, 878316, 879073, 909346, 909448, 909654.

Table H2: Summary of Groundwater Analytical Results - Total Metals - HISTORICAL to 2025

Well ID		GL28-3																				GL29-1				
Sample ID		GL28-3-20091116	GL28-3-20100812	GL28-3-20160524	GL28-3-20160920	GL28-3-20170711	GL28-3-20170926	GL28-3-180528	GL28-3-180925	GL28-3-190528	GL28-3-190919	GL28-3-200610	GL28-3-201105	GL28-3-210609	GL28-3-211007	GL28-3-210602	GL28-3-221006	GL28-3-230530	GL28-3-231026	GL28-3	GL28-3	GL28-3	GL28-3	GL29-1-20130708	GL29-1-20131113	GL29-1-20140603	GL29-1-20141118	GL29-1-20150609
Sample Date		2009 11 16	2010 08 12	2016 05 24	2016 09 20	2017 07 11	2017 09 26	2018 05 28	2018 09 25	2019 05 28	2019 09 19	2020 06 10	2020 11 05	2021 06 09	2021 10 07	2022 06 02	2022 10 06	2023 05 30	2023 10 26	2024-05-28	2024-09-19	2025 05 26	2025 09 02	2013 07 08	2013 11 13	2014 06 03	2014 11 18	2015 06 09
Parameter	Unit	Analytical Results																									
Total Metals																											
Aluminum	µg/L	< 50a	91	< 10	< 10	< 10	< 10	38	< 5.0	6.7	< 5.0	< 1.0	< 1.0	1.7	1.2	<100	<5.0	<2.0	<5.0	<2.0	2.0	<1.0	<2.0	< 10a	< 10a	< 10a	< 10a	< 10
Antimony	µg/L	< 2	< 2	< 0.50	< 0.50	< 0.50	< 0.50	< 0.20	< 0.20	< 0.20	< 0.20	0.11	0.142	0.157	0.139	<5.00	<0.250	0.11	<0.250	<0.100	0.102	0.123	<0.100	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50
Arsenic	µg/L	< 2	< 2	< 1.0	< 1.0	< 1.0	< 1.0	0.76	0.82	0.71	0.62	0.893	0.815	0.684	0.82	13	0.721	0.697	0.569	0.635	0.652	0.743	0.536	3	5.1	3.8	6.5	4.5
Barium	µg/L	30	40	20	< 20	< 20	< 20	21.6	19.1	18.1	18.5	19.9	19.2	18.5	21.5	349	15.8	21.1	14.6	14.8	15.6	16.2	15.4	60	98	108	134	111
Beryllium	µg/L	< 0.4	< 0.4	< 10a	< 5.0a	< 10a	< 10a	< 0.10	< 0.10	< 0.10	< 0.10	0.012	< 0.010	< 0.010	< 0.010	<1.00	<0.050	<0.020	<0.050	<0.020	<0.020	<0.010	<0.020	< 5.0a	< 5.0a	< 5.0a	< 5.0a	< 5.0a
Bismuth	µg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.020	0.023	<0.010	<0.020	-	-	-	-	-
Boron	µg/L	< 40	< 40	< 200	< 100	< 200	< 200	5.6	5.5	< 5.0	10	6	5	6.6	4.5	221	<10.0	7.8	<10.0	9.0	8.7	6.7	9.2	< 100	< 100	< 100	< 100	< 100
Cadmium	µg/L	0.17	< 0.1	0.213	0.265	0.164	0.343	0.382	0.316	0.128	0.212	0.18	0.227	0.0836	0.208	1.83	0.194	0.131	0.401	0.137	0.207	0.0938	0.11	< 0.050	< 0.050	< 0.050	< 0.10	< 0.050
Calcium	mg/L	279	207	377	158	296	300	282	378	343	342	395	408	339	351	613	330	393	375	369	386	385	323	82.5	83.7	84.6	106	99.5
Chromium	µg/L	< 4	7	< 0.50	< 0.50	< 0.50	< 0.50	0.56	< 0.50	1.12	< 0.50	0.35	0.28	0.34	0.34	<10.0	<0.50	<1.00	<2.50	<1.00	<1.00	<0.50	<1.00	< 0.50	< 0.50	< 0.50	< 1.0	< 0.50
Cobalt	µg/L	1.6	0.3	0.65	1.16	< 0.50	< 0.50	0.44	0.51	0.19	0.25	0.356	0.484	0.118	0.191	2.26	0.15	0.12	0.252	0.170	0.163	0.0995	0.113	1.25	2.91	7.65	14.4	8.07
Copper	µg/L	10	< 10a	< 1.0a	< 1.0a	< 1.0a	1.5	1.72	1.5	1.14	1.14	1.45	1.69	1.62	1.42	116	2.05	1.91	3.08	1.27	1.27	1.26	1.22	< 1.0a	< 1.0a	< 1.0a	< 1.0a	< 1.0a
Iron	µg/L	< 100	< 100	< 60	< 30	< 60	< 60	84	< 10	< 10	< 10	< 2.0	4.2	< 2.0	2.2	<200	<10.0	<4.0	<10.0	<4.0	<4.0	<2.0	<4.0	217	597	438	1,980	823
Lead	µg/L	< 1	< 1	< 1.0	< 1.0	< 1.0	< 1.0	< 0.20	< 0.20	< 0.20	< 0.20	< 0.050	< 0.050	< 0.050	< 0.050	<5.00	<0.250	<0.100	<0.250	<0.100	<0.100	<0.050	<0.100	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Lithium	µg/L	40	30	52	< 50	< 50	< 50	35	42.9	51.3	45.4	40.5	46.5	51.5	32.7	1,010	40.9	48.9	46.5	41.9	49.6	46.1	44.9	114	82	63	61	51
Magnesium	mg/L	260	257	438	215	423	430	501	518	491	469	462	448	479	537	9520	505	508	463	469	556	444	447	57.8	69	73.9	105	92.4
Manganese	µg/L	353	82	173	194	18	192	146	321	50.2	175	130	281	27	186	364	120	27.4	183	54.6	136	8.39	35.1	658	1,130	946	1,530	1,250
Mercury	µg/L	-	-	< 0.20	< 0.20	< 0.20	< 0.20	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20
Molybdenum	µg/L	8	5	11.4	11.9	12	13.2	12.5	14.2	13.6	13	13.1	16.5	12.9	17.3	246	13.2	13.1	12.8	13.3	15.6	14.1	13.6	8.8	15.8	16.5	21	20.2
Nickel	µg/L	20	10	8.8	11.6	< 5.0	9.8	10	12	7.2	9.41	8.14	11.6	4.96	9.09	90.9	8.5	6.18	9.04	6.54	7.41	3.48	4.59	< 5.0	8.3	8.2	8.8	8.8
Phosphorus	µg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<20	49	50	41	-	-	-	-	-
Potassium	mg/L	11.9	12.2	12.3	5.5	10.2	10.6	13	13.8	12	11.5	12.7	12.3	12.6	15.2	212	11,7	13.1	12.3	12.3	13.7	12.3	12.4	10.5	9.8	8.6	9.8	9.3
Selenium	µg/L	< 6	< 6	< 1.0	< 1.0	< 1.0	< 1.0	< 0.50	< 0.50	< 0.50	< 0.50	0.23	0.17	0.13	0.29	<10.0	<0.50	0.57	<0.50	0.28	0.44	0.31	0.24	< 1.0	< 1.0	< 1.0	< 2.0	< 1.0
Silicon	µg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	11,400	13,400	11,700	11,700	-	-	-	-	-
Silver	µg/L	< 0.10	< 0.1	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.010	< 0.010	< 0.010	< 0.010	<1.00	<0.050	<0.020	<0.050	<0.020	<0.020	<0.010	<0.020	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050
Sodium	mg/L	556	610	1,000	514	1,000	1,020	1,110	1,230	1,170	1,090	1,190	1,170	1,170	1,230	22800	1170	1,270	1,230	1220	1410	1,150	1,200	272	315	320	411	391
Strontium	µg/L	5,490	5,430	7,550	3,660	6,650	7,040	9,150	8,940	9,270	8,880	9,460	8,710	8,070	8,300	160000	8610	9,390*	8850*	8,610	9,050	8,750	7,890	2,530	2,580	2,520	3,460	3,370
Sulfur	µg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1,560,000	1,880,000	1,820,000	1,660,000	-	-	-	-	-
Tellurium	µg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.100	<0.100	<0.050	<0.100	-	-	-	-	-
Thallium	µg/L	< 0.1	< 0.1	< 0.050	< 0.050	< 0.050	0.052	0.038	0.052	0.033	0.041	0.03	0.0416	0.0194	0.0408	<0.400	0.0324	0.03	0.033	0.0298	0.0351	0.0206	0.0229	< 0.20	< 0.20	< 0.20	< 0.20	< 0.020
Thorium	µg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.020	<0.020	<0.010	<0.020	-	-	-	-	-
Tin	µg/L	< 1	< 1	< 60	< 30	< 60	< 60	< 0.20	< 0.20	< 0.20	< 0.20	< 0.050	0.087	< 0.050	< 0.050	6.26	<0.250	<0.100	<0.250	<0.100	<0.100	<0.100	<0.200	< 30	< 30	< 30	< 30	< 30
Titanium	µg/L	< 10	< 10	51	< 50	< 50	< 50	< 5.0	< 5.0	< 5.0	< 5.0	0.22	0.34	< 0.20	< 0.20	<20.0	<1.00	<0.40	<1.00	<0.40	<0.40	<0.20	<0.40	< 50	< 50	< 50	< 50	< 50
Tungsten	µg/L	-	-	-	-	-	-	< 1.0	< 1.0	< 1.0	< 1.0	< 0.20	< 0.20	< 0.20	< 0.20	<20.0	<1.00	<0.40	<1.00	<0.40	<0.40	<0.20	<0.40	-	-	-	-	-
Uranium	µg/L	145	73	238	263	245	232	239	278	268	274	273	269	255	306	4950	278	289*	272*	264	285	278	242	12.1	23.7	27.9	30.4	31.6
Vanadium	µg/L	1	3	< 60	< 30	< 60	< 60	1.4	1.5	1.4	1.3	1.68	2.02	1.22	1.46	<100	<5.00	<2.00	<5.00	<2.00	<2.00	1.14	<2.00	< 30	< 30	< 30	< 30	< 30
Zinc	µg/L	10	< 10	< 10	< 5.0	< 10	< 10	< 4.0	< 4.0	< 4.0	< 4.0	1.8	3	4.3	2	<100	<5.0	<2.0	<5.0	<2.0	<2.0	<1.0	<2.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0
Zirconium	µg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.363	0.546	0.559	0.509	-	-	-	-	-

Associated CARO files available upon

Associated Exova file(s): 622178, 653600, 712940, 714233, 714243, 756693, 756810, 757047, 811364, 811710, 812030, 812741, 812985, 846260, 878316, 879073, 909346, 909448, 909654.

Table H2: Summary of Groundwater Analytical Results - Total Metals - HISTORICAL to 2025

Well ID		GL29-1																				GL29-2					
Sample ID		GL29-1-20151105	GL29-1-20160524	GL29-1-20160921	GL29-1-20170529	GL29-1-20170926	GL29-1-180604	GL29-1-180919	GL29-1-190603	GL29-1-190924	GL29-1-200612	GL29-1-201120	GL29-1-210611	GL29-1-211006	GL29-1-220606	GL29-1-221006	GL29-1-230706	GL29-1-231026	GL29-1	GL29-1	GL29-1	GL29-1	GL29-2-20130627	GL29-2-20131113	GL29-2-210608	GL29-2-211006	GL29-2-220606	GL29-2-221005
Sample Date		2015 11 05	2016 05 24	2016 09 21	2017 05 29	2017 09 26	2018 06 04	2018 09 19	2019 06 03	2019 09 24	2020 06 12	2020 11 20	2021 06 11	2021 10 06	2022 06 06	2022 10 06	2023 07 06	2023 10 26	2024-05-21	2024-09-17	2025 05 13	2025 08 27	2013 06 27	2013 11 13	2021 06 08	2021 10 06	2022 06 06	2022 10 05
Parameter	Unit	Analytical Results																									
Total Metals																											
Aluminum	µg/L	< 10	< 10	< 10	< 10	< 10	6.1	< 5.0	38.8	8.3	1.9	1.1	2.6	2.9	5.8	<7.0	6.7	8.3	6.5	6.6	4.1	4.1	< 15a	< 30a	3.1	106	<5.0	<5.0
Antimony	µg/L	< 0.50	< 0.50	0.5	0.54	0.52	1.3	1.7	0.8	0.33	0.478	< 0.050	< 0.050	0.074	4.71	4.08	0.161	1.67	1.60	1.48	1.19	1.12	< 0.50	< 1.0	0.187	< 5.00	<0.250	<0.250
Arsenic	µg/L	1.9	2.4	2.3	2.1	2.1	3.64	3.88	1.67	2.08	4.78	3.99	4.8	4.36	3.93	3.84	2.18	3.64	3.62	3.06	2.83	2.76	4.1	4.5	1.71	< 5.00	1.05	1.11
Barium	µg/L	93	83	86	68	69	51.9	63.4	52.4	68.5	68.4	56	64.2	78.3	98.3	90.1	69.3	84.6	93.6	101	107	111	55	49	27.2	63	25.2	20.8
Beryllium	µg/L	< 5.0a	< 5.0a	< 5.0a	< 5.0a	< 5.0a	< 0.10	< 0.10	0.2	< 0.10	0.089	0.122	0.124	0.058	0.115	0.148	0.04	0.056	0.049	0.053	0.044	0.042	< 10a	< 10a	< 0.010	< 1.00	<0.050	<0.050
Bismuth	µg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.010	<0.010	<0.010	<0.010	-	-	-	-	-	-
Boron	µg/L	< 100	240	190	210	170	512	518	92	75.2	59.8	43.4	48.4	63.8	403	366	164	379	536	507	484	465	< 200	< 200	42.5	263	36.8	23.1
Cadmium	µg/L	0.057	0.097	0.2	0.07	0.297	0.267	0.371	0.053	< 0.010	0.0043	< 0.0020	< 0.0020	< 0.0020	0.0553	0.0669	<0.0020	0.0602	0.0573	0.0724	0.0828	0.0924	< 0.25	< 0.50a	0.209	0.429	0.0425	0.236
Calcium	mg/L	116	128	118	115	101	191	192	87.4	79.6	74.4	84.5	84.1	75.9	120	118	76.2	127	142	140	180	179	333	346	371	380	374	369
Chromium	µg/L	< 0.50	0.58	< 0.50	< 0.50	< 0.50	2.08	1.97	< 0.50	0.71	0.19	0.15	0.16	0.31	0.98	0.98	0.82	1.38	1.33	1.06	1.09	0.9	< 2.5	< 5.0	0.23	< 10.0a	<0.50	<0.50
Cobalt	µg/L	12.6	5.88	14.5	1.64	12.6	2.15	53	20.1	3.33	33	47.6	124	73.1	286	310	19.8	40.7	15.7	35.0	11.1	27	17.7	8.6	0.156	1.69	0.119	0.21
Copper	µg/L	5.3	13.5	13.5	13.4	8.8	84	84.5	1.92	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	13.6	14.8	0.87	38.9	45.8	35.7	36.8	34.8	< 2.5a	< 5.0a	1.1	< 10.0	2.01	1.78
Iron	µg/L	176	94	47	< 30	< 30	73	78	65	584	1,030	898	1,170	1,740	156	121	1070	289	126	88.2	56.3	59.6	276	1,080	10.2	< 200	<10.0	22.3
Lead	µg/L	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 0.20	< 0.20	< 0.20	< 0.20	< 0.050	< 0.050	< 0.050	< 0.050	0.185	0.205	<0.050	0.249	0.086	0.087	0.052	<0.050	< 1.0	< 1.0	< 0.050	< 5.00	<0.250	<0.250
Lithium	µg/L	< 50	< 50	< 50	51	52	16.4	18.6	118	89.8	99.1	95	101	72.2	62	57	98.1	66.2	53.6	50.0	55.2	54.7	58	109	82.1	101	81.8	78.9
Magnesium	mg/L	92.5	87.9	83.6	72.8	70.2	43.7	49.2	60.3	60.6	57	56.1	60.7	59.9	61.8	61.7	626	581	68.6	72	89.4	97.5	486	496	509	597	522	485
Manganese	µg/L	1,070	861	885	< 10	312	39.8	637	557	704	674	532	717	875	478	469	544	502	184	337	159	410	3,310	3,410	307	1,380	25.8	432
Mercury	µg/L	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	< 0.20	< 0.20	< 0.010	< 0.010	< 0.010	< 0.010
Molybdenum	µg/L	23.3	29.9	28.9	23.8	21.4	40.1	45	9.71	1.67	8.96	8.94	9.2	8.47	29.5	29.7	12.9	25.7	33.6	27.9	37.3	40.9	46.3	31.2	55.1	60.9	47.6	56.6
Nickel	µg/L	18.7	30.1	30.1	19.8	21.2	30.8	39.2	6.47	2.82	2.52	1.39	1.84	1.3	39.2	48	14	119	117	91.3	51.8	55.6	60.5	30.1	8.21	19.4	4.07	11.4
Phosphorus	µg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	98	81	68	70	-	-	-	-	-	-
Potassium	mg/L	9.6	10.2	9.7	10.2	9.8	16	15.8	11.1	9.74	9.32	10.3	11.9	9.71	18.7	16.6	13.4	24.7	27.7	24.9	27.9	25.5	20.2	20.4	22.6	22.7	21.4	19.4
Selenium	µg/L	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	0.69	0.79	0.6	0.66	0.11	< 0.10	< 0.10	0.15	0.93	1.02	0.32	0.57	1.15	1.08	1.03	1.11	< 5.0	< 10	0.23	< 10.0	0.56	0.55
Silicon	µg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	10,700	11,000	11,800	11,200	-	-	-	-	-	-
Silver	µg/L	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.010	< 0.010	< 0.010	< 0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	< 0.050	< 0.10	< 0.010	< 1.00	0.051	<0.050
Sodium	mg/L	347	306	312	272	262	70.9	83.2	284	267	263	276	285	259	205	201	256	215	191	200	250	253	1,230	1,260	1,200	1,250	1,120	9,970
Strontium	µg/L	3,100	2,880	3,050	2,770	2,730	1,570	1,720	3,190	2,860	2,880	3,000	2,940	2,760	2,820	2750	2950	2590	2,650	2,850	3,110	3,410	7,280	7,240	7,890	8,350	8,870	8,480
Sulfur	µg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	110,000	130,000	217,000	233,000	-	-	-	-	-	-
Tellurium	µg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.050	<0.050	<0.050	<0.050	-	-	-	-	-	-
Thallium	µg/L	< 0.020	< 0.020	< 0.020	< 0.010	< 0.010	0.039	0.054	< 0.020	< 0.020	< 0.0040	< 0.0040	< 0.0040	< 0.0040	<0.0040	0.006	<0.0040	0.0161	0.0290	0.0184	0.027	0.0241	< 0.50	< 1.0	0.0124	< 0.400	<0.0200	<0.0200
Thorium	µg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.161	0.125	0.015	0.01	-	-	-	-	-	-
Tin	µg/L	< 30	< 30	< 30	< 30	< 30	< 0.20	< 0.20	< 0.20	< 0.20	0.051	< 0.050	< 0.050	< 0.050	0.141	0.076	0.75	0.702	0.712	0.211	0.137	0.125	< 60	< 60	0.135	< 5.00	<0.250	<0.250
Titanium	µg/L	< 50	< 50	< 50	< 50	< 50	< 5.0	< 5.0	< 5.0	< 5.0	0.29	< 0.20	< 0.20	0.31	0.77	0.72	0.75	0.93	0.88	0.72	0.56	0.61	< 50	< 50	< 0.20	< 20.0	<1.00	<1.00
Tungsten	µg/L	-	-	-	-	-	1.7	5.1	1	5.2	4.51	3.08	6.33	7.36	2.93	2.9	0.73	1.47	0.71	1.19	1.3	1.41	-	-	< 0.20	< 20.0	<1.00	<1.00
Uranium	µg/L	36	46.9	49.9	41.1	38.2	21.5	27.3	19	31.4	25.2	21.1	16.3	26.5	40.7	45.1	21.6	28.8	42.9	41.4	74	71.1	106	66.7	140	206	201	195
Vanadium	µg/L	< 30	< 30	< 30	< 30	< 30	5.5	5.2	< 1.0	1.2	0.3	< 0.20	< 0.20	< 0.20	<3.00	2.35	1.37	2.91	3.11	2.56	2.41	2.29	< 60	< 60	< 0.20	< 20.0	<5.00	<5.00
Zinc	µg/L	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	6.1	7.7	< 4.0	< 4.0	< 1.0	< 1.0	< 1.0	1.6	4.3	4	<1.0	16.9	10.4	4.8	2.9	3.4	< 10	< 10	4	< 100	<5.0	<5.0
Zirconium	µg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	3.20	2.39	2.41	2.32	-	-	-	-	-	-

Associated CARO files available upon

Associated Exova file(s): 622178, 653600, 712940, 714233, 714243, 756693, 756810, 757047, 811364, 811710, 812030, 812741, 812985, 846260, 878316, 879073, 909346, 909448, 909654.

Table H2: Summary of Groundwater Analytical Results - Total Metals - HISTORICAL to 2025

Well ID		GL29-2						GL31-1		GL31-3					GL35-3												
Sample ID		GL29-2-230525	GL29-2-231026	GL29-2	GL29-2	GL29-2	GL29-2	GL31-3-20130627	GL31-3-20141126	GL31-3-20121205	GL31-3-20131114	GL31-3-20140609	GL31-3-20150611	GL31-3-20151109	GL35-3-20121205	GL35-3-20130627	GL35-3-20131113	GL35-3-20140609	GL35-3-20141126	GL35-3-20150611	GL35-3-20151109	GL35-3-20160526	GL35-3-20170926	GL35-3-180815	GL35-3-190530	GL35-3-200608	GL35-3-210610	GL35-3-220531
Sample Date		2023 05 25	2023 10 26	2024-05-21	2024-09-17	2025 05 13	2025 08 27	2013 06 27	2014 11 26	2012 12 05	2013 11 14	2014 06 09	2015 06 11	2015 11 09	2012 12 05	2013 06 27	2013 11 13	2014 06 09	2014 11 26	2015 06 11	2015 11 09	2016 05 26	2017 09 26	2018 08 15	2019 05 30	2020 06 08	2021 06 10	2022 05 31
Parameter	Unit	Analytical Results																									
Total Metals																											
Aluminum	µg/L	2.4	3.3	2.2	<2.0	<1.0	<2.0	< 60a	< 60a	56	< 60a	< 60a	< 20	21	58	< 30a	< 30a	< 30a	< 30a	< 10	< 20	< 10	< 10	< 5.0	5.1	3	2.5	5.7
Antimony	µg/L	0.138	<0.100	0.147	0.117	0.121	0.109	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	2.1	< 1.0	< 0.50	< 0.20	0.21	< 0.050	< 0.050	<0.250
Arsenic	µg/L	1.29	1.94	1.07	1.33	1.32	1.15	4	26.2	19.1	23.5	11.1	31.3	16.2	3.8	< 1.0	1.7	< 1.0	2.3	1.1	12	1.4	< 1.0	0.67	0.61	0.842	0.162	0.698
Barium	µg/L	25.7	32.2	23.3	22.4	23.7	21.9	< 50	< 50	30	< 50	< 50	< 50	< 50	20	< 30	< 50	< 30	< 50	< 50	< 50	< 30	< 30	17.2	16.3	15.9	16.3	15.2
Beryllium	µg/L	<0.020	<0.020	<0.020	<0.020	<0.010	<0.020	< 25a	< 25a	< 0.40	< 25a	< 25a	< 25a	< 25a	< 0.40	< 15a	< 25a	< 15a	< 25a	< 25a	< 25a	< 15a	< 15a	< 0.10	< 0.10	0.066	0.038	0.09
Bismuth	µg/L	-	-	<0.020	<0.020	<0.010	0.025	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Boron	µg/L	46.3	52.4	55.7	53.6	50.4	52.2	< 500	< 500	50	< 500	< 500	< 500	< 500	130	< 300	< 500	< 300	< 500	< 500	< 500	< 300	< 300	87	76.9	55.4	64.2	58.8
Cadmium	µg/L	0.0566	0.0622	0.0835	0.106	0.111	0.0678	< 1.0a	< 1.0a	< 0.10	< 1.0a	< 1.0a	< 0.10	< 0.10	< 0.10	< 0.50a	< 0.50a	< 0.50a	< 0.50a	< 0.050	< 0.10	< 0.050	< 0.050	< 0.010	< 0.010	0.0077	< 0.0020	0.0183
Calcium	mg/L	389	412	384	429	445	419	199	195	202	195	194	202	190	258	219	221	207	186	205	175	209	196	211	194	228	213	165
Chromium	µg/L	<1.00	<1.00	<1.00	<1.00	<0.50	<1.00	< 10a	< 10a	18.2	< 10a	< 10a	< 2.0	< 2.0	14.7	< 5.0	< 5.0	< 5.0	< 5.0	< 1.0	4.4	< 1.0	< 0.50	0.52	1.28	1.73	< 0.10	<0.50
Cobalt	µg/L	0.262	3.72	0.145	0.902	0.24	1.44	5.4	4.6	7.67	4.9	5.1	4.2	3.5	< 0.20	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 2.0	< 1.0	< 0.50	< 0.10	< 0.10	0.0296	0.0148	<0.0250
Copper	µg/L	2.48	2	2.12	0.76	1.32	0.47	< 10a	< 10a	< 10a	< 10a	< 10a	< 4.0a	4.1	< 10a	< 5.0a	< 5.0a	< 5.0a	< 5.0a	< 2.0a	< 4.0a	< 2.0a	< 1.0a	< 0.40a	< 0.40a	0.9	0.19	<0.50
Iron	µg/L	32.4	403	52.0	155	112	137	< 150	7,070	6,580	6,250	1,690	9,360	2,000	11,400	< 90	15,100	10,300	6,480	18,700	< 150	20,700	25,000	24,800	23,200	16,700	463	12.6
Lead	µg/L	<0.100	<0.100	<0.100	<0.100	<0.050	<0.100	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 0.20	< 0.20	< 0.050	< 0.050	<0.250
Lithium	µg/L	84.7	87.4	93.7	78.7	86.2	92.4	55	< 50	70	53	62	< 50	51	490	377	402	406	353	368	305	377	368	413	421	350	408	337
Magnesium	mg/L	504	462	444	436	444	473	909	921	964	929	955	961	870	495	406	419	413	387	402	387	407	369	374	368	392	322	371
Manganese	µg/L	121	1630	67.0	750	168	783	485	435	1,020	454	521	446	421	250	467	471	407	391	438	385	442	374	443	348	377	347	325
Mercury	µg/L	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	< 0.20	< 0.20	-	< 0.20	< 0.20	< 0.20	< 0.20	-	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010
Molybdenum	µg/L	50.9	61.9	55.1	64.6	57.6	69	33.7	33	37.9	36.4	34.4	34.7	22.6	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	0.21	0.27	2.34	2.14	2.46
Nickel	µg/L	4.42	16.4	4.63	13.5	4.26	13.4	< 10	< 10	20	11	10	< 10	< 10	< 10	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 10	< 5.0	< 5.0	< 0.40	0.46	0.361	0.427	0.54
Phosphorus	µg/L	-	-	22	26	25	25	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Potassium	mg/L	21.5	23.4	21	20.9	22.4	20.9	38	38	37.3	37	39	40	38	39.6	36.8	38	36.3	38	37	61	35.6	32.9	34.1	32	37.1	26.9	26.6
Selenium	µg/L	0.83	0.34	0.74	0.36	0.41	0.21	< 20	< 20	10.7	< 20	< 20	< 1.0	< 1.0	< 6.0	< 10	< 10	< 10	< 10	< 1.0	4	< 1.0	< 1.0	< 0.50	< 0.50	0.1	< 0.10	<0.50
Silicon	µg/L	-	-	8,160	8,980	9,880	9,150	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Silver	µg/L	0.025	<0.020	<0.020	<0.020	<0.010	<0.020	< 0.20	< 0.20	< 0.10	< 0.20	< 0.20	< 0.20	< 0.20	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.20	< 0.10	< 0.050	< 0.050	< 0.050	< 0.010	< 0.010	0.051
Sodium	mg/L	1,060	1,080	905	999	1,050	1,010	3,470	3,250	3,350	3,410	3,490	3,660	3,430	2,490	2,320	2,270	2,310	2,200	2,290	3,180	2,340	2,110	1,980	1,980	2,040	1,670	1,850
Strontium	µg/L	8320	8190	7,630	7,480	7,940	7,490	9,270	9,560	11,300	9,260	9,540	9,820	9,440	12,500	8,740	9,040	8,080	8,070	8,730	8,100	8,350	8,380	8,860	9,410	9,340	7,440	7,720
Sulfur	µg/L	-	-	1,530,000	1,630,000	1,860,000	1,550,000	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Tellurium	µg/L	-	-	<0.100	<0.100	<0.050	<0.100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Thallium	µg/L	<0.0080	0.0119	<0.0080	<0.0080	0.0069	<0.0080	< 2.0	< 2.0	< 0.10	< 2.0	< 2.0	< 0.20	< 0.20	< 0.10	< 1.0	< 1.0	< 1.0	< 1.0	< 0.10	< 0.20	< 0.10	< 0.050	< 0.020	< 0.020	< 0.0040	< 0.0040	<0.0200
Thorium	µg/L	-	-	0.204	<0.020	<0.010	<0.020	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Tin	µg/L	<0.100	<0.100	<0.100	<0.100	<0.100	<0.200	< 150	< 150	< 1.0	< 150	< 150	< 150	< 150	< 1.0	< 90	< 150	< 90	< 150	< 150	< 150	< 90	< 90	< 0.20	< 0.20	< 0.050	< 0.050	<0.250
Titanium	µg/L	<0.40	<0.40	<0.40	<0.40	<0.20	<0.40	< 50	< 50	< 1,000	< 50	< 50	< 50	< 50	< 1,000	< 50	< 50	< 50	< 50	< 50	< 50	< 50	< 50	< 5.0	< 5.0	1.16	< 0.20	<1.00
Tungsten	µg/L	<0.40	<0.40	<0.40	<0.40	<0.20	<0.40	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	< 1.0	< 1.0	< 0.20	< 0.20	<1.00
Uranium	µg/L	219	213	225	209	200	206	25.6	26	29.8	27.3	24.7	27.4	22.8	26.3	10	10.1	9.53	6.6	4.21	16.5	3.83	3.75	4.17	7.01	21.9	20.7	20.3
Vanadium	µg/L	<2.00	<2.00	<2.00	<2.00	<1.00	<2.00	< 150a	< 150a	5.86	< 150a	< 150a	< 150a	< 150a	5.55	< 90	< 150a	< 90	< 150a	< 150a	< 150a	< 90	< 90	1.2	1.3	1.25	< 0.20	<5.00
Zinc	µg/L	<2.0	6.2	4.3	4.8	3.7	4	< 25	< 25	< 10	< 25	< 25	< 25	< 25	< 10	< 15	< 25	< 15	< 25	< 25	< 25	< 15	< 15	< 4.0	< 4.0	< 1.0	< 1.0	<5.0
Zirconium	µg/L	-	-	0.357	0.078	0.055	0.061	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Associated CARO files available upon

Associated Exova file(s): 622178, 653600, 712940, 714233, 714243, 756693, 756810, 757047, 811364, 811710, 812030, 812741, 812985, 846260, 878316, 879073, 909346, 909448, 909654.

Table H2: Summary of Groundwater Analytical Results - Total Metals - HISTORICAL to 2025

Well ID		GL35-3			GL37		GL39-1													GL39-2							
Sample ID		GL35-3-230525	GL35-3	GL35-3	GL37-20130708	GL37-20131114	GL39-1-191205	GL39-1-200609	GL39-1-201019	GL39-1-210526	GL39-1-210914	GL39-1-220531	GL39-1-220923	GL39-1-230525	GL39-1-231024	GL39-1	GL39-1	GL39-1	GL39-1	GL39-2-191205	GL39-2-200609	GL39-2-201016	GL39-2-210526	GL39-2-210914	GL39-2-220531	GL39-2-220923	GL39-2-230525	GL39-2-231024
Sample Date		2023 05 25	2024-05-14	2025 05 22	2013 07 08	2013 11 14	2019 12 05	2020 06 09	2020 10 19	2021 05 26	2021 09 14	2022 05 31	2022 09 23	2023 05 25	2023 10 24	2024-05-27	2024-09-18	2025 05 21	2025 08 26	2019 12 05	2020 06 09	2020 10 16	2021 05 26	2021 09 14	2022 05 31	2022 09 23	2023 05 25	2023 10 24
Parameter	Unit	Analytical Results																										
Total Metals																												
Aluminum	µg/L	<5.0	<5.0	2.1	< 150a	< 150a	< 5.0	1.1	1.7	2.2	2.5	2	6.8	1.4	3.7	2.5	1.4	12.5	2.6	5.7	4.5	1.6	1.4	97.7	1.1	1.2	1.3	1.2
Antimony	µg/L	<0.250	<0.250	<0.100	< 5.0	< 5.0	< 0.20	< 0.050	< 0.050	< 0.050	0.059	<0.100	<0.100	0.05	<0.100	<0.100	0.057	<0.050	<0.050	< 0.20	0.059	0.082	< 0.050	0.07	0.059	0.073	0.062	0.074
Arsenic	µg/L	0.487	1.17	0.19	15.2	16.1	< 0.50	0.333	0.472	0.372	0.619	0.328	0.275	0.362	0.324	0.324	0.380	0.353	0.354	0.51	0.419	0.422	0.404	0.692	0.324	0.345	0.335	0.35
Barium	µg/L	16.5	14.7	15.7	< 100	< 100	14.8	13.5	12.4	14.1	14.3	11.9	10.4	10.8	10.7	10.2	10.8	9.78	10.2	16.2	12.3	12.9	10.9	20.5	9.76	10.8	14.3	19.9
Beryllium	µg/L	0.065	0.064	0.048	< 50a	< 50a	< 0.10	< 0.010	< 0.010	< 0.010	< 0.010	<0.020	0.021	<0.010	<0.020	<0.020	<0.010	<0.010	<0.010	< 0.10	< 0.010	< 0.010	< 0.010	< 0.010	<0.010	<0.010	<0.010	<0.010
Bismuth	µg/L	-	<0.050	<0.020	-	-	-	-	-	-	-	-	-	-	-	<0.020	<0.010	<0.010	<0.010	-	-	-	-	-	-	-	-	-
Boron	µg/L	81.6	85.4	80.2	< 1,000a	< 1,000a	20.4	15.9	8.4	20.9	33.6	13.7	14.3	15.7	16.4	15.4	19.6	18.2	18.7	15.2	9.7	10.9	11.8	22.8	6.7	7.5	10.8	10.3
Cadmium	µg/L	<0.0100	<0.0100	<0.0040	< 2.5a	< 2.5a	0.07	0.0609	0.0459	0.0578	0.0629	0.0597	0.0635	0.0554	0.0812	0.0695	0.0652	0.0661	0.0656	0.05	0.048	0.0236	0.0176	0.0369	<0.0180	<0.0200	<0.0140	<0.0380
Calcium	mg/L	183	176	200	285	298	180	229	253	325	284	237	235	251	224	244	254	217	232	183	188	117	106	182	87.2	75.1	55.2	58.3
Chromium	µg/L	<2.50	<2.50	<1.00	< 25a	< 25a	< 0.50	0.5	0.35	0.21	0.34	0.24	0.29	<0.50	<1.00	<1.00	<0.50	<0.50	<0.50	12.9	7.3	3.31	1.15	2.81	0.69	0.51	<0.50	<0.50
Cobalt	µg/L	<0.0250	<0.0250	0.0134	< 5.0	< 5.0	1.4	0.286	0.207	0.22	0.256	0.173	0.14	0.202	0.242	0.187	0.182	0.175	0.207	0.16	0.137	0.109	0.0787	0.283	0.0645	0.0652	0.0942	0.109
Copper	µg/L	<0.50	<0.50	<0.20	176	< 25a	0.89	1.19	1.16	1.58	2.32	1.88	1.56	1.63	1.82	2.02	2.16	3.1	2.3	1.75	1.74	1.63	1.43	2.02	1.56	1.52	0.82	0.94
Iron	µg/L	15.7	13,400	9,620	6,850	7,060	< 10	< 2.0	3.9	< 2.0	9.1	<4.0	<4.0	<2.0	<4.0	<4.0	<2.0	<2.0	2.5	< 10	8.8	< 2.0	< 2.0	167	<2.0	<2.0	<2.0	<2.0
Lead	µg/L	<0.250	<0.250	<0.100	< 2.5	< 2.5	< 0.20	< 0.050	< 0.050	< 0.050	< 0.050	<0.100	<0.100	<0.050	<0.100	<0.100	<0.050	<0.050	<0.050	< 0.20	< 0.050	< 0.050	< 0.050	0.075	<0.050	<0.050	<0.050	<0.050
Lithium	µg/L	358	316	402	< 100	< 100	61.6	67.4	59.5	96	74.5	76.4	66.5	72.9	64.8	77.7	89.0	76.4	86.9	28.6	23.6	22.2	20.4	21.5	15.8	14	11.6	12.6
Magnesium	mg/L	352	337	353	1,250	1,270	326	376	324	605	466	492	399	443	398	410	427	347	440	360	349	230	201	327	206	130	105	113
Manganese	µg/L	360	333	279	1,160	1,150	161	31.8	10.2	18	16.1	13.4	11.4	17.5	25.9	17.4	17.7	20.1	27.9	13.3	6.72	4.88	5.71	15.3	4.07	3.65	7.7	10.2
Mercury	µg/L	<0.010	<0.010	<0.010	< 0.20	< 0.20	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	<0.010	<0.010
Molybdenum	µg/L	1.71	4.28	0.831	104	103	21.5	22.4	22.4	22.1	26.2	20.3	21.2	21.1	24	23.1	26.1	24.5	24.9	21.5	23.2	26.8	26.6	29.3	23.1	34.4	30.9	39.5
Nickel	µg/L	0.503	0.411	0.324	57	< 25	1.89	1.07	1.02	1	1.33	1.05	0.739	1.14	1.16	1.08	1.11	1.16	1.22	2.18	1.33	1.02	0.932	1.83	0.813	0.684	0.739	0.793
Phosphorus	µg/L	-	180	<20	-	-	-	-	-	-	-	-	-	-	-	<20	<10	<10	<10	-	-	-	-	-	-	-	-	-
Potassium	mg/L	28.5	26.2	34.4	200	210	12.4	14.2	13.5	16.5	16	13.9	14.7	15.4	14.3	14.2	15.7	13.5	14.2	11.3	9.71	7.93	7.24	9.42	5.32	6.13	4.44	5.4
Selenium	µg/L	<0.50	<0.50	<0.20	< 50a	< 50a	4.89	10.6	5.58	14.6	2.69	4.69	5.09	1.34	0.78	0.57	0.53	0.6	0.49	12.2	4.73	5.17	0.92	11.9	0.83	0.44	0.32	0.6
Silicon	µg/L	-	20,900	23,700	-	-	-	-	-	-	-	-	-	-	-	11,600	13,500	11,600	12,400	-	-	-	-	-	-	-	-	-
Silver	µg/L	<0.050	<0.050	<0.020	< 0.50	< 0.50	< 0.050	< 0.010	< 0.010	< 0.010	< 0.010	0.036	<0.020	0.019	<0.020	<0.020	<0.010	0.01	<0.010	< 0.050	< 0.010	< 0.010	< 0.010	< 0.010	0.014	<0.010	<0.010	<0.010
Sodium	mg/L	1,710	1620	1,700	6,650	7,010	406	476	380	566	578	571	483	520	525	527	564	491	520	741	1.27	531	430	630	412	329	227	263
Strontium	µg/L	8270	7,900	8,380	7,660	8,160	5,690	45.5	6,840	8,270	6,770	7,110	6,780	6860	6380	6,430	6,320	6,140	5,940	4,940	27.6	2,870	2,400	3,770	2,130	1,740	1250	1450
Sulfur	µg/L	-	1,090,000	1,560,000	-	-	-	-	-	-	-	-	-	-	-	862,000	1,010,000	851,000	871,000	-	-	-	-	-	-	-	-	-
Tellurium	µg/L	-	<0.250	<0.100	-	-	-	-	-	-	-	-	-	-	-	<0.100	<0.050	<0.050	<0.050	-	-	-	-	-	-	-	-	-
Thallium	µg/L	<0.0200	<0.0200	<0.0080	< 5.0a	< 5.0a	0.034	0.0157	0.0144	0.0184	0.0189	0.0149	0.0237	0.0246	0.0203	0.0246	0.0278	0.0288	0.0255	< 0.020	0.0111	0.0089	0.0067	0.0116	<0.0040	0.0066	0.0057	0.0072
Thorium	µg/L	-	0.394	<0.020	-	-	-	-	-	-	-	-	-	-	-	<0.020	<0.010	<0.010	<0.010	-	-	-	-	-	-	-	-	-
Tin	µg/L	<0.250	<0.250	<0.200	< 300	< 300	< 0.20	< 0.050	< 0.050	< 0.050	< 0.050	<0.100	<0.100	<0.050	<0.100	<0.100	<0.050	0.914	<0.100	< 0.20	< 0.050	0.132	0.055	< 0.050	<0.050	<0.050	<0.050	<0.050
Titanium	µg/L	<1.00	<1.00	<0.40	< 100	< 100	< 5.0	< 0.20	0.24	< 0.20	< 0.20	<0.40	<0.40	<0.20	<0.40	<0.40	<0.20	<0.20	<0.20	< 5.0	0.31	< 0.20	0.22	8.35	<0.20	<0.20	<0.20	<0.20
Tungsten	µg/L	<1.00	<1.00	<0.40	-	-	< 1.0	< 0.20	< 0.20	< 0.20	< 0.20	<0.40	<0.40	<0.20	<0.40	<0.40	<0.20	<0.20	<0.20	< 1.0	< 0.20	< 0.20	< 0.20	< 0.20	<0.20	<0.20	<0.20	<0.20
Uranium	µg/L	20.8	25.3	9.92	251	236	191	219	219	310	276	244	240	281	258	250	268	226	252	131	120	89.8	80.6	134	64.4	50.7	41.9	53.5
Vanadium	µg/L	<5.00	<5.00	<2.00	< 300a	< 300a	< 1.0	0.42	0.23	< 0.20	< 0.20	<2.00	<2.00	<1.00	<2.00	<2.00	<1.00	<1.00	<1.00	< 1.0	0.79	0.61	0.38	< 0.20	<1.00	<1.00	<1.00	<1.00
Zinc	µg/L	<5.0	<5.0	<2.0	< 50	< 50	< 4.0	1.4	1.4	1.2	1.9	<2.0	<2.0	<1.0	<2.0	<2.0	<1.0	<1.0	<1.0	< 4.0	< 1.0	< 1.0	< 1.0	1	<1.0	<1.0	<1.0	<1.0
Zirconium	µg/L	-	3.13	1.76	-	-	-	-	-	-	-	-	-	-	-	0.053	0.052	0.056	0.07	-	-	-	-	-	-	-	-	-

Associated CARO files available upon

Associated Exova file(s): 622178, 653600, 712940, 714233, 714243, 756693, 756810, 757047, 811364, 811710, 812030, 812741, 812985, 846260, 878316, 879073, 909346, 909448, 909654.

Table H2: Summary of Groundwater Analytical Results - Total Metals - HISTORICAL to 2025

Well ID		GL39-2				GL40-2	GL40-3		GL41-1											GL41-2								
Sample ID		GL39-2	GL39-2	GL39-2	GL39-2	GL40-2-200611	GL40-3-201117	GL40-3-210610	GL41-1-200616	GL41-1-201102	GL41-1-210525	GL41-1-220615	GL41-1-220923	GL41-1-230531	GL41-1-231026	GL41-1	GL41-1	GL41-1	GL41-1	GL41-2-191205	GL41-2-200612	GL41-2-201022	GL41-2-210525	GL41-2-210907	GL41-2-220615	GL41-2-220923	GL41-2-230531	GL41-2-231023
Sample Date		2024-05-27	2024-09-18	2025 05 21	2025 08 26	2020 06 11	2020 11 17	2021 06 10	2020 06 16	2020 11 02	2021 05 25	2022 06 15	2022 09 23	2023 05 31	2023 10 26	2024-05-24	2024-09-19	2025 05 28	2025 08 20	2019 12 05	2020 06 12	2020 10 22	2021 05 25	2021 09 07	2022 06 15	2022 09 23	2023 05 31	2023 10 23
Parameter	Unit	Analytical Results																										
Total Metals																												
Aluminum	µg/L	1.1	1.5	<1.0	1.1	1.4	2.1	1.4	3.4	2.1	2.6	2.3	1.6	20.4	1.6	1.5	1.4	1.2	<1.0	75.7	< 1.0	< 1.0	< 1.0	< 1.0	1.2	<1.0	2.1	<1.0
Antimony	µg/L	0.066	0.070	0.069	0.056	0.346	1.45	0.602	0.122	0.156	0.112	0.544	0.384	0.303	0.116	0.071	0.130	0.201	0.185	< 0.20	0.073	0.072	0.069	0.076	0.064	0.061	0.059	0.069
Arsenic	µg/L	0.281	0.278	0.275	0.304	6.37	15.4	4.35	1.3	1.2	1.03	1.21	1.07	0.991	1.13	0.983	1.15	1.85	1.65	1.19	1.05	1.05	1.1	1.14	0.944	0.96	0.965	0.895
Barium	µg/L	15.5	16.5	20.6	18.7	351	585	272	192	118	158	81.6	75.3	74.6	48.3	52.2	74.3	50.9	53.7	67.3	87.9	85.2	85.6	86.2	57.5	65.7	59	57.1
Beryllium	µg/L	<0.010	<0.010	<0.010	<0.010	0.037	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	<0.010	0.011	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	< 0.10	< 0.010	0.011	< 0.010	0.011	<0.010	<0.010	<0.010	<0.010
Bismuth	µg/L	<0.010	<0.010	<0.010	<0.010	-	-	-	-	-	-	-	-	-	-	<0.010	<0.010	<0.010	<0.010	-	-	-	-	-	-	-	-	-
Boron	µg/L	8.7	14.0	8.2	9.3	82.1	76.9	75.5	45.7	50.6	36	39.1	36.9	36.4	26.3	20.6	19.3	27.2	22.5	30	25.2	29.7	30.2	33.1	25.6	23.6	23.4	21.5
Cadmium	µg/L	<0.0300	<0.0160	<0.0280	0.0184	0.0024	0.0058	< 0.0020	0.393	0.311	0.0391	0.0538	0.0339	0.0307	0.0299	0.0238	0.329	0.123	0.155	0.044	0.0102	0.0149	0.0082	0.0111	0.0064	0.0099	0.0083	<0.0160
Calcium	mg/L	67.3	55.5	55	48.6	50.7	75.4	77.5	69.4	61.4	71	56.6	58.7	57	30.4	47.4	49.9	33.5	33.5	53.6	71.1	72.6	76.2	75.8	50.1	60.4	57.3	52.3
Chromium	µg/L	<0.50	<0.50	<0.50	<0.50	0.24	0.24	0.11	0.58	1.68	1.59	1.66	1.28	1.73	1.79	1.89	1.99	1.54	1.5	3.18	2.26	2.44	1.87	2.13	1.62	1.68	1.75	1.64
Cobalt	µg/L	0.0878	0.100	0.115	0.216	0.0202	0.119	0.103	1.01	0.229	0.0478	0.0469	0.05	0.0463	0.0438	0.0361	0.0359	0.0403	0.0401	0.29	0.0429	0.0438	0.0452	0.0527	0.0354	0.039	0.0367	0.0318
Copper	µg/L	0.79	0.75	0.71	0.66	< 0.10	< 0.10	0.18	1.17	1.69	1.82	2.93	2.71	1.69	2.01	0.72	0.74	1.9	1.34	1.52	1.13	1.24	1.33	1.25	1.82	0.91	0.74	0.66
Iron	µg/L	<2.0	<2.0	<2.0	<2.0	24.4	66.6	42	4	< 2.0	< 2.0	2.2	<2.0	4.7	3.7	2.1	<2.0	<2.0	<2.0	97	< 2.0	< 2.0	< 2.0	2.4	2.9	<2.0	<2.0	<2.0
Lead	µg/L	<0.050	<0.050	<0.050	<0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	<0.050	<0.050	0.079	<0.050	<0.050	<0.050	<0.050	<0.050	0.24	< 0.050	< 0.050	< 0.050	< 0.050	0.058	<0.050	<0.050	<0.050
Lithium	µg/L	12.3	15.4	11.4	12.1	342	283	321	38.3	44.2	44.2	39.4	38.1	42.1	32.5	29.9	29.5	32.6	28.3	36.9	45.2	41.7	42.5	41.5	29.7	32.9	34.1	29.9
Magnesium	mg/L	129	102	104	87.1	18	29.7	31.3	118	141	140	109	109	105	64.6	82.9	80.1	65.7	63.4	96.3	133	122	137	127	84.6	98.4	89	83.6
Manganese	µg/L	10.5	10.8	16.3	27.8	560	466	451	669	215	1.05	7.64	1.8	2.65	9.98	0.302	1.95	0.17	1.22	164	0.111	0.07	< 0.050	0.166	0.547	<0.050	0.342	0.071
Mercury	µg/L	<0.010	<0.010	<0.010	<0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	<0.000010	<0.010	<0.010
Molybdenum	µg/L	33.6	41.3	30.9	39.1	0.211	1.52	0.607	12	11	8.48	13.1	15.8	11	11	7.67	9.02	12	11.5	10.9	7.49	7.1	7.22	6.96	7.27	7.39	6.08	7.63
Nickel	µg/L	0.833	0.762	1.02	0.96	0.131	1.13	1.3	4.8	2.4	2.15	1.2	1.01	0.714	0.643	0.433	0.766	0.853	0.726	1.55	0.479	0.516	0.569	0.604	0.474	0.467	0.47	0.443
Phosphorus	µg/L	<10	<10	<10	<10	-	-	-	-	-	-	-	-	-	-	30	62	490	335	-	-	-	-	-	-	-	-	-
Potassium	mg/L	5.27	4.77	4.65	4.14	10.1	10.6	11.2	17.4	18.6	17.9	15.7	17.1	17.3	13.4	12.9	14.1	13.4	11.5	15.1	16	15.1	17.1	16.9	12.8	15100	14.5	12.6
Selenium	µg/L	0.73	0.26	0.32	0.13	0.51	< 0.10	< 0.10	0.79	0.54	0.46	0.91	0.79	0.63	0.49	0.60	0.63	0.54	0.61	0.64	0.49	0.49	0.34	0.46	0.52	0.55	0.68	1.95
Silicon	µg/L	8,530	9,570	7,970	7,930	-	-	-	-	-	-	-	-	-	-	11,100	11,700	10,900	10,200	-	-	-	-	-	-	-	-	-
Silver	µg/L	<0.010	<0.010	<0.010	<0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	< 0.050	0.01	0.011	< 0.010	0.011	<0.010	<0.010	<0.010	<0.010
Sodium	mg/L	268	195	212	176	1,550	1,230	1,090	249	312	282	246	230	232	202	168	173	166	151	234	279	256	286	266	195	199	189	173
Strontium	µg/L	1,560	1,120	1,250	1,110	8,510	8,370	7,280	2,540	2,830	2,860	2,250	2,200	2150	1370	1,890	2,000	1,340	1,400	2,320	3,120	2,840	2,990	2,960	2,140	2,440	2260	2060
Sulfur	µg/L	229,000	143,000	192,000	126,000	-	-	-	-	-	-	-	-	-	-	33,600	36,500	28,900	27,300	-	-	-	-	-	-	-	-	-
Tellurium	µg/L	<0.050	<0.050	<0.050	<0.050	-	-	-	-	-	-	-	-	-	-	<0.050	<0.050	<0.050	<0.050	-	-	-	-	-	-	-	-	-
Thallium	µg/L	0.0056	0.0059	0.0071	0.0049	< 0.0040	< 0.0040	< 0.0040	0.0521	0.026	0.0517	0.0365	0.0536	0.0377	0.01	<0.0040	0.0176	0.0081	0.0126	< 0.020	0.0064	< 0.0040	< 0.0040	< 0.0040	<0.0040	<0.0040	<0.0040	<0.0040
Thorium	µg/L	<0.010	<0.010	<0.010	<0.010	-	-	-	-	-	-	-	-	-	-	<0.010	<0.010	<0.010	<0.010	-	-	-	-	-	-	-	-	-
Tin	µg/L	<0.050	<0.050	<0.100	<0.100	0.058	0.176	< 0.050	0.2	< 0.050	0.124	0.166	0.128	0.052	0.08	<0.050	<0.050	<0.100	<0.100	< 0.20	< 0.050	< 0.050	< 0.050	< 0.050	0.082	<0.050	<0.050	<0.050
Titanium	µg/L	<0.20	<0.20	<0.20	<0.20	0.33	1.29	1.04	< 0.20	0.26	< 0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	< 5.0	< 0.20	< 0.20	< 0.20	< 0.20	<0.20	<0.20	<0.20	<0.20
Tungsten	µg/L	<0.20	<0.20	<0.20	<0.20	0.24	0.66	0.65	< 0.20	< 0.20	< 0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	< 1.0	< 0.20	< 0.20	< 0.20	< 0.20	<0.20	<0.20	<0.20	<0.20
Uranium	µg/L	50.4	32.1	36.6	28.9	0.555	8.49	6.76	29.2	27.7	28.1	30.6	37.2	32.2	14.4	13.9	20.3	13.9	13.9	20.3	26.3	25.8	24.5	24.6	15.4	18	14.2	18.5
Vanadium	µg/L	<1.00	<1.00	<1.00	<1.00	1.23	1.22	0.94	1.85	2.73	1.68	1.38	<1.00	1.43	3.05	1.73	2.01	2.68	2.34	2.6	2.29	2.54	2.2	1.76	2.09	2.09	2.16	2.04
Zinc	µg/L	<1.0	<1.0	<1.0	<1.0	< 1.0	< 1.0	< 1.0	5.6	4.7	2.5	2.7	2.6	2.7	2.2	<1.0	3.5	1.9	2	< 4.0	< 1.0	< 1.0	< 1.0	< 1.0	1.2	<1.0	<1.0	<1.0
Zirconium	µg/L	<0.020	<0.020	<0.020	<0.020	-	-	-	-	-	-	-	-	-	-	0.022	0.054	0.066	0.043	-	-	-	-	-	-	-	-	-

Associated CARO files available upon

Associated Exova file(s): 622178, 653600, 712940, 714233, 714243, 756693, 756810, 757047, 811364, 811710, 812030, 812741, 812985, 846260, 878316, 879073, 909346, 909448, 909654.

Table H2: Summary of Groundwater Analytical Results - Total Metals - HISTORICAL to 2025

Well ID		GL41-2				GL41-3												GL42-1								GL42-2		
Sample ID		GL41-2	GL41-2	GL41-2	GL41-2	GL41-3-200612	GL41-3-201022	GL41-3-210525	GL41-3-210907	GL41-3-220615	GL41-3-220923	GL41-3-230531	GL41-3-231023	GL41-3	GL41-3	G 41-3	GL41-3	GL42-1-200612	GL42-1-201106	GL42-1-210603	GL42-1-220607	GL42-1-230621	GL42-1-231030	GL42-1	GL42-1	GL42-2-200616	GL42-2-201109	GL42-2-210607
Sample Date		2024-05-24	2024-09-19	2025 05 28	2025 08 20	2020 06 12	2020 10 22	2021 05 25	2021 09 07	2022 06 15	2022 09 23	2023 05 31	2023 10 23	2024-05-24	2024-09-19	2025 05 28	2025 08 20	2020 06 12	2020 11 06	2021 06 03	2022 06 07	2023 06 21	2023 10 30	2024-05-24	2025 05 22	2020 06 16	2020 11 09	2021 06 07
Parameter	Unit	Analytical Results																										
Total Metals																												
Aluminum	µg/L	<1.0	<1.0	1.5	3.7	< 1.0	2.1	2.3	5.7	9.8	9.2	2.1	2.4	23.0	1.5	<1.0	43.1	< 1.0	1.7	3.8	<5.0	2.7	<5.0	<5.0	<5.0	55.4	30.2	< 1.0
Antimony	µg/L	0.064	0.063	0.068	0.064	0.08	0.075	0.064	0.088	0.063	0.077	<0.050	0.072	0.059	0.079	0.066	0.068	0.225	0.655	0.654	<0.250	4.99	<0.250	<0.250	0.868	0.353	0.868	1.03
Arsenic	µg/L	0.912	0.930	0.909	0.902	1.07	1.14	1.12	1.24	0.924	0.957	0.962	1.12	0.959	1.03	0.967	1.01	2.67	5.24	10.4	4.37	14.8	26.4	28.0	2.23	2.53	1.74	1.42
Barium	µg/L	51.5	45.9	39.9	43.8	104	91.5	95.1	92.8	56.7	74.5	58.8	38.7	54.3	47.1	39.7	41.3	551	640	689	580	63.2	55.6	165	14.5	102	47.2	65.7
Beryllium	µg/L	<0.010	<0.010	<0.010	<0.010	< 0.010	< 0.010	< 0.010	< 0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	0.025	0.014	0.013	<0.050	0.023	<0.050	<0.050	<0.050	0.013	< 0.010	0.013
Bismuth	µg/L	0.074	<0.010	<0.010	<0.010	-	-	-	-	-	-	-	-	<0.010	<0.010	<0.010	<0.010	-	-	-	-	-	-	<0.050	<0.050	-	-	-
Boron	µg/L	21.1	23.8	20.2	18.4	24.2	27.7	28.8	32.3	25.5	25.1	22.7	19.8	20.5	25.3	22.2	18.9	82.3	55.3	91	73.1	54.5	68.4	76.3	22	48.3	43.1	49.3
Cadmium	µg/L	<0.0120	<0.0080	0.0076	0.0097	0.024	0.0231	0.0148	0.0143	0.0112	0.0148	0.0167	<0.0180	<0.0120	0.0155	0.0123	0.0159	0.027	0.0334	0.0118	<0.0100	0.09	<0.0100	<0.0100	0.209	0.195	0.719	0.188
Calcium	mg/L	50	43.9	42.2	42.8	69.3	70.9	75.8	74	47.4	63.9	53.2	29	46.4	40	39.6	38.2	35	33.4	36.1	24	202	146	71.5	415	89.2	117	119
Chromium	µg/L	1.82	1.65	1.8	2.35	2.09	2.02	1.74	1.96	1.5	1.42	1.54	1.37	1.86	1.72	1.93	2.16	0.3	0.48	0.23	<0.50	<1.00	<2.50	<2.50	<2.50	0.18	3.51	0.27
Cobalt	µg/L	0.0386	0.0329	0.0266	0.0381	0.0981	0.0589	0.0691	0.061	0.0508	0.0518	0.0358	0.0285	0.0671	0.0313	0.0256	0.122	0.154	0.292	0.906	0.444	14.5	1.81	0.574	1.71	1.88	1.88	1.18
Copper	µg/L	0.65	0.60	0.64	0.63	1.37	2.26	1.68	1.53	1	1.14	1.36	1.14	0.76	0.67	0.61	0.82	< 0.10	0.19	0.25	<0.50	1.28	<0.50	<0.50	2.38	0.63	2.36	7.23
Iron	µg/L	<2.0	<2.0	<2.0	<2.0	2.2	4.7	< 2.0	10.4	13.5	13.6	<2.0	<2.0	26.8	<2.0	<2.0	65.6	2,940	3,500	3,650	1,820	154	2270	3,410	878	122	51.3	3.7
Lead	µg/L	<0.050	<0.050	<0.050	<0.050	< 0.050	< 0.050	< 0.050	< 0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	0.077	0.11	0.065	< 0.050	<0.250	0.153	<0.250	<0.250	<0.250	0.167	0.068	0.127
Lithium	µg/L	29.8	34.2	26.7	26.3	47.5	41.3	45.3	43.4	31.1	37	34.7	24.1	29.3	35.6	30	25.4	1,270	1,270	1,410	861	721	852	1,150	199	105	200	156
Magnesium	mg/L	83.6	78.1	68.6	68.3	141	126	146	131	86.3	111	88.9	53	81.3	75.4	73.4	65.1	23.4	21.3	23.5	20	273	150	69.4	1050	153	238	227
Manganese	µg/L	0.062	<0.050	0.694	2.92	7.31	5.82	5.15	2.82	1.65	1.33	0.363	0.227	2.75	0.069	<0.050	6.22	343	467	322	139	629	439	248	118	1,320	606	655
Mercury	µg/L	<0.010	<0.010	<0.010	<0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	<0.000010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	< 0.010	< 0.010	< 0.010	< 0.010	<0.010	<0.010	<0.010	<0.010	< 0.010	< 0.010	< 0.010
Molybdenum	µg/L	8.28	9.24	9.19	9.66	8.33	8.25	7.54	7.97	6.82	7.35	6.35	11.5	7.74	9.18	9.03	9.39	4	3.08	2.13	3.24	32	26.7	11.9	25.1	18.4	21.7	19.4
Nickel	µg/L	0.373	0.322	0.294	0.304	0.925	0.91	0.755	0.756	0.534	0.64	0.523	0.668	0.470	0.370	0.319	0.491	0.61	0.932	2.02	1.58	26.5	11.6	2.35	13.7	6.5	9.37	8.82
Phosphorus	µg/L	34	34	59	37	-	-	-	-	-	-	-	-	29	39	36	34	-	-	-	-	-	-	151	<50	-	-	-
Potassium	mg/L	12.9	12.7	12.1	10.7	17.2	17.1	18.7	19.3	13.6	18.4	15.5	11.4	12.8	13.2	12.8	11.6	9.87	9.63	9.8	8.87	25.5	20.7	17.6	25.2	7.78	8.76	9.69
Selenium	µg/L	0.64	0.56	0.78	1.27	0.53	0.35	0.35	0.39	0.43	0.45	0.52	0.52	0.61	0.57	0.82	0.89	0.12	< 0.10	< 0.10	<0.50	0.78	0.58	<0.50	0.83	0.21	0.73	0.53
Silicon	µg/L	11,200	11,700	10,800	10,700	-	-	-	-	-	-	-	-	11,000	12,200	11,100	11,300	-	-	-	-	-	-	10,500	7,590	-	-	-
Silver	µg/L	<0.010	<0.010	<0.010	<0.010	< 0.010	< 0.010	< 0.010	< 0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	< 0.010	< 0.010	< 0.010	0.053	<0.020	<0.050	<0.050	<0.050	< 0.010	< 0.010	< 0.010
Sodium	mg/L	165	157	127	119	290	273	299	288	200	221	193	145	167	162	147	128	1,530	1,440	1,490	1,180	1,190	1,220	1380	1,680	973	1,350	1,170
Strontium	µg/L	2,080	1,700	1,600	1,710	3,080	2,840	3,050	2,810	1,960	2,600	2010	1150	1,840	1,540	1,550	1,690	3,460	3,360	3,530	2,740	6300	4380	3,450	12,700	4,000	5,560	5,650
Sulfur	µg/L	34,300	31,700	30,000	33,200	-	-	-	-	-	-	-	-	33,600	30,300	30,900	31,100	-	-	-	-	-	-	65,900	2,970,000	-	-	-
Tellurium	µg/L	<0.050	<0.050	<0.050	<0.050	-	-	-	-	-	-	-	-	<0.050	<0.050	<0.050	<0.050	-	-	-	-	-	-	<0.250	<0.250	-	-	-
Thallium	µg/L	<0.0040	<0.0040	<0.0040	<0.0040	0.0242	0.0135	0.0087	0.0095	0.0058	0.0049	<0.0040	0.0047	<0.0040	<0.0040	<0.0040	<0.0040	< 0.0040	< 0.0040	< 0.0040	<0.0200	0.0971	<0.0200	<0.0200	0.299	0.0497	0.0787	0.0808
Thorium	µg/L	<0.010	<0.010	<0.010	<0.010	-	-	-	-	-	-	-	-	<0.010	<0.010	<0.010	0.021	-	-	-	-	-	-	<0.050	0.068	-	-	-
Tin	µg/L	<0.050	<0.050	<0.100	<0.100	< 0.050	< 0.050	< 0.050	< 0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.100	<0.100	0.115	0.269	0.087	<0.250	<0.100	<0.250	<0.250	<0.500	0.346	0.429	1.34
Titanium	µg/L	<0.20	<0.20	<0.20	<0.20	< 0.20	< 0.20	< 0.20	0.46	0.48	0.49	<0.20	<0.20	1.18	<0.20	<0.20	2.14	1	1.78	1.49	<1.00	0.43	<1.00	<1.00	<1.00	1.62	2.24	< 0.20
Tungsten	µg/L	<0.20	<0.20	<0.20	<0.20	< 0.20	< 0.20	< 0.20	< 0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	0.24	0.22	0.37	<1.00	<0.40	<1.00	<1.00	<1.00	< 0.20	< 0.20	< 0.20
Uranium	µg/L	15.7	14.4	12.3	13.4	27.7	26.9	26.3	24.6	14.1	19.3	14.2	11.2	14.0	13.9	12.5	11.8	1.73	0.956	0.603	1.47	132	61.2	7.20	533	85.4	100	107
Vanadium	µg/L	2.08	2.14	2.06	1.81	1.82	2.14	1.82	1.28	1.65	1.99	1.79	1.97	1.80	1.92	1.74	1.87	1.36	1.5	0.61	<5.00	2.78	<5.00	<5.00	<5.00	0.77	1.56	0.63
Zinc	µg/L	1.0	<1.0	<1.0	<1.0	< 1.0	4.9	< 1.0	< 1.0	<1.0	<1.0	1.5	<1.0	<1.0	<1.0	<1.0	<1.0	1.7	1.9	< 1.0	<5.0	9	<5.0	<5.0	<5.0	2.8	4.2	6.4
Zirconium	µg/L	0.030	<0.020	0.023	0.025	-	-	-	-	-	-	-	-	0.058	<0.020	<0.020	0.108	-	-	-	-	-	-	15.4	0.488	-	-	-

Associated CARO files available upon

Associated Exova file(s): 622178, 653600, 712940, 714233, 714243, 756693, 756810, 757047, 811364, 811710, 812030, 812741, 812985, 846260, 878316, 879073, 909346, 909448, 909654.

Table H2: Summary of Groundwater Analytical Results - Total Metals - HISTORICAL to 2025

Well ID		GL42-2					GL43-1			GL44-1			GL44-2			GL45-1			GL45-2			GL46-1	
Sample ID		GL42-2-220617	GL42-2-230621	GL42-2-231031	GL42-2	GL42-2	GL43-1	GL43-1	GL43-1	GL44-1	GL44-1	GL44-1	GL44-2	GL44-2	GL44-2	GL45-1	GL45-1	GL45-1	GL45-2	GL45-2	GL45-2	GL46-1	GL46-1
Sample Date		2022 06 17	2023 06 21	2023 10 31	2024-05-27	2025 05 22	2024-09-25	2025 05 23	2025 08 21	2024-09-25	2025 06 02	2025 08 28	2024-09-25	2025 06 02	2025 08 28	2024-09-26	2025 06 02	2025 08 28	2024-09-26	2025 06 02	2025 08 28	2025 05 22	2025 08 26
Parameter	Unit	Analytical Results																					
Total Metals																							
Aluminum	µg/L	<5.0	5.2	<5.0	2.8	<1.0	4.8	8.7	1.9	1.7	2	8.7	1.6	1.7	<1.0	3.0	<2.0	1.9	2.6	1.4	1.5	<1.0	2.1
Antimony	µg/L	0.904	0.539	0.776	0.520	0.55	1.16	0.637	0.881	0.293	<0.050	<0.050	<0.050	<0.050	<0.050	0.082	<0.100	<0.050	0.060	<0.050	<0.050	0.511	0.127
Arsenic	µg/L	1.05	0.803	0.844	0.711	0.775	20.9	15.9	16.1	1.61	5.53	5.8	2.30	3.37	3.68	2.60	2.38	3.47	2.47	1.9	1.88	5.73	4.43
Barium	µg/L	40.5	25.5	19.6	18.1	19.7	54.4	47.4	48.3	77.1	39.2	26.3	22.6	18.2	17.1	39.5	61.5	34.3	41.2	31.7	29.9	131	183
Beryllium	µg/L	<0.050	<0.050	<0.050	<0.020	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	0.011	<0.010	<0.010	<0.010	0.034	0.036	0.035	<0.010	<0.010	<0.010	<0.010	<0.020
Bismuth	µg/L	-	-	-	<0.020	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.020	<0.010	<0.010	<0.010	<0.010	<0.010	<0.020
Boron	µg/L	34.8	30.4	22.2	25.1	23.6	117	79.5	93.5	36.5	27.1	26.1	39.9	26.6	28.5	37.8	52.1	40.4	48.3	37.8	33.3	58.2	82.6
Cadmium	µg/L	0.158	0.237	0.0722	0.0725	0.185	<0.180	0.105	0.117	0.125	<0.0040	<0.0040	<0.0240	<0.0060	<0.0060	<0.0040	<0.0040	<0.0020	<0.0060	0.0231	0.056	<0.0060	<0.0040
Calcium	mg/L	109	255	144	172	149	115	97	92	300	317	282	255	247	285	289	225	241	141	126	118	202	127
Chromium	µg/L	0.97	<2.50	<2.50	<1.00	0.59	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	0.99	<1.00	<0.50	<0.50	<0.50	<0.50	<0.50	<1.00
Cobalt	µg/L	0.177	0.231	0.199	0.140	0.0639	1.09	0.365	0.422	0.137	4.17	2.84	1.87	1.77	2.06	2.99	0.788	0.877	2.29	0.935	0.997	0.784	1.12
Copper	µg/L	2.69	3.25	1.64	1.38	1.43	10.1	5.47	6.54	0.53	<0.10	<0.10	<0.10	0.1	<0.10	<0.10	<0.20	<0.10	<0.10	0.14	<0.10	0.44	<0.20
Iron	µg/L	<10.0	<10.0	<10.0	<4.0	<2.0	7.2	9.3	<2.0	2.4	2,490	2,140	1,810	2,740	3,800	``	19,400	15,000	975	611	845	31.2	751
Lead	µg/L	<0.250	<0.250	0.358	<0.100	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.100	<0.050	<0.050	<0.050	<0.050	<0.050	<0.100
Lithium	µg/L	121	198	174	191	170	32.3	32.4	33.4	194	132	152	77.5	52.7	70.1	365	604	480	52.5	53.3	44.6	414	824
Magnesium	mg/L	271	679	557	389	339	265	329	238	436	525	519	373	381	385	335	289	376	197	211	209	343	237
Manganese	µg/L	207	45.1	71.8	54.9	1	400	182	342	275	1,590	952	943	1,300	1,410	2,130	1,480	1,020	904	414	580	191	346
Mercury	µg/L	< 0.010	<0.200	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010
Molybdenum	µg/L	18.2	15.2	15.4	14.3	15.1	187	136	131	18.1	15	15.9	30.5	27.6	25.9	16.5	11.9	17.3	25.9	20.6	20.6	21.6	6.37
Nickel	µg/L	7.83	8.87	6.85	5.25	13	10.6	7.57	8.16	7.26	7.43	5.68	3.94	3.94	4.44	15.0	5.35	4.89	3.87	2.43	3	4.83	2.62
Phosphorus	µg/L	-	-	-	<20	10	6,290	5,930	5,430	<10	29	31	15	18	18	34	34	25	20	17	21	1,450	368
Potassium	mg/L	9.09	15.5	12.4	11.3	12.8	21.2	16.9	14.2	24.4	26.8	20.9	15.9	15.1	14.5	23	24.4	21	12.2	12.9	11.2	14.1	12.3
Selenium	µg/L	0.64	4.9	2.38	1.03	1.1	5.26	4.52	3.24	0.86	0.15	<0.10	0.21	0.41	0.12	0.48	0.25	0.13	<0.10	0.1	<0.10	1.19	<0.20
Silicon	µg/L	-	-	-	9,200	8,610	13,700	12,100	13,900	14,700	15,400	15,900	13,500	11,300	12,900	21,600	23,700	22,100	12,900	11,900	11,600	9,410	8,730
Silver	µg/L	<0.050	<0.050	<0.050	<0.020	<0.010	0.011	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.020	<0.010	<0.010	<0.010	<0.010	<0.010	<0.020
Sodium	mg/L	1,250	1,550	1,350	1300	1,170	500	458	441	792	869	747	809	749	776	917	959	883	491	482	417	1,010	1,240
Strontium	µg/L	6010	11800	9970	8,310	7,910	3,370	3,720	3,400	7,880	9,140	8,360	5,670	5,360	5,870	7,100	6,830	6,390	2,770	2,670	2,640	5,880	4,710
Sulfur	µg/L	-	-	-	1,290,000	1,390,000	423,000	394,000	425,000	1,250,000	1,430,000	1,200,000	1,140,000	997,000	1,230,000	1,000,000	816,000	804,000	461,000	400,000	359,000	1,010,000	578,000
Tellurium	µg/L	-	-	-	<0.100	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.100	<0.050	<0.050	<0.050	<0.050	<0.050	<0.100
Thallium	µg/L	0.083	0.121	0.106	0.0790	0.0761	0.0283	0.0164	0.018	0.0217	0.0075	0.0069	<0.0040	<0.0040	<0.0040	<0.0040	<0.0080	<0.0040	<0.0040	<0.0040	<0.0040	0.0341	<0.0080
Thorium	µg/L	-	-	-	<0.020	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.020	<0.010	<0.010	<0.010	<0.010	<0.010	<0.020
Tin	µg/L	<0.250	<0.250	0.858	<0.100	<0.100	0.237	<0.100	<0.100	0.272	<0.100	0.108	0.248	0.258	0.225	0.078	<0.200	<0.100	0.187	<0.100	<0.100	<0.100	<0.200
Titanium	µg/L	<1.00	<1.00	<1.00	<0.40	<0.20	0.47	0.6	0.25	<0.20	<0.20	0.33	<0.20	<0.20	<0.20	0.38	0.46	<0.20	<0.20	<0.20	<0.20	0.69	0.51
Tungsten	µg/L	<1.00	<1.00	<1.00	<0.40	<0.20	0.36	<0.20	0.22	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.40	<0.20	<0.20	<0.20	<0.20	0.72	1.1
Uranium	µg/L	122	322	248	180	170	180	168	151	130	172	178	75.7	66.4	89.3	98.2	89.6	68.2	57.3	53.9	51.1	222	140
Vanadium	µg/L	<5.00	<5.00	<5.00	<2.00	<1.00	18.2	15.6	14.5	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<2.00	<1.00	<1.00	<1.00	<1.00	1.82	<2.00
Zinc	µg/L	<5.0	10.7	<5.0	2.5	3.4	1.5	<1.0	<1.0	3.4	1.2	1.3	2.6	1.5	1	1.2	<2.0	<1.0	1.1	<1.0	<1.0	1.6	<2.0
Zirconium	µg/L	-	-	-	0.452	0.574	1.09	0.704	0.759	0.889	0.611	0.536	0.406	0.229	0.343	3.77	4.82	2.73	0.859	0.517	0.523	5.96	7.18

Associated CARO files available upon

Associated Exova file(s): 622178, 653600, 712940, 714233, 714243, 756693, 756810, 757047, 811364, 811710, 812030, 812741, 812985, 846260, 878316, 879073, 909346, 909448, 909654.

Table H1: Summary of Groundwater Analytical Results - Inorganics/General - HISTORICAL to 2025

Well ID		09BH03							09BH04	09BH06-S					09BH06-D													BH11-18C	BH11-31C		GL0-1	
Sample ID		09BH03-20151105	09BH03-20170601	09BH03-180604	09BH03-190530	09BH03-200609	09BH03-210609	09BH03-220606	09BH04-20151105	09BH06-S-20131112	09BH06-S-20140602	09BH06-S-20141117	09BH06-S-20150610	09BH06-S-20151105	09BH06-D-20131112	09BH06-D-20140602	09BH06-D-20141117	09BH06-D-20150610	09BH06-D-20151105	09BH06-D-20170606	09BH06-D-180604	09BH06-D-190528	09BH06-D-200609	09BH06-D-210608	09BH06-D-220602	09BH06-D-230525	09BH06-D	GL 09BH06-D	BH 11-18C-20120627	BH11-31C-20111217	BH11-31C-20120625	GL0-1-20130625	GL0-1-20140603
Sample Date		2015 11 05	2017 06 01	2018 06 04	2019 05 30	2020 06 09	2021 06 09	2022-06-06	2015 11 05	2013 11 12	2014 06 02	2014 11 17	2015 06 10	2015 11 05	2013 11 12	2014 06 02	2014 11 17	2015 06 10	2015 11 05	2017 06 06	2018 06 04	2019 05 28	2020 06 09	2021 06 08	2022 06 02	2023 05 25	2024-05-28	2025-06-02	2012 06 27	2011 12 17	2012 06 25	2013 06 25	2014 06 03
Parameter	**Unit**	**Analytical Results**																														
Inorganics / General																																
Alkalinity, Bicarb(as CaCO3)	mg/L	736	-	788	780	776	713	644	1,400	-	-	-	-	362	-	-	-	-	365	-	355	377	373	357	308	361	360	385	-	-	-	-	-
Alkalinity, Carb (as CaCO3)	mg/L	<1.0	-	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	-	-	-	-	<1.0	-	-	-	-	<1.0	-	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	-	-	-	-	-
Alkalinity, Hydro(as CaCO3)	mg/L	<1.0	-	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	-	-	-	-	<1.0	-	-	-	-	<1.0	-	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	-	-	-	-	-
Alkalinity, Phen(as CaCO3)	mg/L	-	-	<1.0	<1.0	<1.0	<1.0	<1.0	-	-	-	-	-	-	-	-	-	-	-	-	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	-	-	-	-	-
Alkalinity, Total (as CaCO3)	mg/L	736	698	788	780	776	713	644	1,400	392	379	399	394	362	397	376	407	398	365	343	355	377	373	357	308	361	360	385	2,580	17,000	2,620	205	205
Ammonia, Total (as N)	µg/L	< 5.0	39.8	<20	274	< 50	120	<50	346	87	91	94	95.1	101	94	96	99.5	102	100	107	167	199	96	120	147	99	0.190	0.134	2,300	57,300	2,740	91.9	52.9
Bromide	mg/L	<1.0	<1.0	<0.10	<0.10	<0.10	<1.00	<1.00	<1.00	-	<0.50	<0.50	<0.25	<0.25	-	<0.50	<0.50	<0.25	<0.25	<0.25	<0.10	<0.10	<0.10	<0.10	<1.00	<0.10	<1.00	<1.00	-	-	-	<0.50	<0.50
Chloride	mg/L	20	15	26.2	27.9	25.3	11.1	9.43	31	8.3	10.9	8	7.1	7.6	9.1	9.5	8.3	7.9	7.7	8.2	7.16	9.45	8.22	6.95	6.5	10.6	9.61	12	821	4,000	546	7.9	9.1
COD - Chemical Oxygen Demand	mg/L	<20	<20	30	26	22	<20	<20	22	<20	<20	<20	<20	<20	<20	<20	42	<20	<20	<20	<20	<20	<20	<20	<20	<20	<20	<20	80	2,400	50	<20	<20
Conductivity	µS/cm	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Conductivity - Field	µS/cm	-	-	3,665	3120	3,178	2,869	2933	-	-	-	-	-	-	-	-	-	-	-	-	1,289	1,229	1,038	1,142	1156	-	-		-	-	-	-	-
Dissolved Phosphate	mg/L	-	-	0.0075	0.009	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.0055	0.0073	-	-	-				-	-	-	-	-
DOC - Dissolved Organic Carbon	mg/L	-	-	7.39	5.85	7.88	7.73	6.18	-	-	-	-	-	-	-	-	-	-	-	-	2.98	2.88	2.26	2.54	2.87	2.86	2.78	2.7	-	-	-	-	-
Fluoride	µg/L	1,580	1,030	790	1,510	950	< 1,000	<1,000	1,350	940	1,010	1,010	960	980	940	1,000	1,010	940	940	970	450	800	790	960	<1000	830	1980	1450	-	-	-	1,170	1,010
Hardness (as CaCO3)	mg/L	661	940	1,130	929	1,270	812	896	1,120	353	358	354	351	349	372	366	372	385	369	364	387	435	422	333	307	413	440	506	4,600	1,100	2,740	427	416
Hydrogen Sulfide	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-				-	-	-	-	-
Nitrate (as N)	µg/L	1,330	690	<10	1,880	1,750	1,010	931	< 100	<50	<50	<50	<25	<25	<50	<50	<50	<25	<25	<25	<10	<10	<10	<100	<100	<100	< 100	< 100	-	<500	-	<50	99
Nitrite (as N)	µg/L	-	-	<10	<10		<100	<100	-	-	-	-	-	-	-	-	-	-	-	-	<10	<10	<10	<10	<100	<100	<100	<100	-	-	-	-	-
Ortho-Phosphate	mg/L	0.0079	0.0087	-	-	<0.0050	<0.0500	-	0.0012	-	0.0199	0.0177	0.0205	0.0157	-	0.0125	0.009	0.0107	0.008	0.0092	-	-	<0.0050	<0.0050	-			0.0076	0.013	0.16	0.008	-	0.0596
pH (field)	pH	-	-	6.87	6.81	7.04	7.08	-	-	-	-	-	-	-	-	-	-	-	-	-	6.99	7.08	7.3	7.4	-	-			-	-	-	-	-
pH (lab)	pH	7.65	8.13	7.53	7.8	7.8	7.94	7.83	7.19	-	-	-	8.22	7.91	-	-	-	8.21	7.93	8.42	7.76	8.04	7.95	8.08	8.11	7.95	8.06	8.12	-	-	-	-	-
Phosphate	mg/L	-	-	0.0075	0.009	-	-	<0.05	-	-	-	-	-	-	-	-	-	-	-	-	0.0055	0.0073	-	-	-	<0.0050	-		-	-	-	-	-
Sulfate	mg/L	990	1,240	1,500	1,090	1,540	939	1070	1,130	230	244	256	252	282	243	254	272	285	295	286	282	392	327	278	294	371	366	535	7,800	10,800	5,150	373	348
Sulfide	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-				-	-	-	-	-
TDS - Solids, Total Dissolved	mg/L	2,040	2,270	2,800	2,460	3,020	1,800	2,200	2,730	700	700	713	716	724	706	720	743	770	760	699	800	968	849	742	730	950	956	1,010	15,500	37,000	10,900	771	711

Associated CARO files available upon request.
Associated Exova file(s): 712940, 714233, 714243, 756693, 756810, 757047, 811364, 811710, 812030, 812741, 812985, 813438, 846260, 878316, 879073, 909346, 909448, 909654.

Table H1: Summary of Groundwater Analytical Results - Inorganics/General - HISTORICAL to 2025

Well ID		GL0-1								GL0-2										GL0-3										GL1-1			
Sample ID		GL0-1-20141124	GL0-1-20150608	GL0-1-20151103	GL0-1-20160524	GL0-1-20170524	GL0-1-180529	GL0-1-190523	GL0-1-200310	GL0-2-20130627	GL0-2-20140603	GL0-2-20141124	GL0-2-20150608	GL0-2-20151103	GL0-2-20160524	GL0-2-20170524	GL0-2-180529	GL0-2-190529	GL0-2-200310	GL0-3-20130627	GL0-3-20140603	GL0-3-20141124	GL0-3-20150608	GL0-3-20151103	GL0-3-20160524	GL0-3-20170524	GL0-3-180529	GL0-3-190529	GL0-3-200310	GL 1-1-20091109	GL1-1-20100810	GL1-1-20160531	GL1-1-20180927
Sample Date		2014 11 24	2015 06 08	2015 11 03	2016 05 24	2017 05 24	2018 05 29	2019 05 23	2020 03 10	2013 06 27	2014 06 03	2014 11 24	2015 06 08	2015 11 03	2016 05 24	2017 05 24	2018 05 29	2019 05 29	2020 03 10	2013 06 27	2014 06 03	2014 11 24	2015 06 08	2015 11 03	2016 05 24	2017 05 24	2018 05 29	2019 05 29	2020 03 10	2009 11 09	2010 08 10	2016 05 31	2018 09 27
Parameter	**Unit**	**Analytical Results**																															
Inorganics / General																																	
Alkalinity, Bicarb(as CaCO3)	mg/L	-	-	-	198	-	187	191	189	-	-	-	-	-	266	-	258	340	255	-	-	-	-	-	442	-	481	525	491	-	-	-	-
Alkalinity, Carb (as CaCO3)	mg/L	-	-	-	<1.0	-	<1.0	<1.0	<1.0	-	-	-	-	-	< 1.0	-	< 1.0	< 1.0	< 1.0	-	-	-	-	-	< 1.0	-	< 1.0	< 1.0	< 1.0	-	-	-	-
Alkalinity, Hydro(as CaCO3)	mg/L	-	-	-	<1.0	-	<1.0	<1.0	<1.0	-	-	-	-	-	< 1.0	-	< 1.0	< 1.0	< 1.0	-	-	-	-	-	< 1.0	-	< 1.0	< 1.0	< 1.0	-	-	-	-
Alkalinity, Phen(as CaCO3)	mg/L	-	-	-	-	-	<1.0	<1.0	<1.0	-	-	-	-	-	-	-	< 1.0	< 1.0	< 1.0	-	-	-	-	-	-	-	< 1.0	< 1.0	< 1.0	-	-	-	-
Alkalinity, Total (as CaCO3)	mg/L	209	209	206	198	196	187	191	189	294	255	268	273	268	266	258	258	340	255	436	445	457	456	422	442	396	481	525	491	-	656	664	-
Ammonia, Total (as N)	µg/L	58.4	48.9	77.4	38.4	9.7	43	<20	284	183	101	92.6	213	171	208	173	211	173	317	< 5.0	< 5.0	11.8	13	7.5	9.6	13.3	38	82	56	-	30	< 20	45
Bromide	mg/L	<0.50	<0.10	<0.25	<0.25	<0.25	<1.00	<0.10	<0.10	< 0.50	< 0.50	< 0.50	< 0.10	< 0.25	< 0.25	< 0.25	< 1.00	< 1.00	< 0.10	< 1.0	< 1.0	< 1.0	< 0.50	< 0.50	< 1.0	< 1.0	< 1.00	< 1.00	< 1.00	-	-	-	< 0.10
Chloride	mg/L	9.3	7.3	7.1	7.1	7.2	6.47	6.33	6.82	49.4	20.9	26.3	9.6	12.1	6.8	7.1	9.63	71.6	7.88	123	124	127	121	121	127	131	121	154	139	-	169	237	157
COD - Chemical Oxygen Demand	mg/L	<20	<20	<20	<20	<20	<20	<20	<20	< 20	< 20	< 20	< 20	< 20	< 20	< 20	< 20	< 20	< 20	27	20	< 20	48	< 20	< 20	< 20	22	< 20	31	-	40	-	-
Conductivity	µS/cm	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Conductivity - Field	µS/cm	-	-	-	-	-	934	859	-	-	-	-	-	-	-	-	931	1406	-	-	-	-	-	-	-	-	1826	2776	-	-	-	-	-
Dissolved Phosphate	mg/L	-	-	-	-	-	0.0516	0.0174	-	-	-	-	-	-	-	-	0.0173	< 0.0050	-	-	-	-	-	-	-	-	0.0084	< 0.0050	-	-	-	-	-
DOC - Dissolved Organic Carbon	mg/L	-	-	-	-	-	0.87	1.69	1.01	-	-	-	-	-	-	-	1.12	3.7	1.18	-	-	-	-	-	-	-	5.47	6.89	6.19	-	-	-	-
Fluoride	µg/L	970	884	990	980	1,000	640	730	860	1,410	1,240	1,220	1,090	1,190	1,240	1,320	1,050	1,050	1,150	1,580	1,190	1,160	1,120	1,130	1,220	1,110	990	920	930	-	-	1,520	1,420
Hardness (as CaCO3)	mg/L	436	423	423	423	418	415	384	405	506	465	496	479	500	468	482	473	546	456	762	747	797	772	751	754	769	799	1,110	1,000	866	790	-	730
Hydrogen Sulfide	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Nitrate (as N)	µg/L	<50	116	<25	65	131	82	109	49	6,410	181	1,820	< 10	< 25	< 25	< 25	< 10	16,800	< 10	49,500	48,600	49,300	47,700	47,600	49,100	48,700	44,700	67,000	55,800	-	-	633	12
Nitrite (as N)	µg/L	-	-	-	-	-	<10	<10	<10	-	-	-	-	-	-	-	< 10	47	< 10	-	-	-	-	-	-	-	< 10	12	< 10	-	-	-	-
Ortho-Phosphate	mg/L	0.0519	0.0637	0.0617	0.0555	0.0614	-	-	0.0175	-	0.0591	0.0553	0.0399	0.0446	0.0423	0.0463	-	-	0.0134	-	0.0096	0.0059	0.0069	0.0068	0.0054	0.0063	-	-	< 0.0050	-	0.007	< 0.01	< 0.0050
pH (field)	pH	-	-	-	-	-	7.65	7.65	-	-	-	-	-	-	-	-	7.43	7.5	-	-	-	-	-	-	-	-	7.28	7.12	-	-	-	-	-
pH (lab)	pH	-	7.59	7.65	8.19	8.32	7.81	8.09	7.94	-	-	-	7.8	7.94	8.22	8.4	7.82	8.01	7.95	-	-	-	7.65	7.53	8.1	8.05	7.81	7.77	7.82	-	-	7.43	-
Phosphate	mg/L	-	-	-	-	-	0.0516	0.0174	-	-	-	-	-	-	-	-	0.0173	< 0.0050	-	-	-	-	-	-	-	-	0.0084	< 0.0050	-	-	-	-	-
Sulfate	mg/L	355	345	354	346	350	281	326	316	395	326	341	317	317	310	325	296	349	303	400	385	390	391	382	401	368	293	613	505	-	222	244	253
Sulfide	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TDS - Solids, Total Dissolved	mg/L	711	665	682	673	671	690	691	705	956	744	814	675	726	700	696	726	1,050	721	1,500	1,440	1,440	1,390	1,460	1,450	1,420	1,480	2,060	1,970	-	1,250	1,290	-

Associated CARO files available upon request.
Associated Exova file(s): 712940, 714233, 714243, 756693, 756810, 757047, 811364, 811710, 812030, 812741, 812985, 813438, 846260, 878316, 879073, 909346, 909448, 909654.

Table H1: Summary of Groundwater Analytical Results - Inorganics/General - HISTORICAL to 2025

Well ID		GL1-1					GL1-2									GL2-1																
Sample ID		GL1-1-180612	GL1-1-190917	GL1-1-200910	GL1-1-231023	GL 1-1	GL 1-2-20091109	GL1-2-20100810	GL1-2-20160531	GL1-2-180612	GL1-2-20180927	GL1-2-190917	GL1-2-200910	GL1-2-231023	GL 1-2	GL 2-1-20091109	GL 2-1-20120627	GL2-1-20100810	GL2-1-20110629	GL2-1-20111217	GL2-1-20121204	GL2-1-20130626	GL2-1-20140603	GL2-1-20141124	GL2-1-20150608	GL2-1-20151103	GL2-1-20160524	GL2-1-20170524	GL2-1-180528	GL2-1-190523	GL2-1-200609	GL2-1-200820	GL2-1-201019
Sample Date		2018 06 12	2019 09 17	2020 09 10	2023 10 23	2025-05-23	2009 11 09	2010 08 10	2016 05 31	2018 06 12	2018 09 27	2019 09 17	2020 09 10	2023 10 23	2025-05-23	2009 11 09	2012 06 27	2010 08 10	2011 06 29	2011 12 17	2012 12 04	2013 06 26	2014 06 03	2014 11 24	2015 06 08	2015 11 03	2016 05 24	2017 05 24	2018 05 28	2019 05 23	2020 06 09	2020 08 20	2020 10 19
Parameter	**Unit**	**Analytical Results**																														
Inorganics / General																																
Alkalinity, Bicarb(as CaCO3)	mg/L	627	628	646	581	571	-	-	-	640	-	662	676	607	600	-	-	-	-	-	-	-	-	-	-	289	-	257	260	254	237	216
Alkalinity, Carb (as CaCO3)	mg/L	< 1.0	< 1.0	< 1.0	<1.0	<1.0	-	-	-	< 1.0	-	< 1.0	< 1.0	<1.0	<1.0	-	-	-	-	-	-	-	-	-	-	< 1.0	-	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Alkalinity, Hydro(as CaCO3)	mg/L	< 1.0	< 1.0	< 1.0	<1.0	<1.0	-	-	-	< 1.0	-	< 1.0	< 1.0	<1.0	<1.0	-	-	-	-	-	-	-	-	-	-	< 1.0	-	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Alkalinity, Phen(as CaCO3)	mg/L	< 1.0	< 1.0	< 1.0	<1.0	<1.0	-	-	-	< 1.0	-	< 1.0	< 1.0	<1.0	<1.0	-	-	-	-	-	-	-	-	-	-	-	-	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Alkalinity, Total (as CaCO3)	mg/L	627	628	646	581	571	-	675	660	640	-	662	676	607	600	-	306	317	302	332	326	291	292	275	306	358	289	259	257	260	254	237	216
Ammonia, Total (as N)	µg/L	62	76	52	<50	<0.050	-	< 10	< 20	71	< 20	32	< 50	55	<0.050	-	50	40	50	20	90	34.3	17	39.8	14.6	37.1	< 5.0	53.7	92	63	90	73	131
Bromide	mg/L	< 0.10	< 0.10	< 0.10	<1.00	0.13	-	-	-	< 0.10	< 0.10	< 0.10	< 0.10	<1.00	0.13	-	-	-	-	-	-	< 0.50	< 0.50	< 0.50	0.31	0.27	0.31	0.39	< 2.50	0.32	< 10.0	0.44	0.5
Chloride	mg/L	173	153	131	140	108	-	191	232	216	181	166	117	127	101	-	22.5	16.8	21.3	18.1	18	23.2	32	27.8	34.5	28.2	34.9	45.3	35.6	46.4	54	63.4	66.4
COD - Chemical Oxygen Demand	mg/L	-	-	-	<20	<20	-	60	-	-	-	-	-	<20	<20	-	10	< 10	< 10	< 10	14	< 20	< 20	< 20	< 20	< 20	< 20	< 20	< 20	< 20	< 20	< 20	< 20
Conductivity	µS/cm	-	-	-	-		-	-	-	-	-	-	-	-		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Conductivity - Field	µS/cm	-	-	-	-		-	-	-	-	-	-	-	-		-	-	-	-	-	-	-	-	-	-	-	-	-	-	1119	1,202	1,435	1,508
Dissolved Phosphate	mg/L	0.0115	-	-	-		-	-	-	0.0102	-	-	-	-		-	-	-	-	-	-	-	-	-	-	-	-	-	< 0.0050	< 0.0050	-	-	-
DOC - Dissolved Organic Carbon	mg/L	-	4.15	3.45	5.1	3.02	-	-	-	-	-	4.46	4.98	5.16	3.08	-	-	-	-	-	-	-	-	-	-	-	-	-	1.46	1.77	1.54	1.72	2.1
Fluoride	µg/L	1,250	1,520	1570	<1000	1380	-	-	1,420	1,270	1,100	1,330	1,430	<1000	1140	-	-	-	-	-	-	830	770	790	730	760	720	670	510	510	< 10,000a	-	580
Hardness (as CaCO3)	mg/L	743	763	746	713	688	909	840	-	790	759	762	814	732	832	348	380	360	359	372	348	418	418	429	444	424	445	466	457	505	556	473	513
Hydrogen Sulfide	mg/L	-	-	-	-		-	-	-	-	-	-	-	-		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Nitrate (as N)	µg/L	58	< 10	< 10	<100	164	-	-	29	< 10	44	< 10	< 10	<100	213	-	-	-	-	< 10	< 100	< 50	54	372	36	< 25	97	< 25	< 250	16	< 1,000	-	< 10
Nitrite (as N)	µg/L	< 10	< 10	< 10	<100	<10	-	-	-	< 10	-	< 10	< 10	<100	<10	-	-	-	-	-	-	-	-	-	-	-	-	-	< 250a	< 10	< 1,000a	-	< 10
Ortho-Phosphate	mg/L	-	< 0.0050	< 0.0050	-	0.0057	-	0.006	< 0.01	-	< 0.0050	< 0.0050	< 0.0050	-	0.0095	-	0.004	0.004	0.09	< 0.01	< 0.002	-	0.0034	0.0044	0.0027	0.0028	0.0033	0.0016	-	-	< 0.500	< 0.0050	< 0.0050
pH (field)	pH	-	-	-	-		-	-	-	-	-	-	-	-		-	-	-	-	-	-	-	-	-	-	-	-	-	-	7.57	7.36	7.46	7.6
pH (lab)	pH	7.75	7.94	8.12	8.07	8.09	-	-	7.66	7.84	-	7.98	8.14	8.08	7.94	-	-	-	-	-	-	-	-	-	7.89	8.05	8.21	8.25	7.9	8.11	7.9	8.1	8.1
Phosphate	mg/L	0.0115	-	-	<0.050		-	-	-	0.0102	-	-	-	<0.050		-	-	-	-	-	-	-	-	-	-	-	-	-	< 0.0050	< 0.0050	-	-	-
Sulfate	mg/L	242	269	284	238	232	-	201	209	238	228	256	283	235	223	-	212	170	203	207	192	225	266	233	281	246	275	323	319	370	410	-	443
Sulfide	mg/L	-	-	-	-		-	-	-	-	-	-	-	-		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TDS - Solids, Total Dissolved	mg/L	1,160	1,200	1,200	1,010	1,120	-	1,140	1,190	1,230	-	1,240	1,300	1,050	1,130	-	670	604	638	640	642	660	707	688	713	688	730	815	845	903	970	1,000	1,030

Associated CARO files available upon request.
Associated Exova file(s): 712940, 714233, 714243, 756693, 756810, 757047, 811364, 811710, 812030, 812741, 812985, 813438, 846260, 878316, 879073, 909346, 909448, 909654.

Table H1: Summary of Groundwater Analytical Results - Inorganics/General - HISTORICAL to 2025

Well ID	GL2-1									GL2-2													GL3-2		GL3-5			
Sample ID	GL2-1-210512	GL2-1-211005	GL2-1-220530	GL2-1-220927	GL2-1-231024	GL2-1	GL2-1	GL 2-1	GL 2-1	GL 2-2-20091109	GL2-2-20100810	GL2-2-200826	GL2-2-201020	GL2-2-210513	GL2-2-211005	GL2-2-220530	GL2-2-220927	GL2-2-231025	GL2-2	GL2-2	GL 2-2	GL 2-2	GL3-2-20091116	GL3-2-20100810	GL3-5-20130627	GL3-5 (2012)-20140609	GL3-5 (2012)-20141125	GL3-5 (2012)-20150609
Sample Date	2021 05 12	2021 10 05	2022 05 30	2022 09 27	2023 10 24	2024-05-14	2024-09-13	2025-05-22	2025-08-29	2009 11 09	2010 08 10	2020 08 26	2020 10 20	2021 05 13	2021 10 05	2022 05 30	2022 09 27	2023 10 25	2024-05-14	2024-09-13	2025-05-21	2025-09-09	2009 11 16	2010 08 10	2013 06 27	2014 06 09	2014 11 25	2015 06 09
Parameter	**Unit**	**Analytical Results**																										
Inorganics / General																												
Alkalinity, Bicarb(as CaCO3)	mg/L	240	232	201	227	188	207	160	192	169	-	-	305	283	280	285	233	275	224	164	204	153	211	-	-	-	-	-	-
Alkalinity, Carb (as CaCO3)	mg/L	< 1.0	< 1.0	< 1.0	< 1.0	<1.0	<1.0	<1.0	<1.0	<1.0	-	-	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	<1.0	<1.0	<1.0	<1.0	<1.0	-	-	-	-	-	-
Alkalinity, Hydro(as CaCO3)	mg/L	< 1.0	< 1.0	< 1.0	< 1.0	<1.0	<1.0	<1.0	<1.0	<1.0	-	-	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	<1.0	<1.0	<1.0	<1.0	<1.0	-	-	-	-	-	-
Alkalinity, Phen(as CaCO3)	mg/L	< 1.0	< 1.0	< 1.0	< 1.0	<1.0	<1.0	<1.0	<1.0	<1.0	-	-	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	<1.0	<1.0	<1.0	<1.0	<1.0	-	-	-	-	-	-
Alkalinity, Total (as CaCO3)	mg/L	240	232	201	227	188	207	160	192	169	-	352	305	283	280	285	233	275	224	164	204	153	211	-	379	2,100	2,020	1,990	2,110
Ammonia, Total (as N)	µg/L	58	99	75	58	0.098	0.070	0.270	0.07	0.122	-	< 10	< 50	< 50	< 50	61	85	<50	<50	0.115	0.109	0.083	0.055	-	140	48,000	53,800	48,600	52,700
Bromide	mg/L	0.53	< 1.00	<0.10	0.65	0.68	0.57	0.79	0.64	0.84	-	-	< 1.00	0.29	0.39	< 1.00	<0.10	0.48	0.49	0.75	0.62	<2.50	0.52	-	-	< 1.0	< 1.0	< 1.0	0.74
Chloride	mg/L	64.5	75.5	90.5	101	117	96.5	113	95.9	131	-	16.1	37.4	46.7	50.7	48.1	68.1	70.6	78.3	127	84.3	131	98.6	-	9.52	90	94	98	93.7
COD - Chemical Oxygen Demand	mg/L	< 20	< 20	< 20	< 20	<20	<20	20	<20	<20	-						<20	<20	<20	<20	<20	<20	<20			152	152	148	139
Conductivity	µS/cm	-	-	-	-	-					-	-	-	-	-	-	-	-	-	-				-	-	-	-	-	-
Conductivity - Field	µS/cm	1,440	1,440	1496	1689	-	-	-			-	-	1,142	1,234	1,280	1,199	1,241	1,468	-	-	-			-	-	-	-	-	-
Dissolved Phosphate	mg/L	-	-	-	-	-					-	-	-	-	-	-	-	-	-					-	-	-	-	-	-
DOC - Dissolved Organic Carbon	mg/L	1.71	1.98	2.97	1.93	2.61	1.86	2.45	1.54	2.2	-	-	1.29	1.25	2.74	1.72	2.93	1.52	2.22	3.61	2.31	2.04	1.44	-	-	-	-	-	-
Fluoride	µg/L	510	600	500	540	0.46	510	560	350	580	-	-	< 1,000	660	660	620	550	610	500	470	660	540	280	-	-	960	680	730	640
Hardness (as CaCO3)	mg/L	515	583	573	632	658	627	728	603	687	359	350	405	464	485	511	502	275	587	691	652	638	612	337	320	1,260	1,230	1,330	1,240
Hydrogen Sulfide	mg/L	-	-	-	-	-					-	20	< 20	< 20	36	< 20	-	-	-					-	10	-	-	-	-
Nitrate (as N)	µg/L	< 10	< 10	<100	<10	<10	17	42	< 10	< 10	-	-	< 100	< 10	< 10	< 10	<100	<10	<10	18	< 10	< 10	< 10	-	-	< 100	100	< 100	< 50
Nitrite (as N)	µg/L	< 10	< 10	< 10	< 10	<10	<10	<10	<10	14	-	-	< 100	< 10	< 10	< 10	< 10	< 10	<10	<10	<10	15	<10	-	-	-	-	-	-
Ortho-Phosphate	mg/L	< 0.0050	< 0.0050	-	-	-			0.0054	<0.0050	-	0.016	< 0.0500	< 0.0050	< 0.0050	< 0.0050	-	-	-			<0.0050	0.0072	-	0.024	-	0.0016	0.0018	0.0015
pH (field)	pH	7.55	7.55	-	-	-					-	-	7.36	7.55	7.49	7.45	-	-	-					-	-	-	-	-	-
pH (lab)	pH	8.06	7.85	7.54	7.89	7.6	7.69	7.91	8	7.86	-	-	8.06	7.91	7.91	7.92	7.83	7.99	7.74	7.69	7.88	7.86	7.79	-	-	-	-	-	7.43
Phosphate	mg/L	-	-	<0.05	<0.0050	<0.0050	-	-			-	-	-	-	-	-	-	-	<0.0050	-	-			-	-	-	-	-	-
Sulfate	mg/L	415	517	573	632	700	590	675	565	746	-	129	273	309	352	370	465	473	500	694	535	746	546	-	278	< 10	< 10	< 6.0	< 3.0
Sulfide	mg/L	-	-	-	-	-					-	-	-	-	-	-	-	-	-					-	-	-	-	-	-
TDS - Solids, Total Dissolved	mg/L	1,020	1,100	1,120	1,220	1,320	1,150	1,470	1,390	1,530	-	598	751	810	891	894	1,030	998	1,080	1,390	1,110	1,530	1,220	-	750	1,950	1,920	2,030	1,850

Associated CARO files available upon request.
Associated Exova file(s): 712940, 714233, 714243, 756693, 756810, 757047, 811364, 811710, 812030, 812741, 812985, 813438, 846260, 878316, 879073, 909346, 909448, 909654.

Table H1: Summary of Groundwater Analytical Results - Inorganics/General - HISTORICAL to 2025

Well ID	GL3-5	GL4-1																								GL4-2					
Sample ID	GL3-5 (2012)-20151109	GL 4-1-20091110	GL 4-1-20120626	GL 4-1-20120704	GL4-1-20100810	GL4-1-20110629	GL4-1-20120625	GL4-1-20121203	GL4-1-20130627	GL4-1-20140603	GL4-1-20141124	GL4-1-20150608	GL4-1-20151104	GL4-1-200814	GL4-1-201016	GL4-1-210511	GL4-1-211005	GL4-1-220530	GL4-1-220927	GL4-1-230523	GL4-1-231025	GL4-1	GL4-1	GL 4-1	GL 4-1	GL4-2-20091116	GL4-2-20100810	GL4-2-20110629	GL4-2-20120626	GL4-2-20121203	GL4-2-200814
Sample Date	2015 11 09	2009 11 10	2012 06 26	2012 07 04	2010 08 10	2011 06 29	2012 06 25	2012 12 03	2013 06 27	2014 06 03	2014 11 24	2015 06 08	2015 11 04	2020 08 14	2020 10 16	2021 05 11	2021 10 05	2022 05 30	2022 09 27	2023 05 23	2023 10 25	2024-05-13	2024-09-13	2025-05-26	2025-08-29	2009 11 16	2010 08 10	2011 06 29	2012 06 26	2012 12 03	2020 08 14
Parameter	**Unit**	**Analytical Results**																													
Inorganics / General																															
Alkalinity, Bicarb(as CaCO3)	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	563	536	562	555	520	575	472	483	488	489	502	518	-	-	-	-	-	845
Alkalinity, Carb (as CaCO3)	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	-	-	-	-	-	< 1.0
Alkalinity, Hydro(as CaCO3)	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	-	-	-	-	-	< 1.0
Alkalinity, Phen(as CaCO3)	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	-	-	-	-	-	< 1.0
Alkalinity, Total (as CaCO3)	mg/L	1,960	-	792	-	542	571	577	542	583	527	524	536	522	563	536	562	555	520	575	472	483	488	489	502	518	-	956	934	1,000	926	845
Ammonia, Total (as N)	µg/L	49,900	-	-	8,700	20	760	2,520	170	105	94.6	102	102	117	126	116	113	148	134	101	153	105	0.124	0.192	0.146	0.156	-	< 10	240	140	< 10	< 50
Bromide	mg/L	< 1.0	-	-	-	-	-	-	-	< 1.0	< 1.0	< 1.0	< 0.50	< 0.50	< 1.00	< 0.10	< 0.10	< 1.00	<0.10	<0.10	<0.10	<0.10	0.13	0.19	<0.10	0.16	-	-	-	-	-	< 1.00
Chloride	mg/L	93	-	7.4	-	10.4	10.6	13.7	12.1	12	15	16	12.9	12.2	16.7	17.7	16.6	15.5	18.8	18.2	17.2	18.5	18.8	19.5	20	21.5	-	51.2	57	51.1	40.5	61.7
COD - Chemical Oxygen Demand	mg/L	139	-	-	70	< 10	10	30	20	< 20	< 20	< 20	< 20	< 20	< 20	< 20	< 20	< 20	< 20	< 20	21	<20	<20	<20	<20	<20	-	20	10	20	30	< 20
Conductivity	µS/cm	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-					-	-	-	-	-	-
Conductivity - Field	µS/cm	-	-	-	-	-	-	-	-	-	-	-	-	-	1,846	1,582	1,831	1,747	1517	1830	-	-	-	-			-	-	-	-	-	2,259
Dissolved Phosphate	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-					-	-	-	-	-	-
DOC - Dissolved Organic Carbon	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	2.82	3.18	5.18	3.04	3.62	2.23	3.29	4.32	5.01	2.87	2.43	3.03	-	-	-	-	-	5.89
Fluoride	µg/L	940	-	-	-	-	-	-	-	2,660	2,180	2,510	2,100	2,010	1,540	1,900	1,910	1,930	1,830	1,970	1,810	1,750	1960	1810	1890	1840	-	-	-	-	-	2,040
Hardness (as CaCO3)	mg/L	1,280	630	-	580	600	613	610	548	622	597	646	625	591	642	616	618	632	604	618	659	614	663	725	620	658	1,040	1,000	1,010	1,000	973	846
Hydrogen Sulfide	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-					-	-	-	-	-	-
Nitrate (as N)	µg/L	< 100	-	-	-	-	-	-	< 100	< 100	< 100	< 100	< 50	< 50	< 100	< 10	11	< 10	<100	< 10	<10	<10	< 10	< 10	< 10	18	-	-	-	-	< 100	< 100
Nitrite (as N)	µg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	< 100	< 10	< 10	< 10	< 10	< 10	<10	<10	<10	<10	<10	<10	-	-	-	-	-	< 100
Ortho-Phosphate	mg/L	< 0.0010	-	-	1.4	0.012	0.148	0.16	0.008	-	0.006	0.0057	0.0068	0.0052	< 0.0500	< 0.0050	< 0.0050	< 0.0050	-	-	-	-			0.0091	0.0069	-	0.011	0.211	0.021	0.022	< 0.0500
pH (field)	pH	-	-	-	-	-	-	-	-	-	-	-	-	-	7.95	7.69	7.62	7.55	-	-	-	-					-	-	-	-	-	7.71
pH (lab)	pH	6.8	-	-	-	-	-	-	-	-	-	-	8	8.09	8.18	8.11	8.17	8	7.99	8.1	8.15	8.06	8.08	8.12	8.15	8.14	-	-	-	-	-	8.04
Phosphate	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.0050	<0.0050	0.005	0.0111	0.261	-			-	-	-	-	-	-
Sulfate	mg/L	< 6.0	-	142	-	474	442	432	458	501	482	514	505	492	498	501	482	534	507	551	518	517	487	487	507	538	-	395	390	386	292	480
Sulfide	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-					-	-	-	-	-	-
TDS - Solids, Total Dissolved	mg/L	1,990	-	1,170	-	1,210	1,190	1,230	1,210	1,140	1,140	1,160	1,110	1,130	1,280	1,260	1,300	1,320	1,280	1,300	1,220	1,220	1,240	1,320	1,290	1,310	-	1,760	1,540	1,550	1,700	1,610

Associated CARO files available upon request.
Associated Exova file(s): 712940, 714233, 714243, 756693, 756810, 757047, 811364, 811710, 812030, 812741, 812985, 813438, 846260, 878316, 879073, 909346, 909448, 909654.

Table H1: Summary of Groundwater Analytical Results - Inorganics/General - HISTORICAL to 2025

Well ID		GL4-2											GL5-1		GL5-2																	
Sample ID		GL4-2-201030	GL4-2-210511	GL4-2-211005	GL4-2-220530	GL4-2-220927	GL4-2-230523	GL4-2-231025	GL4-2	GL4-2	GL 4-2	GL 4-2	GL5-1-20091116	GL5-1-20100810	GL5-2-20180528	GL5-2-20091116	GL5-2-20100810	GL5-2-20110704	GL 5-2-20120627	GL5-2-20121205	GL5-2-20130626	GL5-2-20131114	GL5-2-20140603	GL5-2-20141118	GL5-2-20150608	GL5-2-20151103	GL5-2-20160526	GL5-2-20170525	GL5-2-180528	GL5-2-190527	GL5-2-200611	GL5-2-210603	GL5-2-2206023
Sample Date		2020 10 30	2021 05 11	2021 10 05	2022 05 30	2022 09 27	2023 05 23	2023 10 25	2024-05-13	2024-09-13	2025-05-26	2025-08-29	2009 11 16	2010 08 10	2018 05 28	2009 11 16	2010 08 10	2011 07 04	2012 06 27	2012 12 05	2013 06 26	2013 11 14	2014 06 03	2014 11 18	2015 06 08	2015 11 03	2016 05 26	2017 05 25	2018 05 28	2019 05 27	2020 06 11	2021 06 03	2022 06 02
Parameter	**Unit**	**Analytical Results**																														
Inorganics / General																																
Alkalinity, Bicarb(as CaCO3)	mg/L	812	807	843	719	823	634	688	670	662	644	676	-	-	472	-	-	-	-	-	-	-	-	-	-	-	-	-	472	488	522	490	425
Alkalinity, Carb (as CaCO3)	mg/L	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	-	-	< 1.0	-	-	-	-	-	-	-	-	-	-	-	-	-	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Alkalinity, Hydro(as CaCO3)	mg/L	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	-	-	< 1.0	-	-	-	-	-	-	-	-	-	-	-	-	-	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Alkalinity, Phen(as CaCO3)	mg/L	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Alkalinity, Total (as CaCO3)	mg/L	812	807	843	719	823	634	688	670	662	644	676	-	1,210	472	-	527	560	522	551	580	803	600	691	630	539	475	510	472	488	522	490	425
Ammonia, Total (as N)	µg/L	< 50	< 50	59	<50	<50	51	<50	<0.050	0.059	<0.050	<0.050	-	250	52	-	< 10	40	< 10	< 10	< 5.0	< 5.0	< 5.0	5.9	< 5.0	5	< 5.0	< 5.0	52	38	< 50	< 50	<50
Bromide	mg/L	0.27	< 1.00	< 1.00	<0.10	<0.10	<0.10	<0.10	0.20	0.14	<0.10	0.19	-	-	< 5.00	-	-	-	-	-	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 0.50	< 1.0	< 1.0	< 5.00	0.24	< 1.00	0.52	<1.0
Chloride	mg/L	49.4	55.6	46	36.4	41.6	33.6	37.6	37.3	31.5	28.1	32.4	-	42.2	266	-	183	228	243	193	256	226	248	176	739	165	719	550	266	319	179	353	173
COD - Chemical Oxygen Demand	mg/L	< 20	< 20	< 20	< 20	< 20	24	<20	<20	<20	<20	21	-	< 10	< 20	-	10	20	10	21	37	< 20	21	< 20	31	< 20	< 20	< 20	< 20	< 20	48	26	<20
Conductivity	µS/cm	-	-	-	-	-	-	-					-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Conductivity - Field	µS/cm	2,207	2,200	2,023	1757	2123	-	-	-	-			-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2,100	2396	1,529	2,417	1800
Dissolved Phosphate	mg/L	-	-	-	-	-	-	-					-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	< 0.0050	0.0051	-	-	-
DOC - Dissolved Organic Carbon	mg/L	4.41	6.52	4.25	5.3	3.62	3.72	5.51	4.00	4.46	3.78	3.84	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	4.6	4.4	2.31	3.35	2.57
Fluoride	µg/L	2,520	2,510	2,670	2,600	2,820	2,630	2,590	2760	2620	272	2910	-	-	500	-	-	-	-	-	1,160	980	980	940	790	940	900	840	500	650	< 1,000	800	<1000
Hardness (as CaCO3)	mg/L	765	818	829	767	749	774	761	827	883	729	727	77	110	671	602	640	778	710	659	726	687	655	636	956	623	879	782	671	638	501	709	515
Hydrogen Sulfide	mg/L	-	-	-	-	-	-	-					-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Nitrate (as N)	µg/L	< 10	< 10	< 10	<100	<10	<10	<10	< 10	< 10	< 10	< 10	-	-	6,270	-	-	-	-	< 1,000	< 100	< 100	< 100	< 100	2,060	< 50	5,370	5,720	6,270	9,010	310	1,840	<100
Nitrite (as N)	µg/L	< 10	< 10	< 10	< 10	< 10	<10	<10	<10	<10	<10	<10	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	< 10	< 10	< 100	< 10	< 10
Ortho-Phosphate	mg/L	< 0.0050	< 0.0050	< 0.0050	-	-	-	-			0.0202	0.018	-	0.002	< 0.0050	-	0.006	0.005	0.005	0.005	-	-	0.0046	0.0046	0.0036	0.0049	0.0031	0.0037	-	-	< 0.0500	< 0.0050	-
pH (field)	pH	7.46	7.43	7.4	-	-	-	-					-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	7.08	7.43	7.21	7.2	-
pH (lab)	pH	8.01	8.13	7.95	8	7.99	8.06	8.06	8.07	8.10	8.08	8.13	-	-	7.83	-	-	-	-	-	-	-	-	-	7.65	7.94	7.97	8.22	7.83	7.96	7.83	8.05	8.02
Phosphate	mg/L	-	-	-	<0.0050	<0.0050	<0.0050	<0.0050	0.226	-			-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	< 0.0050	0.0051	-	-	<0.0500
Sulfate	mg/L	473	456	475	440	488	458	464	464	431	421	476	-	283	201	-	168	153	171	191	181	207	191	210	176	219	215	209	201	332	243	249	291
Sulfide	mg/L	-	-	-	-	-	-	-					-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TDS - Solids, Total Dissolved	mg/L	1,460	1,500	1,760	1,410	1,410	1,220	1,380	1,350	1,430	1,370	1,320	-	1,690	1,370	-	1,050	1,080	1,160	1,060	1,150	1,110	1,130	1,000	1,890	1,060	1,960	1,690	1,370	1,300	1,120	1,390	1070

Associated CARO files available upon request.
Associated Exova file(s): 712940, 714233, 714243, 756693, 756810, 757047, 811364, 811710, 812030, 812741, 812985, 813438, 846260, 878316, 879073, 909346, 909448, 909654.

Table H1: Summary of Groundwater Analytical Results - Inorganics/General - HISTORICAL to 2025

Well ID		GL5-2		GL5-3		GL6-1															GL7-1									GL8-1		GL8-2	
Sample ID		GL5-2	GL 5-2	GL5-3-20091116	GL5-3-20100810	GL 6-1-20091110	GL6-1-20110704	GL 6-1 (2011)-20120626	GL 6-1 (2011)-20120704	GL6-1 (2011)-20130627	GL6-1-20131114	GL6-1 (2011)-20140609	GL6-1 (2011)-20141127	GL6-1 (2011)-20150615	GL6-1 (2011)-20170530	GL6-1(2011)-20121205	GL6-1-180604	GL6-1 (2011)-190603	GL6-1-200611	GL6-1-210610	GL7-1-20110704	GL7-1-20120625	GL7-1-20121205	GL7-1-20130626	GL7-1-20131114	GL7-1-20140604	GL7-1-20141125	GL7-1-20150609	GL7-1-20151109	GL 8-1-20091110	GL8-1-20100810	GL 8-2-20091110	GL8-2-20100810
Sample Date		2024-05-14	2025-05-28	2009 11 16	2010 08 10	2009 11 10	2011 07 04	2012 06 26	2012 07 04	2013 06 27	2013 11 14	2014 06 09	2014 11 27	2015 06 15	2017 05 30	2012 12 05	2018 06 04	2019 06 03	2020 06 11	2021 06 10	2011 07 04	2012 06 25	2012 12 05	2013 06 26	2013 11 14	2014 06 04	2014 11 25	2015 06 09	2015 11 09	2009 11 10	2010 08 10	2009 11 10	2010 08 10
Parameter	**Unit**	**Analytical Results**																															
Inorganics / General																																	
Alkalinity, Bicarb(as CaCO3)	mg/L	452	455	-	-	-	-	-	-	-	-	-	7,150	-	-	-	3,960	3,600	3,980	3,990	-	-	-	-	-	-	-	-	-	-	-	-	-
Alkalinity, Carb (as CaCO3)	mg/L	<1.0	<1.0	-	-	-	-	-	-	-	-	-	< 100	-	-	-	< 1.0	< 1.0	< 1.0	< 1.0	-	-	-	-	-	-	-	-	-	-	-	-	-
Alkalinity, Hydro(as CaCO3)	mg/L	<1.0	<1.0	-	-	-	-	-	-	-	-	-	< 100	-	-	-	< 1.0	< 1.0	< 1.0	< 1.0	-	-	-	-	-	-	-	-	-	-	-	-	-
Alkalinity, Phen(as CaCO3)	mg/L	<1.0	<1.0	-	-	-	-	-	-	-	-	-	-	-	-	-	< 1.0	< 1.0	< 1.0	< 1.0	-	-	-	-	-	-	-	-	-	-	-	-	-
Alkalinity, Total (as CaCO3)	mg/L	452	455	-	474	-	6,900	6,150	-	6,020	7,020	5,810	7,150	5,920	4,370	614	3,960	3,600	3,980	3,990	1,410	1,540	1,520	1,440	1,540	1,780	1,230	1,800	1,430	-	550	-	2,800
Ammonia, Total (as N)	µg/L	<0.050	<0.050	-	< 10	-	230,000	275,000	-	251,000	235,000	252,000	234,000	254,000	119	245,000	334,000	227,000	194,000	210,000	400	360	450	442	446	435	411	408	412	-	430	-	20
Bromide	mg/L	0.14	<0.10	-	-	-	-	-	-	10.4	10	8.7	9.4	9.4	8.4	-	< 50.0	< 10.0	4.43	5.22	-	-	-	< 1.0	< 1.0	< 1.0	< 1.0	0.54	< 1.0	-	-	-	-
Chloride	mg/L	120	132	-	180	-	840	809	-	951	965	872	943	936	941	828	1,570	527	652	659	69.3	69.2	72	69	75	57	71	58.4	61	-	55.9	-	528
COD - Chemical Oxygen Demand	mg/L	<20	<20	-	20	-	1,120	1,300	-	1,220	1,120	987	1,030	1,110	< 20	1,280	881	705	621	842	30	30	32	34	27	24	30	28	29	-	< 10	-	120
Conductivity	µS/cm			-	-	-	-	-	-	-	-	-	-	-	-	-	15,700	11,200	8,440	8,020	-	-	-	-	-	-	-	-	-	-	-	-	-
Conductivity - Field	µS/cm	-		-	-	-	-	-	-	-	-	-	-	-	-	-	14,230	11903	6,871	7,919	-	-	-	-	-	-	-	-	-	-	-	-	-
Dissolved Phosphate	mg/L			-	-	-	-	-	-	-	-	-	-	-	-	-	0.224	1.15	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
DOC - Dissolved Organic Carbon	mg/L	2.58	1.79	-	-	-	-	-	-	-	-	-	-	-	-	-	339	175	241	211	-	-	-	-	-	-	-	-	-	-	-	-	-
Fluoride	µg/L	1020	1050	-	-	-	-	-	-	1,100	438	< 1,000	449	< 2,000a	< 1,000	-	< 50,000a	< 10,000a	< 1,000	< 1,000	-	-	-	2,490	2,390	2,420	2,300	1,770	2,180	-	-	-	-
Hardness (as CaCO3)	mg/L	579	647	596	600	3,530	1,220	1,510	-	1,200	1,650	1,300	1,580	1,030	1,260	1,980	1,900	1,270	962	1,230	1,190	1,150	1,120	1,110	1,140	1,190	1,110	1,090	1,080	60	630	1,190	928
Hydrogen Sulfide	mg/L			-	-	-	-	-	-	-	-	-	-	-	-	-	0.49	0.82	10.7	0.29	-	-	-	-	-	-	-	-	-	-	-	-	-
Nitrate (as N)	µg/L	< 10	< 10	-	-	-	-	-	-	< 250	< 500	550	840	< 500	< 250	< 10,000a	< 5,000a	< 1,000	< 100	< 100	-	-	< 1,000	< 100	< 100	< 100	< 100	< 25	< 100	-	-	-	-
Nitrite (as N)	µg/L	<10	<10	-	-	-	-	-	-	-	-	-	-	-	-	-	276	< 1,000a	< 100	< 100	-	-	-	-	-	-	-	-	-	-	-	-	-
Ortho-Phosphate	mg/L		0.0068	-	0.022	-	5.6	-	2.6	-	-	4.94	6.39	4.24	2.69	4	-	-	0.576	0.413	0.006	< 0.002	0.002	-	-	< 0.0010	< 0.0010	0.0014	< 0.0010	-	0.037	-	0.298
pH (field)	pH			-	-	-	-	-	-	-	-	-	-	-	-	-	6.987.0	7.42	7.1	6.99	-	-	-	-	-	-	-	-	-	-	-	-	-
pH (lab)	pH	8.05	8.03	-	-	-	-	-	-	-	-	-	-	7.83	7.4	-	7.45	7.8	7.82	7.07.72	-	-	-	-	-	-	-	7.32	6.61	-	-	-	-
Phosphate	mg/L	-		-	-	-	-	-	-	-	-	-	-	-	-	-	0.224	1.15	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Sulfate	mg/L	269	293	-	155	-	930	1,800	-	779	3,740	2,030	3,480	1,710	1,210	2,080	12,000	2,380	282	25	735	709	758	771	757	671	759	669	704	-	1,230	-	2,830
Sulfide	mg/L			-	-	-	-	-	-	-	-	-	-	-	-	-	1.08	8.44	25.5	6	-	-	-	-	-	-	-	-	-	-	-	-	-
TDS - Solids, Total Dissolved	mg/L	1,020	1,090	-	974	-	9,120	10,100	-	9,310	12,400	9,450	13,800	9,280	7,540	9,940	10,800	6,100	5,220	4,570	2,560	2,590	2,500	2,500	2,530	2,560	2,480	2,430	2,470	-	2,710	-	8,530

Associated CARO files available upon request.
Associated Exova file(s): 712940, 714233, 714243, 756693, 756810, 757047, 811364, 811710, 812030, 812741, 812985, 813438, 846260, 878316, 879073, 909346, 909448, 909654.

Table H1: Summary of Groundwater Analytical Results - Inorganics/General - HISTORICAL to 2025

Well ID		GL8-2											GL9-1															GL9-2				
Sample ID		GL8-2-20110627	GL8-2-20111217	GL 8-2-20120626	GL 8-2-20120704	GL8-2-20121204	GL8-2-20130626	GL8-2-20131113	GL8-2-20140605	GL8-2-20141118	GL8-2-20150610	GL8-2-20151103	GL 9-1-20091111	GL9-1-20100810	GL9-1-20110628	GL 9-1-20120627	GL9-1-20121204	GL9-1-20130626	GL9-1-20131114	GL9-1-20140604	GL9-1-20141125	GL9-1-20150609	GL9-1-20151109	GL9-1-20170530	GL9-1-180604	GL9-1-190530	GL9-1-200611	GL9-1-210611	GL 9-2-20091111	GL9-2-20100810	GL9-2-20110628	GL 9-2-20120627	GL9-2-20121204
Sample Date		2011 06 27	2011 12 17	2012 06 26	2012 07 04	2012 12 04	2013 06 26	2013 11 13	2014 06 05	2014 11 18	2015 06 10	2015 11 03	2009 11 11	2010 08 10	2011 06 28	2012 06 27	2012 12 04	2013 06 26	2013 11 14	2014 06 04	2014 11 25	2015 06 09	2015 11 09	2017 05 30	2018 06 04	2019 05 30	2020 06 11	2021 06 11	2009 11 11	2010 08 10	2011 06 28	2012 06 27	2012 12 04
Parameter	**Unit**	**Analytical Results**																														
Inorganics / General																																
Alkalinity, Bicarb(as CaCO3)	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	739	701	1,060	1,220	-	-	-	-	-
Alkalinity, Carb (as CaCO3)	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	< 1.0	12	< 1.0	< 1.0	-	-	-	-	-
Alkalinity, Hydro(as CaCO3)	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	< 1.0	< 1.0	< 1.0	< 1.0	-	-	-	-	-
Alkalinity, Phen(as CaCO3)	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	< 1.0	6	< 1.0	< 1.0	-	-	-	-	-
Alkalinity, Total (as CaCO3)	mg/L	2,520	2,470	2,080	-	2,600	1,930	2,210	1,850	2,040	1,630	1,580	-	923	677	690	684	727	872	879	776	833	684	693	739	713	1,060	1,220	-	720	606	588	564
Ammonia, Total (as N)	µg/L	220	60	130	-	90	64.4	25.8	14	15.6	18.1	12.4	-	230	120	140	160	167	155	106	189	76.2	74.2	314,000	261	280	255	239	-	800	40	< 10	100
Bromide	mg/L	-	-	-	-	-	3.6	-	3.4	2.5	2.6	2.7	-	-	-	-	-	< 1.0	< 1.0	< 1.0	< 1.0	0.72	< 1.0	0.71	< 1.00	0.39	< 1.00	< 1.00	-	-	-	-	-
Chloride	mg/L	512	511	390	-	478	459	460	390	389	390	392	-	126	132	153	152	153	155	156	154	153	153	159	153	140	109	99	-	1,300	1,150	1,130	1,210
COD - Chemical Oxygen Demand	mg/L	100	120	120	-	113	487	76	68	78	64	59	-	< 10	< 10	20	18	< 20	< 20	< 20	28	< 20	< 20	1,150	< 20	< 20	< 20	35	-	100	110	190	101
Conductivity	µS/cm	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Conductivity - Field	µS/cm	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2,027	1961	2,032	2,568	-	-	-	-	-
Dissolved Phosphate	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	< 0.0050	< 0.0050	-	-	-	-	-	-	-
DOC - Dissolved Organic Carbon	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2.53	1.44	1.77	0.74	-	-	-	-	-
Fluoride	µg/L	-	-	-	-	-	3,200	3,600	3,000	3,700	2,700	3,700	-	-	-	-	-	770	580	820	640	590	600	660	650	720	< 1,000	< 1,000	-	-	-	-	-
Hardness (as CaCO3)	mg/L	1,040	652	800	-	581	1,180	800	768	626	837	683	510	610	375	420	392	418	410	374	404	332	326	363	480	407	584	746	9,260	6,980	8,320	8,200	8,370
Hydrogen Sulfide	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Nitrate (as N)	µg/L	-	< 100	-	-	220	350	< 250	6,340	2,770	15,700	11,200	-	-	-	-	< 100	< 100	< 100	< 100	< 100	< 25	< 100	< 50	< 100	< 10	< 100	< 100	-	-	-	-	< 1,000
Nitrite (as N)	µg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	< 10	< 10	< 100	< 100	-	-	-	-	-
Ortho-Phosphate	mg/L	0.158	0.35	-	0.05	0.324	-	-	0.0704	0.166	0.0773	0.141	-	0.003	0.026	< 0.002	< 0.002	-	-	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	-	-	< 0.0500	< 0.0500	-	0.011	0.095	0.006	0.009
pH (field)	pH	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	7.21	8.25	7.06	6.79	-	-	-	-	-
pH (lab)	pH	-	-	-	-	-	-	-	-	-	8.29	8.03	-	-	-	-	-	-	-	-	-	8.9	8.97	8.9	8.03	8.33	7.9	7.75	-	-	-	-	-
Phosphate	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	< 0.0050	< 0.0050	-	-	-	-	-	-	-
Sulfate	mg/L	2,760	2,940	1,970	-	2,830	3,260	2,870	3,000	2,840	3,320	3,290	-	300	270	263	299	279	254	244	250	224	218	223	314	270	267	277	-	23,000	25,300	26,000	27,000
Sulfide	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TDS - Solids, Total Dissolved	mg/L	7,520	7,360	5,610	-	7,350	7,140	7,050	6,600	5,580	6,800	6,730	-	1,470	1,220	1,320	1,350	1,260	1,230	1,190	1,310	1,140	1,220	1,150	1,390	1,330	1,470	1,630	-	40,200	40,500	41,400	39,400

Associated CARO files available upon request.
Associated Exova file(s): 712940, 714233, 714243, 756693, 756810, 757047, 811364, 811710, 812030, 812741, 812985, 813438, 846260, 878316, 879073, 909346, 909448, 909654.

Table H1: Summary of Groundwater Analytical Results - Inorganics/General - HISTORICAL to 2025

Well ID	GL9-2						GL9-3																	GL10-1								
Sample ID	GL9-2-20130626	GL9-2-20131113	GL9-2-20140605	GL9-2-20141125	GL9-2-20150609	GL9-2-20151104	GL 9-3-20091111	GL9-3-20100810	GL9-3-20110628	GL 9-3-20120627	GL9-3-20121204	GL9-3-20130626	GL9-3-20131113	GL9-3-20140605	GL9-3-20141125	GL9-3-20150609	GL9-3-20151109	GL9-3-20160526	GL9-3-20170529	GL9-3-180528	GL9-3-190527	GL9-3-200608	GL9-3-210610	GL10-1-20091112	GL10-1-20100810	GL10-1-20110704	GL10-1-20120626	GL10-1-20121204	GL10-1-20130626	GL10-1-20140605	GL10-1-20141125	GL10-1-20150610
Sample Date	2013 06 26	2013 11 13	2014 06 05	2014 11 25	2015 06 09	2015 11 04	2009 11 11	2010 08 10	2011 06 28	2012 06 27	2012 12 04	2013 06 26	2013 11 13	2014 06 05	2014 11 25	2015 06 09	2015 11 09	2016 05 26	2017 05 29	2018 05 28	2019 05 27	2020 06 08	2021 06 10	2009 11 12	2010 08 10	2011 07 04	2012 06 26	2012 12 04	2013 06 26	2014 06 05	2014 11 25	2015 06 10
Parameter	**Unit**	**Analytical Results**																														
Inorganics / General																																
Alkalinity, Bicarb(as CaCO3)	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	862	859	921	943	-	-	-	-	-	-	-	-	-
Alkalinity, Carb (as CaCO3)	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	< 1.0	< 1.0	< 1.0	< 1.0	-	-	-	-	-	-	-	-	-
Alkalinity, Hydro(as CaCO3)	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	< 1.0	< 1.0	< 1.0	< 1.0	-	-	-	-	-	-	-	-	-
Alkalinity, Phen(as CaCO3)	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	< 1.0	< 1.0	< 1.0	< 1.0	-	-	-	-	-	-	-	-	-
Alkalinity, Total (as CaCO3)	mg/L	898	950	1,030	502	1,080	547	-	944	930	948	947	1,420	1,450	1,580	989	1,530	926	915	834	862	859	921	943	-	3,470	3,200	2,640	267	2,540	2,560	2,180	2,300
Ammonia, Total (as N)	µg/L	140	485	11.9	54.3	92.3	50.4	-	< 10	20	30	< 10	17.1	9.6	7.4	10.5	16.5	9.9	10.4	30.5	69	73	< 50	< 50	-	170	140	140	210	142	81.5	129	170
Bromide	mg/L	< 5.0	-	7.8	5.6	5.9	5.6	-	-	-	-	-	< 5.0	-	10.5	7.2	8.5	6.2	10.8	11.2	< 10.0	< 10.0	< 50.0	< 10.0	-	-	-	-	-	10.5	11.1	9.5	8.7
Chloride	mg/L	1,250	1,250	1,230	1,290	1,270	1,200	-	1,610	1,450	1,360	1,500	1,540	1,590	1,530	1,600	1,590	1,530	1,780	1,680	238	1,540	1,400	1,600	-	1,400	1,420	1,450	1,270	1,270	1,130	1,250	1,020
COD - Chemical Oxygen Demand	mg/L	78	64	78	68	64	53	-	100	180	230	156	100	281	88	105	91	124	78	80	86	83	79	104	-	480	210	230	228	166	145	177	145
Conductivity	µS/cm	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Conductivity - Field	µS/cm	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	3,210	44350	36,600	41,476	-	-	-	-	-	-	-	-	-
Dissolved Phosphate	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	< 0.0050	< 0.500	-	-	-	-	-	-	-	-	-	-	-
DOC - Dissolved Organic Carbon	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	25.1	24.8	23.6	18.8	-	-	-	-	-	-	-	-	-
Fluoride	µg/L	3,040	3,100	3,240	3,780	2,400	3,300	-	-	-	-	-	2,340	2,420	2,320	3,020	< 2,000a	3,200	3,500	2,700	4,350	< 10,000a	< 50,000a	< 10,000a	-	-	-	-	-	1,860	1,900	2,250	< 2,000a
Hardness (as CaCO3)	mg/L	7,670	7,950	8,100	7,700	7,650	7,360	217	10,500	12,300	11,000	10,400	10,400	10,500	10,800	10,400	10,400	9,720	10,600	11,100	11,300	12,600	10,200	10,700	7,010	6,430	8,310	8,760	8,350	7,720	6,550	6,570	6,240
Hydrogen Sulfide	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Nitrate (as N)	µg/L	< 500	< 500	720	730	< 500	< 500	-	-	-	-	< 1,000	< 500	560	< 500	< 500	< 500	< 500	< 500	< 500	6,320	< 1,000	< 5,000a	< 1,000	-	-	-	-	< 1,000	< 500	< 500	710	< 500
Nitrite (as N)	µg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	< 1,000a	< 1,000a	< 5,000a	< 1,000	-	-	-	-	-	-	-	-	-
Ortho-Phosphate	mg/L	-	-	0.0054	0.0054	0.0052	0.0057	-	0.028	0.033	0.008	< 0.002	-	-	0.0051	0.0054	0.0042	0.0043	0.0049	0.0065	-	-	< 2.50	< 0.500	-	0.059	0.035	0.006	0.004	-	0.0044	0.0063	0.0024
pH (field)	pH	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	7.22	7.54	7.32	7.29	-	-	-	-	-	-	-	-	-
pH (lab)	pH	-	-	-	-	8.05	7.92	-	-	-	-	-	-	-	-	-	7.92	7.69	7.78	7.9	7.68	7.73	7.8	7.74	-	-	-	-	-	-	-	-	7.95
Phosphate	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	< 0.0050	< 0.500	-	-	-	-	-	-	-	-	-	-	-
Sulfate	mg/L	26,900	25,500	26,100	27,500	27,100	26,200	-	29,400	31,400	31,400	31,800	32,600	31,500	31,800	32,800	33,500	32,100	37,100	34,600	199	31,700	34,500	32,300	-	14,800	17,600	19,300	19,400	18,800	17,400	19,100	16,300
Sulfide	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TDS - Solids, Total Dissolved	mg/L	40,500	40,900	39,300	40,600	38,700	40,400	-	48,500	49,600	51,700	50,200	51,900	49,000	48,700	49,300	48,200	50,200	62,800	46,400	53,000	52,300	52,600	54,200	-	31,200	31,700	33,800	33,000	31,400	28,900	28,000	26,600

Associated CARO files available upon request.
Associated Exova file(s): 712940, 714233, 714243, 756693, 756810, 757047, 811364, 811710, 812030, 812741, 812985, 813438, 846260, 878316, 879073, 909346, 909448, 909654.

Table H1: Summary of Groundwater Analytical Results - Inorganics/General - HISTORICAL to 2025

Well ID	GL10-1	GL12-1																										GL13-1				
Sample ID	GL10-1-20151109	GL12-1-20091112	GL12-1-20100811	GL12-1-20110629	GL 12-1-20111218	GL12-1-20120625	GL12-1-20121204	GL12-1-20130626	GL12-1-20131113	GL12-1-20140604	GL12-1-20141118	GL12-1-20150609	GL12-1-20151104	GL12-1-20160524	GL12-1-20160921	GL12-1-20170529	GL12-1-20170926	GL12-1-180604	GL12-1-180919	GL12-1-190527	GL12-1-190919	GL12-1-200610	GL12-1-201102	GL12-1-210525	GL12-1-211005	GL12-1-220607	GL12-1-221005	GL13-1-20091117	GL13-1-20100811	GL13-1-20110627	GL13-1-20111217	GL13-1-20120625
Sample Date	2015 11 09	2009 11 12	2010 08 11	2011 06 29	2011 12 18	2012 06 25	2012 12 04	2013 06 26	2013 11 13	2014 06 04	2014 11 18	2015 06 09	2015 11 04	2016 05 24	2016 09 21	2017 05 29	2017 09 26	2018 06 04	2018 09 19	2019 05 27	2019 09 19	2020 06 10	2020 11 02	2021 05 25	2021 10 05	2022 06 07	2022 10 05	2009 11 17	2010 08 11	2011 06 27	2011 12 17	2012 06 25
Parameter	**Unit**	**Analytical Results**																														
Inorganics / General																																
Alkalinity, Bicarb(as CaCO3)	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	768	-	-	-	865	882	907	886	997	948	915	928	685	815	-	-	-	-	-
Alkalinity, Carb (as CaCO3)	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	< 1.0	-	-	-	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	<1.0	<1.0	-	-	-	-	-
Alkalinity, Hydro(as CaCO3)	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	< 1.0	-	-	-	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	<1.0	<1.0	-	-	-	-	-
Alkalinity, Phen(as CaCO3)	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	<1.0	<1.0	-	-	-	-	-
Alkalinity, Total (as CaCO3)	mg/L	1,950	-	558	544	571	589	606	767	860	1,170	1,110	842	744	768	824	823	877	865	882	907	886	997	948	915	928	685	815	-	640	666	682	647
Ammonia, Total (as N)	µg/L	152	-	< 10	20	< 10	< 10	< 10	5.4	6.7	69.6	86.6	274	252	467	648	2,020	1,720	1,430	1,840	1,750	1,270	4,260	7,300	4,360	4,660	6910	7960	-	< 10	< 10	40	< 10
Bromide	mg/L	7.4	-	-	-	-	-	-	< 2.5	-	< 2.5	< 2.5	< 1.0	< 2.5	< 2.5	< 2.5	< 2.5	< 1.0	< 50.0	< 1.00	0.33	< 1.00	< 1.00	0.84	< 10.0	< 1.00	<1.00	<10.0	-	-	-	-	-
Chloride	mg/L	963	-	174	151	168	173	182	222	251	467	404	607	455	500	574	514	556	1,050	495	480	496	610	603	568	579	559	598	-	178	196	183	170
COD - Chemical Oxygen Demand	mg/L	210	-	50	30	40	70	72	63	69	258	219	378	260	393	657	1,070	751	542	513	485	458	544	566	563	536	563	613	-	10	30	30	30
Conductivity	µS/cm	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Conductivity - Field	µS/cm	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	58,741	5,880	8360	7380	6,947	8,081	7,982	7,452	6887	7795	-	-	-	-	-
Dissolved Phosphate	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.0074	< 0.0050	0.0125	-	-	-	-	-	-	-	-	-	-	-	-
DOC - Dissolved Organic Carbon	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	382	190	155	175	203	179	156	174	199	182	-	-	-	-	-
Fluoride	µg/L	< 2,000a	-	-	-	-	-	-	2,200	1,800	2,900	1,600	1,830	2,000	2,000	2,000	1,700	1,750	1,220	1,840	1,560	1,190	1,200	1,400	1,430	1,300	1050	<1000	-	-	-	-	-
Hardness (as CaCO3)	mg/L	5,980	3,250	3,080	3,310	3,160	3,520	3,610	3,720	3,900	4,090	3,910	3,880	3,480	3,840	3,590	2,610	3,240	3,390	3,890	3,850	3,830	4,490	4,720	4,090	4,140	3720	3420	3,530	3,550	3,950	3,500	3,580
Hydrogen Sulfide	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Nitrate (as N)	µg/L	< 500	-	-	-	3,660	-	5,830	8,300	5,870	2,640	< 250	< 100	< 250	< 250	< 250	< 250	< 100	< 5,000a	< 100	59	< 100	< 100	< 1,000	< 1,000	< 100	<1000	<1000	-	-	-	220	-
Nitrite (as N)	µg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	< 10	< 100	24	< 100	< 100	< 10	< 10	< 100	<1000	<1000	-	-	-	-	-
Ortho-Phosphate	mg/L	0.0019	-	0.004	0.095	0.03	0.003	0.007	-	-	0.357	0.0076	0.0016	< 0.0010	< 0.0010	0.0062	0.372	0.157	-	-	-	< 0.0500	< 0.0500	< 0.0050	< 0.0050	< 0.0500	-	-	-	0.005	0.007	0.03	0.007
pH (field)	pH	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	6.73	6.99	6.75	6.81	6.78	6.64	6.69	6.67	-	-	-	-	-	-	-
pH (lab)	pH	7.57	-	-	-	-	-	-	-	-	-	-	7.68	7.31	7.14	7.34	7.17	7.39	7.31	7.07	7.49	7.43	7.39	7.51	7.69	7.27	6.86	7.14	-	-	-	-	-
Phosphate	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.0074	< 0.0050	0.0125	-	-	-	-	-	<0.0500	<0.500	-	-	-	-	-
Sulfate	mg/L	15,500	-	3,890	4,240	3,040	4,400	4,770	4,980	4,820	5,550	5,610	4,560	4,980	4,600	4,430	3,850	3,540	9,180	3,660	3,800	3,620	3,880	3,820	3,850	4,280	3910	3870	-	5,870	6,580	5,900	5,900
Sulfide	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TDS - Solids, Total Dissolved	mg/L	25,100	-	7,420	7,330	8,050	7,750	7,920	8,440	8,560	9,790	9,400	7,990	8,290	8,210	8,290	7,280	6,500	6,950	7,730	7,860	7,920	8,040	8,040	7,150	7,940	7760	7490	-	11,200	10,800	10,900	9,930

Associated CARO files available upon request.
Associated Exova file(s): 712940, 714233, 714243, 756693, 756810, 757047, 811364, 811710, 812030, 812741, 812985, 813438, 846260, 878316, 879073, 909346, 909448, 909654.

Table H1: Summary of Groundwater Analytical Results - Inorganics/General - HISTORICAL to 2025

Well ID		GL13-1	GL14-1						GL15-1														GL15-2									
Sample ID		GL13-1-20121204	GL14-1-20091116	GL14-1-20100811	GL14-1-20110704	GL14-1-20120627	GL14-1-20120704	GL14-1-20121204	GL15-1-20091117	GL15-1-20140604	GL15-1-20141117	GL15-1-20150610	GL15-1-20151103	GL15-1-20160920	GL15-1-20170925	GL15-1-180928	GL15-1-190924	GL15-1-201104	GL15-1-211007	GL15-1-221005	GL15-1-231025	GL15-1	GL 15-1	GL15-2-20110704	GL15-2-20120627	GL15-2-20121205	GL15-2-20130708	GL15-2-20140604	GL15-2-20141117	GL15-2-20150610	GL15-2-20151103	GL15-2-20160920	GL15-2-20170925
Sample Date		2012 12 04	2009 11 16	2010 08 11	2011 07 04	2012 06 27	2012 07 04	2012 12 04	2009 11 17	2014 06 04	2014 11 17	2015 06 10	2015 11 03	2016 09 20	2017 09 25	2018 09 28	2019 09 24	2020 11 04	2021 10 07	2022 10 05	2023 10 25	2024-09-17	2025-08-21	2011 07 04	2012 06 27	2012 12 05	2013 07 08	2014 06 04	2014 11 17	2015 06 10	2015 11 03	2016 09 20	2017 09 25
Parameter	**Unit**	**Analytical Results**																														
Inorganics / General																																
Alkalinity, Bicarb(as CaCO3)	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	441	442	644	489	414	417	409	417	-	-	-	-	-	-	-	-	-	-
Alkalinity, Carb (as CaCO3)	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	< 1.0	< 1.0	< 1.0	< 1.0	<1.0	<1.0	<1.0	<1.0	-	-	-	-	-	-	-	-	-	-
Alkalinity, Hydro(as CaCO3)	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	< 1.0	< 1.0	< 1.0	< 1.0	<1.0	<1.0	<1.0	<1.0	-	-	-	-	-	-	-	-	-	-
Alkalinity, Phen(as CaCO3)	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	< 1.0	< 1.0	< 1.0	< 1.0	<1.0	<1.0	<1.0	<1.0	-	-	-	-	-	-	-	-	-	-
Alkalinity, Total (as CaCO3)	mg/L	672	-	783	809	-	799	790	-	446	479	468	457	446	428	441	442	644	489	414	417	409	417	650	644	686	822	1,030	972	900	807	807	794
Ammonia, Total (as N)	µg/L	< 10	-	40	60	50	-	70	-	15.2	38.3	32.2	47.7	17.8	12.5	78	240	51	< 50	50	<50	0.058	<0.050	< 10	40	< 10	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	7.6
Bromide	mg/L	-	-	-	-	-	-	-	-	< 0.50	< 0.50	< 0.25	< 0.25	< 0.25	< 0.25	< 0.10	< 0.10	<1.00	<1.00	<1.00	<0.10	<0.10	<1.00	-	-	-	< 2.5	< 2.5	< 2.5	< 2.5	< 2.5	< 2.5	< 2.5
Chloride	mg/L	174	-	7	8.6	-	0.11	8.66	-	6.7	10	4.9	8.5	12.3	8.1	8.32	7.96	241	24.3	9.27	16.1	15.0	18.6	52.4	121	155	143	159	185	197	182	259	181
COD - Chemical Oxygen Demand	mg/L	41	-	< 10	30	40	-	26	-	< 20	< 20	< 20	< 20	< 20	< 20	21	< 20	32	< 20	<20	<20	<20	<20	20	30	63	30	36	39	38	32	45	41
Conductivity	µS/cm	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-			-	-	-	-	-	-	-	-	-	-
Conductivity - Field	µS/cm	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1,320	1259	3,904	1,528	1308	-	-		-	-	-	-	-	-	-	-	-	-
Dissolved Phosphate	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	< 0.0050	-	-	-	-	-			-	-	-	-	-	-	-	-	-	-
DOC - Dissolved Organic Carbon	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1.75	1.68	10.8	2.11	1.03	4.86	1.64	1.68	-	-	-	-	-	-	-	-	-	-
Fluoride	µg/L	-	-	-	-	-	-	-	-	2,190	1,950	1,310	1,900	1,760	2,090	1,810	1,970	860	1,310	1,490	1,840	2020	1830	-	-	-	< 1,000	2,100	< 1,000	1,000	1,100	1,400	1,300
Hardness (as CaCO3)	mg/L	3,440	40	40	48	40	-	35	702	335	340	339	336	385	326	333	327	1,530	468	345	380	384	412	2,090	3,300	3,580	3,920	3,290	3,250	3,700	3,910	5,010	4,190
Hydrogen Sulfide	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-			-	-	-	-	-	-	-	-	-	-
Nitrate (as N)	µg/L	< 1,000	-	-	-	-	-	< 100	-	233	72	< 25	< 25	89	98	23	< 10	2,440	< 100	<100	<10	< 10	< 100	-	-	< 10,000a	8,850	7,610	8,200	7,690	7,470	3,700	3,120
Nitrite (as N)	µg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	< 10	< 10	< 10	< 100	<100	<10	<10	<10	-	-	-	-	-	-	-	-	-	-
Ortho-Phosphate	mg/L	0.006	-	0.051	0.11	-	0.125	0.137	-	0.076	0.0409	0.0308	0.155	0.0562	0.0338	-	< 0.0050	< 0.0050	< 0.0500	-	-		0.0201	0.024	0.017	0.018	-	0.0188	0.0193	0.017	0.0186	0.0166	0.0179
pH (field)	pH	-	-	-	-	-	-	-	-	-	-	-	-	-	-	7.47	7.35	7.18	7.47	-	-			-	-	-	-	-	-	-	-	-	-
pH (lab)	pH	-	-	-	-	-	-	-	-	-	-	8.32	8.12	8.01	8.1	7.87	8.09	7.8	8.08	8.01	8.07	8.04	8.1	-	-	-	-	-	-	7.84	7.5	7.4	7.59
Phosphate	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	< 0.0050	-	-	-	0.068	<0.0050	-		-	-	-	-	-	-	-	-	-	-
Sulfate	mg/L	5,750	-	141	132	-	141	145	-	261	280	175	269	295	264	280	263	1,200	358	292	314	297	350	1,900	3,230	4,020	4,190	4,000	4,040	4,800	4,800	6,740	4,560
Sulfide	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-			-	-	-	-	-	-	-	-	-	-
TDS - Solids, Total Dissolved	mg/L	9,990	-	1,120	1,100	-	1,120	1,190	-	782	793	959	814	874	767	819	826	3,210	1,030	811	908	921	971	3,760	6,180	6,750	7,970	7,380	6,750	7,960	7,970	10,400	8,470

Associated CARO files available upon request.
Associated Exova file(s): 712940, 714233, 714243, 756693, 756810, 757047, 811364, 811710, 812030, 812741, 812985, 813438, 846260, 878316, 879073, 909346, 909448, 909654.

Table H1: Summary of Groundwater Analytical Results - Inorganics/General - HISTORICAL to 2025

Well ID		GL15-2								GL16-1																				GL17-1		
Sample ID		GL15-2-180928	GL15-2-190924	GL15-2-201104	GL15-2-211007	GL15-2-221005	GL15-2-231025	GL15-2	GL 15-2	GL 16-1-20091111	GL 16-1-20111217	GL16-1-20100811	GL16-1-20110627	GL16-1-20120626	GL16-1-20121204	GL16-1-20130626	GL16-1-20131113	GL16-1-20140605	GL16-1-20141118	GL16-1-20150610	GL16-1-20151103	GL16-1-20160524	GL16-1-20170525	GL16-1-180604	GL16-1-190529	GL16-1-200608	GL16-1-210609	GL16-1-220602	GL16-1	GL 16-1	GL17-1-20091112	GL17-1-20100811	GL17-1-20110628
Sample Date		2018 09 28	2019 09 24	2020 11 04	2021 10 07	2022 10 05	2023 10 25	2024-09-18	2025-09-16	2009 11 11	2011 12 17	2010 08 11	2011 06 27	2012 06 26	2012 12 04	2013 06 26	2013 11 13	2014 06 05	2014 11 18	2015 06 10	2015 11 03	2016 05 24	2017 05 25	2018 06 04	2019 05 29	2020 06 08	2021 06 09	2022 06 02	2024-05-14	2025-05-13	2009 11 12	2010 08 11	2011 06 28
Parameter	**Unit**	**Analytical Results**																														
Inorganics / General																																
Alkalinity, Bicarb(as CaCO3)	mg/L	765	748	794	817	650	613	522	494	-	-	-	-	-	-	-	-	-	-	-	-	938	-	944	965	973	978	833	852	861	-	-	-
Alkalinity, Carb (as CaCO3)	mg/L	< 1.0	< 1.0	< 1.0	< 1.0	<1.0	<1.0	<1.0	<1.0	-	-	-	-	-	-	-	-	-	-	-	-	< 1.0	-	< 1.0	< 1.0	< 1.0	< 1.0	<1.0	<1.0	<1.0	-	-	-
Alkalinity, Hydro(as CaCO3)	mg/L	< 1.0	< 1.0	< 1.0	< 1.0	<1.0	<1.0	<1.0	<1.0	-	-	-	-	-	-	-	-	-	-	-	-	< 1.0	-	< 1.0	< 1.0	< 1.0	< 1.0	<1.0	<1.0	<1.0	-	-	-
Alkalinity, Phen(as CaCO3)	mg/L	< 1.0	< 1.0	< 1.0	< 1.0	<1.0	<1.0	<1.0	<1.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	< 1.0	< 1.0	< 1.0	< 1.0	<1.0	<1.0	<1.0	-	-	-
Alkalinity, Total (as CaCO3)	mg/L	765	748	794	817	650	613	522	494	-	985	1,170	982	1,170	1,190	1,100	1,120	1,200	1,170	1,050	1,180	938	898	944	965	973	978	833	852	861	-	678	664
Ammonia, Total (as N)	µg/L	73	< 20	< 50	< 50	<50	<50	<0.050	<0.050	-	< 10	470	< 10	500	1,130	448	39.9	382	125	350	34.9	< 5.0	< 5.0	27	68	256	124	118	0.293	0.368	-	50	180
Bromide	mg/L	<1.00	<1.00	< 10.0	<1.00	<1.00	<1.00	<1.00	<1.00	-	-	-	-	-	-	< 2.5	-	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	< 50.0	<1.00	< 10.0	<1.00	<1.00	<1.00	<1.00	-	-	-
Chloride	mg/L	214	246	360	346	361	290	237	165	-	166	252	168	162	154	153	158	154	148	155	151	145	139	273	133	95.1	113	130	124	118	-	172	164
COD - Chemical Oxygen Demand	mg/L	38	26	33	26	38	44	35	<20	-	10	< 10	10	30	34	35	< 20	< 20	< 20	< 20	< 20	< 20	< 20	24	< 20	< 20	< 20	<20	<20	<20	-	30	40
Conductivity	µS/cm	-	-	-	-	-	-			-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-			-	-	-
Conductivity - Field	µS/cm	7,089	7047	10,680	8,617	7326	-	-		-	-	-	-	-	-	-	-	-	-	-	-	-	-	3,660	4453	3,720	4,173	4,010	-		-	-	-
Dissolved Phosphate	mg/L	< 0.0050	-	-	-	-	-			-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.0072	< 0.0500	-	-	-			-	-	-
DOC - Dissolved Organic Carbon	mg/L	15.4	12.2	19	14	12.1	12	8.90	5.41	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2.93	3.06	1.59	2.15	1.51	2.82	1.57	-	-	-
Fluoride	µg/L	1,030	< 1,000	1,020	<1,000	<1,000	<1000	<1000	1800	-	-	-	-	-	-	1,500	< 1,000	900	890	880	940	1,020	940	690	1,240	< 10,000a	< 1,000	<1,000	<1000	<1000	-	-	-
Hardness (as CaCO3)	mg/L	3,300	3,470	6,230	< 10.0	3,100	3,300	3,020	2,280	1,840	987	1,700	1,210	1,260	1,020	1,040	949	930	845	900	827	803	833	762	756	699	658	651	612	628	3,390	3,280	3,580
Hydrogen Sulfide	mg/L	-	-	-	-	-	-			-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-			-	-	-
Nitrate (as N)	µg/L	2,590	3,550	1,690	1,300	874	0.739	1580	1140	-	220	-	-	-	120	< 250	590	< 100	150	< 100	260	250	330	< 5,000a	< 100	< 1,000	< 100	137	< 100	< 100	-	-	-
Nitrite (as N)	µg/L	< 10	< 100	< 10	< 100	<100	<100	<100	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	< 10	< 100	< 1,000a	< 100	<0.100	<100	<100	-	-	-
Ortho-Phosphate	mg/L	-	< 0.0500	< 0.0050	< 0.0500	-	-		0.0102	-	0.04	0.012	0.024	0.011	0.018	-	-	0.0033	0.017	0.0046	0.0451	0.0526	0.0517	-	-	< 0.500	< 0.0500	-		0.0085	-	0.003	0.088
pH (field)	pH	6.88	6.77	6.94	6.89	-	-			-	-	-	-	-	-	-	-	-	-	-	-	-	-	7.11	7.03	7.08	7.01	-			-	-	-
pH (lab)	pH	7.41	7.7	7.69	7.67	7.54	7.79	7.77	7.93	-	-	-	-	-	-	-	-	-	-	7.96	7.76	7.84	8.51	7.67	7.83	7.98	7.98	7.93	7.81	7.83	-	-	-
Phosphate	mg/L	< 0.0050	-	-	-	<0.0500	<0.050	-		-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.0072	< 0.0500	-	-	<0.0500	-		-	-	-
Sulfate	mg/L	3,730	4,060	7,190	5,260	4,080	4,310	3,760	1,840	-	2,240	3,520	2,480	2,270	2,110	2,080	1,940	1,970	1,850	1,960	1,860	1,770	1,710	4,040	1,480	1,270	1,110	1,410	1,240	1,260	-	4,600	5,060
Sulfide	mg/L	-	-	-	-	-	-			-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-			-	-	-
TDS - Solids, Total Dissolved	mg/L	6,990	7,220	11,900	9,270	7,170	7,520	5,690	4,020	-	4,500	6,750	4,780	4,490	4,170	4,200	4,160	3,880	3,830	3,880	3,670	3,470	3,530	3,180	3,390	3,020	2,670	2,790	2,840	2,680	-	9,080	8,930

Associated CARO files available upon request.
Associated Exova file(s): 712940, 714233, 714243, 756693, 756810, 757047, 811364, 811710, 812030, 812741, 812985, 813438, 846260, 878316, 879073, 909346, 909448, 909654.

Table H1: Summary of Groundwater Analytical Results - Inorganics/General - HISTORICAL to 2025

Well ID	GL17-1																	GL17-2											GL18-2				
Sample ID	GL17-1-20120625	GL17-1-20121204	GL17-1-20160526	GL17-1-20160919	GL17-1-20170531	GL17-1-20170926	GL17-1-180604	GL17-1-180919	GL17-1-190527	GL17-1-190923	GL17-1-200608	GL17-1-201020	GL17-1-210604	GL17-1-211006	GL17-1-220531	GL17-1-220928	GL17-2-20091112	GL17-2-20100811	GL17-2-20110628	GL17-2-20120625	GL17-2-20121204	GL17-2-20130626	GL17-2-20131113	GL17-2-20140605	GL17-2-20141118	GL17-2-20150608	GL17-2-20151104	GL 18-2-20091110	GL18-2-20100811	GL18-2-20110629	GL18-2-20120626	GL18-2-20121205
Sample Date	2012 06 25	2012 12 04	2016 05 26	2016 09 19	2017 05 31	2017 09 26	2018 06 04	2018 09 19	2019 05 27	2019 09 23	2020 06 08	2020 10 20	2021 06 04	2021 10 06	2022 05 31	2022 09 28	2009 11 12	2010 08 11	2011 06 28	2012 06 25	2012 12 04	2013 06 26	2013 11 13	2014 06 05	2014 11 18	2015 06 08	2015 11 04	2009 11 10	2010 08 11	2011 06 29	2012 06 26	2012 12 05
Parameter	**Unit**	**Analytical Results**																															
Inorganics / General																																	
Alkalinity, Bicarb(as CaCO3)	mg/L	-	-	-	-	-	-	1,330	1,220	1,380	1,360	1,400	1,300	1,410	1,460	1,220	1450	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Alkalinity, Carb (as CaCO3)	mg/L	-	-	-	-	-	-	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	<1.0	<1.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Alkalinity, Hydro(as CaCO3)	mg/L	-	-	-	-	-	-	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	<1.0	<1.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Alkalinity, Phen(as CaCO3)	mg/L	-	-	-	-	-	-	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	<1.0	<1.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Alkalinity, Total (as CaCO3)	mg/L	1,480	614	1,330	1,240	1,350	1,310	1,330	1,220	1,380	1,360	1,400	1,300	1,410	1,460	1,220	1,450	-	1,480	135	606	652	780	864	822	966	870	705	-	154	260	156	165
Ammonia, Total (as N)	µg/L	340	360	371	184	353	334	373	287	445	351	349	402	315	399	300	347	-	350	220	190	110	< 5.0	22.6	32.4	47	33.2	9.3	-	1,400	710	1,020	1,450
Bromide	mg/L	-	-	< 1.0	< 1.0	< 1.0	< 1.0	< 1.00	0.4	0.18	0.42	< 1.00	0.33	0.34	< 1.00	<0.10	0.35	-	-	-	-	-	< 2.5	-	< 2.5	< 2.5	< 2.5	< 2.5	-	-	-	-	-
Chloride	mg/L	71.5	72.6	71	93	78	81	68.9	88.4	75.7	78.7	62.6	69.6	71	64.2	65.6	70.9	-	65.2	68	204	180	191	262	226	247	241	257	-	568	572	572	785
COD - Chemical Oxygen Demand	mg/L	20	33	< 20	< 20	< 20	< 20	< 20	< 20	< 20	< 20	< 20	< 20	< 20	< 20	<20	<20	-	10	10	40	33	33	24	29	40	32	26	-	40	40	40	22
Conductivity	µS/cm	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Conductivity - Field	µS/cm	-	-	-	-	-	-	2,044	2,197	2558	2421	2,138	2,457	-	2,153	2,415	2,184	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Dissolved Phosphate	mg/L	-	-	-	-	-	-	< 0.0050	< 0.0050	< 0.0050	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
DOC - Dissolved Organic Carbon	mg/L	-	-	-	-	-	-	2.54	2.83	2.02	1.92	2.32	2.22	1.36	1.24	1.98	0.98	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Fluoride	µg/L	-	-	2,040	1,930	1,890	1,950	1,710	2,060	1,960	1,940	1,820	1,990	2,030	1,970	2,040	2,120	-	-	-	-	-	2,300	1,700	1,300	1,400	1,700	1,700	-	-	-	-	-
Hardness (as CaCO3)	mg/L	130	98	118	123	125	121	127	130	124	128	121	132	135	127	129	118	128	110	109	3,440	3,920	4,000	4,190	3,650	3,860	4,010	3,760	1,060	1,380	1,510	1,480	1,380
Hydrogen Sulfide	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Nitrate (as N)	µg/L	-	< 100	< 100	< 100	< 100	< 100	< 10	< 100	< 10	< 10	< 10	< 10	< 10	< 10	<10	<10	-	-	-	-	2,500	2,610	1,840	1,490	1,330	1,680	1,970	-	-	-	-	< 10,000a
Nitrite (as N)	µg/L	-	-	-	-	-	-	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	<10	<10	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ortho-Phosphate	mg/L	0.034	0.031	0.0152	0.053	0.0146	0.0114	-	-	-	0.0715	0.05	0.0103	< 0.0050	< 0.0050	-	-	-	0.058	0.109	< 0.002	< 0.002	-	-	0.0025	0.0014	0.0025	0.0033	-	0.005	0.078	0.004	0.005
pH (field)	pH	-	-	-	-	-	-	7.3	7.5	7.56	7.67	7.35	7.43	-	7.33	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
pH (lab)	pH	-	-	8.18	8.32	8.13	7.95	7.83	7.8	8.11	8.11	8.2	8.01	8.14	7.98	8.16	8.15	-	-	-	-	-	-	-	-	-	7.5	7.65	-	-	-	-	-
Phosphate	mg/L	-	-	-	-	-	-	< 0.0050	< 0.0050	< 0.0050	-	-	-	-	-	<0.0050	0.0088	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Sulfate	mg/L	6.7	6.3	< 6.0	29.3	< 6.0	7.6	18.3	45.7	14.4	14.3	3.9	4.4	3.9	< 10.0	1.9	<1.0	-	6.2	60	5,740	6,120	6,330	6,380	6,290	6,820	6,660	7,000	-	3,800	3,770	3,620	8,090
Sulfide	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TDS - Solids, Total Dissolved	mg/L	1,610	1,570	1,480	1,490	1,530	1,480	1,480	1,480	1,490	1,550	1,590	1,530	1,220	1,660	1,250	1,520	-	1,630	1,510	9,700	10,000	10,800	10,800	10,500	11,300	10,300	11,100	-	6,930	6,440	6,820	6,600

Associated CARO files available upon request.
Associated Exova file(s): 712940, 714233, 714243, 756693, 756810, 757047, 811364, 811710, 812030, 812741, 812985, 813438, 846260, 878316, 879073, 909346, 909448, 909654.

Table H1: Summary of Groundwater Analytical Results - Inorganics/General - HISTORICAL to 2025

Well ID	GL18-2							GL20-1																				GL21-1			
Sample ID	GL18-2-20130627	GL18-2-20131114	GL18-2-20140609	GL18-2-20141126	GL18-2-20150615	GL18-2-20170529	GL18-2-180604	GL20-1-20091112	GL20-1-20100811	GL20-1-20110629	GL20-1-20111217	GL20-1-20120625	GL20-1-20121203	GL20-1-20130625	GL20-1-20140605	GL20-1-20141126	GL20-1-20150611	GL20-1-200826	GL20-1-201020	GL20-1-210511	GL20-1-210924	GL20-1-220531	GL20-1-220927	GL20-1-231024	GL20-1	GL20-1	GL 20-1	GL 20-1	GL21-1-20091117	GL21-1-20110705	GL 21-1-20110707	GL21-1-20120625
Sample Date	2013 06 27	2013 11 14	2014 06 09	2014 11 26	2015 06 15	2017 05 29	2018 06 04	2009 11 12	2010 08 11	2011 06 29	2011 12 17	2012 06 25	2012 12 03	2013 06 25	2014 06 05	2014 11 26	2015 06 11	2020 08 26	2020 10 20	2021 05 11	2021 09 24	2022 05 31	2022 09 27	2023 10 24	2024-05-13	2024-09-13	2025-05-21	2025-08-26	2009 11 17	2011 07 05	2011 07 07	2012 06 25
Parameter / **Unit**	**Analytical Results**																														
Inorganics / General																															
Alkalinity, Bicarb(as CaCO3) mg/L	-	-	-	-	-	-	138	-	-	-	-	-	-	-	-	-	-	4,460	4,240	4,520	4,740	3,130	2,820	3,360	2,920	3,120	2,660	3,020	-	-	-	-
Alkalinity, Carb (as CaCO3) mg/L	-	-	-	-	-	-	< 1.0	-	-	-	-	-	-	-	-	-	-	< 1.0	< 1.0	< 1.0	< 1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	-	-	-	-
Alkalinity, Hydro(as CaCO3) mg/L	-	-	-	-	-	-	< 1.0	-	-	-	-	-	-	-	-	-	-	< 1.0	< 1.0	< 1.0	< 1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	-	-	-	-
Alkalinity, Phen(as CaCO3) mg/L	-	-	-	-	-	-	< 1.0	-	-	-	-	-	-	-	-	-	-	< 1.0	< 1.0	< 1.0	< 1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	-	-	-	-
Alkalinity, Total (as CaCO3) mg/L	177	181	180	680	170	141	138	-	5,940	582	5,820	5,670	5,900	6,320	3,850	6,130	5,200	4,460	4,240	4,520	4,740	3,130	2,820	3,360	2,920	3,120	2,660	3,020	-	1,230	-	1,120
Ammonia, Total (as N) µg/L	1,330	1,370	1,440	1,370	1,330	1,390	1,520	-	13,000	317,000	354,000	288,000	485,000	273,000	96,100	180,000	110,000	140,000	116,000	94,500	111,000	70,400	85,700	89,300	89.8	85.5	73.3	78.3	-	-	40	< 10
Bromide mg/L	3.7	3.7	3.4	3.5	3.7	3.2	< 50.0	-	-	-	-	-	-	6.9	5.3	6.8	5.7	< 1.00	< 1.00	< 1.00	2.62	<1.00	2.11	<1.00	<5.00	<0.10	<0.10	1.3	-	-	-	-
Chloride mg/L	611	618	608	613	608	619	1,130	-	868	880	986	885	923	865	586	819	724	506	493	467	463	370	399	402	202	335	266	300	-	19	-	697
COD - Chemical Oxygen Demand mg/L	47	32	150	38	35	< 20	38	-	1,500	110	1,500	1,300	1,280	1,180	566	923	655	422	429	423	445	283	369	348	278	298	282	236	-	-	140	110
Conductivity µS/cm	-	-	-	-	-	-	8,140	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-					-	-	-	-
Conductivity - Field µS/cm	-	-	-	-	-	-	7,172	-	-	-	-	-	-	-	-	-	-	8,514	8,684	8,487	8,332	7,236	7,925	-	-	-			-	-	-	-
Dissolved Phosphate mg/L	-	-	-	-	-	-	0.0231	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-					-	-	-	-
DOC - Dissolved Organic Carbon mg/L	-	-	-	-	-	-	2.92	-	-	-	-	-	-	-	-	-	-	122	< 0.50	0.81	118	113	89	102	71.8	59.4	55.8	73.9	-	-	-	-
Fluoride µg/L	< 1,000	< 1,000	< 1,000	< 1,000	< 1,000	< 1,000	230	-	-	-	-	-	-	1,600	< 1,000	< 1,000	< 1,000	< 1,000	< 1,000	< 1,000	320	<1000	<1000	<1000	190	<0.10	340	550	-	-	-	-
Hardness (as CaCO3) mg/L	1,400	1,380	1,380	1,380	1,340	1,370	1,410	998	997	113	997	1,030	872	1,130	907	945	848	118	565	686	565	583	497	444	449	390	382	424	4,230	520	-	4,660
Hydrogen Sulfide mg/L	-	-	-	-	-	-	< 0.01a	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-					-	-	-	-
Nitrate (as N) µg/L	< 250	< 250	< 250	760	< 250	< 250	< 5,000a	-	-	-	< 200	-	< 1,000	< 250	123,000	< 250	27,200	< 100	< 100	< 100	582	<100	<100	<100	<500	< 10	53	<500	-	-	-	-
Nitrite (as N) µg/L	-	-	-	-	-	-	< 10	-	-	-	-	-	-	-	-	-	-	< 100	< 100	< 100	50	<100	165	<100	<10	<10	<10	15	-	-	-	-
Ortho-Phosphate mg/L	-	-	0.0043	0.0042	0.0043	0.0027	-	-	0.36	3.8	0.49	0.52	15.7	-	0.791	6.4	0.66	2.39	2.48	< 0.0500	0.0835	-	-	-			0.087	0.166	-	0.07	-	0.052
pH (field) pH	-	-	-	-	-	-	7.797.8	-	-	-	-	-	-	-	-	-	-	6.99	7	7.04	6.9	-	-	-					-	-	-	-
pH (lab) pH	-	-	-	-	7.98	7.95	7.38	-	-	-	-	-	-	-	-	-	7.84	7.73	7.5	7.72	7.6	7.7	7.63	7.67	7.70	7.59	7.6	7.87	-	-	-	-
Phosphate mg/L	-	-	-	-	-	-	0.0231	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.0500	1.46	1.19	0.192	-				-	-	-	-
Sulfate mg/L	3,900	3,870	3,820	3,780	3,780	3,820	8,810	-	33	600	< 3	25.3	< 50	294	1,250	21	754	86.3	32.6	132	14.7	251	172	36.8	23.3	21.2	79.8	26.4	-	170	-	8,380
Sulfide mg/L	-	-	-	-	-	-	< 0.020	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-					-	-	-	-
TDS - Solids, Total Dissolved mg/L	6,660	6,670	6,260	6,330	6,410	6,310	6,140	-	6,910	6,900	7,110	6,820	7,070	8,490	7,650	7,430	7,590	5,240	5,230	5,750	5,520	4,210	4,510	4,170	3,490	3,890	3,220	3,360	-	14,200	-	14,800

Associated CARO files available upon request.
Associated Exova file(s): 712940, 714233, 714243, 756693, 756810, 757047, 811364, 811710, 812030, 812741, 812985, 813438, 846260, 878316, 879073, 909346, 909448, 909654.

Table H1: Summary of Groundwater Analytical Results - Inorganics/General - HISTORICAL to 2025

Well ID	GL21-1	GL22-1		GL23-1																								GL24-1				
Sample ID	GL21-1-20121204	GL 22-1-20091110	GL22-1-20100811	GL 23-1-20091110	GL23-1-20100811	GL23-1-20110704	GL 23-1-20120627	GL23-1-20121203	GL23-1-20130627	GL23-1-20140603	GL23-1-20141124	GL23-1-20150608	GL23-1-20151104	GL23-1-20160526	GL23-1-20160531	GL23-1-20170525	GL23-1-180529	GL23-1-190523	GL23-1-190917	GL23-1-200617	GL23-1-200910	GL23-1-210513	GL23-1-220606	GL23-1-230523	GL23-1-231023	GL23-1	GL 23-1	GL24-1-20100811	GL24-1-20160531	GL24-1-20180927	GL24-1-180612	GL24-1-190917
Sample Date	2012 12 04	2009 11 10	2010 08 11	2009 11 10	2010 08 11	2011 07 04	2012 06 27	2012 12 03	2013 06 27	2014 06 03	2014 11 24	2015 06 08	2015 11 04	2016 05 26	2016 05 31	2017 05 25	2018 05 29	2019 05 23	2019 09 17	2020 06 17	2020 09 10	2021 05 13	2022 06 06	2023 05 23	2023 10 23	2024-05-13	2025-05-23	2010 08 11	2016 05 31	2018 09 27	2018 06 12	2019 09 17
Parameter	**Unit**	**Analytical Results**																														
Inorganics / General																																
Alkalinity, Bicarb(as CaCO3)	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1,090	1,120	1,090	964	1,110	1,180	962	906	941	928	932	-	-	-	1,060	921
Alkalinity, Carb (as CaCO3)	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	<1.0	<1.0	<1.0	<1.0	<1.0	-	-	-	< 1.0	< 1.0
Alkalinity, Hydro(as CaCO3)	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	<1.0	<1.0	<1.0	<1.0	<1.0	-	-	-	< 1.0	< 1.0
Alkalinity, Phen(as CaCO3)	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	<1.0	<1.0	<1.0	<1.0	<1.0	-	-	-	< 1.0	< 1.0
Alkalinity, Total (as CaCO3)	mg/L	1,160	-	961	-	1,220	1,170	1,160	1,080	1,180	1,130	1,100	1,200	1,130	1,090	1,090	1,070	1,090	1,120	1,090	964	1,110	1,180	962	906	941	928	932	852	778	-	1,060	921
Ammonia, Total (as N)	µg/L	90	-	70	-	40	40	< 10	80	< 5.0	11.6	26.9	< 5.0	17.2	< 5.0	< 20	10.4	36	33	60	< 50	< 50	< 50	<50	54	116	<0.050	<0.050	< 10	< 20	31	60	47
Bromide	mg/L	-	-	-	-	-	-	-	-	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	-	< 1.0	0.27	0.27	< 0.10	< 1.00	0.32	0.33	<0.10	<0.10	<1.00	0.20	0.21	-	-	< 0.10	< 0.10	< 1.00
Chloride	mg/L	628	-	25.6	-	30.9	31.9	32.9	33.8	35	41	37	36	33	34	30.6	35	34.2	34	35	32.3	33.1	33.2	31.9	26.5	29.6	26.1	23.3	91.4	188	99.1	216	163
COD - Chemical Oxygen Demand	mg/L	125	-	60	-	50	160	40	44	30	38	48	41	37	38	-	42	39	30	-	33	-	22	35	33	24	42	34	20	-	-	-	-
Conductivity	µS/cm	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		-	-	-	-	-
Conductivity - Field	µS/cm	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2,014	2332	-	2,150	-	2,319	2,306	-	-	-		-	-	-	-	-
Dissolved Phosphate	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.0062	< 0.0050	-	-	-	-	-	-	-			-	-	-	0.0083	-
DOC - Dissolved Organic Carbon	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	14.3	14.8	16.4	14.6	14.8	13.9	11.2	11.2	12.2	11.4	10.5	-	-	-	-	9.09
Fluoride	µg/L	-	-	-	-	-	-	-	-	1,650	1,170	1,210	1,090	940	1,030	1,050	890	710	660	750	< 1,000	780	760	570	62	410	580	560	-	1,270	1,140	1,090	1,200
Hardness (as CaCO3)	mg/L	4,300	1,050	970	1,140	1,000	1,160	1,100	270	1,170	1,080	1,210	1,130	1,050	1,080	-	1,150	1,260	1,170	1,130	1,000	1,130	1,080	1,170	1,150	1,180	1,190	1,360	1,200	-	1,760	1,300	1,100
Hydrogen Sulfide	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-			-	-	-	-	-
Nitrate (as N)	µg/L	1,880	-	-	-	-	-	-	< 100	110	160	< 100	< 100	< 100	< 100	66	< 100	< 10	72	< 10	134	28	10	41	133	<100	314	1050	-	11,700	61,600	13,100	6,540
Nitrite (as N)	µg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	66	< 10	< 10	< 100	< 10	< 10	<10	<10	<10	<10	<10	-	-	-	29	< 100
Ortho-Phosphate	mg/L	0.042	-	0.01	-	0.005	0.008	0.008	0.009	-	0.0065	0.0054	0.0059	0.0048	0.003	< 0.01	0.0034	-	-	< 0.0050	< 0.0500	< 0.0050	< 0.0050	-	-	-		0.0051	0.034	0.1	< 0.0050	-	< 0.0500
pH (field)	pH	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	7.22	7.7	-	6.95	-	7.06	-	-	-			-	-	-	-	-
pH (lab)	pH	-	-	-	-	-	-	-	-	-	-	-	7.67	7.68	7.99	7.64	8.45	7.86	8.01	7.78	7.97	7.98	7.85	7.78	7.83	7.9	7.80	7.93	-	7.64	-	7.63	7.92
Phosphate	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.0062	< 0.0050	-	-	-	-	<0.0050	<0.0050	<0.0050	0.0200		-	-	-	0.0083	-
Sulfate	mg/L	7,910	-	338	-	352	467	497	500	544	522	624	500	390	382	384	386	341	384	394	405	402	376	416	422	507	491	475	762	349	1,450	742	591
Sulfide	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-			-	-	-	-	-
TDS - Solids, Total Dissolved	mg/L	14,600	-	1,450	-	1,640	1,720	1,780	1,790	1,750	1,710	1,790	1,700	1,570	1,570	1,580	1,610	1,560	1,590	1,610	1,530	1,660	1,370	1,610	1,450	1,350	1,640	1,690	2,110	1,570	-	2,380	1,870

Associated CARO files available upon request.
Associated Exova file(s): 712940, 714233, 714243, 756693, 756810, 757047, 811364, 811710, 812030, 812741, 812985, 813438, 846260, 878316, 879073, 909346, 909448, 909654.

Table H1: Summary of Groundwater Analytical Results - Inorganics/General - HISTORICAL to 2025

Well ID		GL24-1			GL25-1		GL26-1		GL26-2												GL26-3		GL27-1											
Sample ID		GL24-1-200910	GL24-1-231023	GL 24-1	GL25-1-20091117	GL25-1-20100812	GL26-1-20091112	GL26-1-20100812	GL26-2-20091116	GL26-2-20100812	GL26-2-20110629	GL26-2-20120625	GL26-2-20121204	GL26-2-20130626	GL26-2-20131114	GL26-2-20140605	GL26-2-20141117	GL26-2-20150608	GL26-2-20151104	GL26-3-20091111	GL26-3-20100812	GL27-1-20091116	GL27-1-20100812	GL27-1-20110629	GL 27-1-20120626	GL 27-1-20120704	GL27-1-20121204	GL27-1-20130626	GL27-1-20131113	GL27-1-20140605	GL27-1-20141118	GL27-1-20150610	GL27-1-20151104
Sample Date		2020 09 10	2023 10 23	2025-05-23	2009 11 17	2010 08 12	2009 11 12	2010 08 12	2009 11 16	2010 08 12	2011 06 29	2012 06 25	2012 12 04	2013 06 26	2013 11 14	2014 06 05	2014 11 17	2015 06 08	2015 11 04	2009 11 11	2010 08 12	2009 11 16	2010 08 12	2011 06 29	2012 06 26	2012 07 04	2012 12 04	2013 06 26	2013 11 13	2014 06 05	2014 11 18	2015 06 10	2015 11 04
Parameter	**Unit**	**Analytical Results**																															
Inorganics / General																																	
Alkalinity, Bicarb(as CaCO3)	mg/L	930	758	697	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Alkalinity, Carb (as CaCO3)	mg/L	< 1.0	<1.0	<1.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Alkalinity, Hydro(as CaCO3)	mg/L	< 1.0	<1.0	<1.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Alkalinity, Phen(as CaCO3)	mg/L	< 1.0	<1.0	<1.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Alkalinity, Total (as CaCO3)	mg/L	930	758	697	-	455	-	706	-	655	644	644	643	666	818	782	830	735	613	-	604	-	1,580	161	1,600	-	1,570	1,550	1,500	1,560	1,640	1,590	1,500
Ammonia, Total (as N)	µg/L	< 50	<50	<0.050	-	< 10	-	30	-	< 10	< 10	30	100	62.7	68.3	52	50.8	80.2	62.4	-	< 10	-	210	70	70	-	100	126	107	126	171	122	180
Bromide	mg/L	0.3	<1.00	0.17	-	-	-	-	-	-	-	-	-	< 1.0	< 0.50	< 0.50	< 1.0	< 0.50	< 0.50	-	-	-	-	-	-	-	-	<1.0	-	<1.0	<1.0	<1.0	<1.0	<1.0
Chloride	mg/L	123	93.4	74.7	-	67	-	8.9	-	15.5	14.8	18.3	14.9	15	19.3	14.3	20	19.1	13.6	-	62	-	68	44	36.5	-	39.8	37	41	38	39	38	36
COD - Chemical Oxygen Demand	mg/L	-	<20	<20	-	60	-	10	-	20	< 10	20	23	< 20	< 20	< 20	< 20	< 20	< 20	-	20	-	10	<10	20	-	18	<20	<20	<20	38	<20	<20
Conductivity	µS/cm	-	-		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Conductivity - Field	µS/cm	-	-		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Dissolved Phosphate	mg/L	-	-		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
DOC - Dissolved Organic Carbon	mg/L	6.56	7.29	3.92	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Fluoride	µg/L	1,390	<1000	1340	-	-	-	-	-	-	-	-	-	1,380	1,320	1,170	1,160	1,170	1,170	-	-	-	-	-	-	-	-	3,540	3,400	3,420	3,280	3,250	3,080
Hardness (as CaCO3)	mg/L	856	830	855	1,540	1,480	654	527	629	491	634	670	572	673	639	665	638	643	617	682	538	94	67	88	94	-	73	88.4	93.5	94.4	86.8	87.1	86.6
Hydrogen Sulfide	mg/L	-	-		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Nitrate (as N)	µg/L	1,690	3,780	392	-	-	-	-	-	-	-	-	< 100	120	< 50	< 50	< 100	99	< 50	-	-	-	-	-	-	-	<100	<100	<100	<100	<100	<100	<100
Nitrite (as N)	µg/L	< 10	<100	<10	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ortho-Phosphate	mg/L	< 0.0050	-	0.104	-	0.016	-	0.005	-	0.013	0.108	0.006	< 0.002	-	-	0.0021	0.0023	0.0096	< 0.0010	-	0.03	-	0.041	0.165	-	0.121	0.128	-	-	0.12	0.115	0.102	0.0954
pH (field)	pH	-	-		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
pH (lab)	pH	8.04	8.01	8.08	-	-	-	-	-	-	-	-	-	-	-	-	-	7.58	7.73	-	-	-	-	-	-	-	-	-	-	-	8.41	8.18	
Phosphate	mg/L	-	<0.050		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Sulfate	mg/L	418	398	307	-	1,350	-	309	-	346	357	367	357	410	417	400	403	406	388	-	499	-	57	70	8	-	6.3	< 10	< 10	< 10	< 10	< 6.0	< 6.0
Sulfide	mg/L	-	-		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TDS - Solids, Total Dissolved	mg/L	1,750	1,090	1,240	-	2,630	-	1,230	-	1,210	1,160	1,210	1,200	1,170	1,160	1,130	1,120	1,120	1,170	-	1,500	-	1,650	1,600	1,660	-	1,670	1,730	1,630	1,630	1,640	1,470	1,610

Associated CARO files available upon request.
Associated Exova file(s): 712940, 714233, 714243, 756693, 756810, 757047, 811364, 811710, 812030, 812741, 812985, 813438, 846260, 878316, 879073, 909346, 909448, 909654.

Table H1: Summary of Groundwater Analytical Results - Inorganics/General - HISTORICAL to 2025

Well ID		GL27-1																				GL27-2				GL27-3								
Sample ID		GL27-1-20160526	GL27-1-20160919	GL27-1-20170525	GL27-1-20170925	GL27-1-180815	GL27-1-180919	GL27-1-190527	GL27-1-190919	GL27-1-200608	GL27-1-201022	GL27-1-210602	GL27-1-210924	GL27-1-220531	GL27-1-220927	GL27-1-230525	GL27-1-231024	GL 27-1	GL 27-1	GL27-1	GL27-1	GL27-1-20111217	GL27-2-20091116	GL27-2-20100812	GL27-2	GL27-3-20091112	GL27-3-20100812	GL27-3-20110629	GL27-3-20111217	GL27-3-20120625	GL27-3-20121204	GL27-3-20130626	GL27-3-20131113
Sample Date		2016 05 26	2016 09 19	2017 05 25	2017 09 25	2018 08 15	2018 09 19	2019 05 27	2019 09 19	2020 06 08	2020 10 22	2021 06 02	2021 09 24	2022 05 31	2022 09 27	2023 05 25	2023 10 24	2025-05-13	2025-08-27	2024-05-21	2024-09-17	2011 12 17	2009 11 16	2010 08 12	2024-09-17	2009 11 12	2010 08 12	2011 06 29	2011 12 17	2012 06 25	2012 12 04	2013 06 26	2013 11 13
Parameter	**Unit**	**Analytical Results**																																
Inorganics / General																																		
Alkalinity, Bicarb(as CaCO3)	mg/L	-	-	-	-	1,500	1,450	1,480	1,490	1,480	1,420	1,510	1,550	1,270	1,570	1,280	1,310	1,320	1,410	1,320	1,320	-	-	-	598	-	-	-	-	-	-	-	-
Alkalinity, Carb (as CaCO3)	mg/L	-	-	-	-	<1.0	<1.0	<1.0	<1.0	22.6	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	17.1	<1.0	<1.0	<1.0	<1.0	-	-	-	<1.0	-	-	-	-	-	-	-	-
Alkalinity, Hydro(as CaCO3)	mg/L	-	-	-	-	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	-	-	-	<1.0	-	-	-	-	-	-	-	-
Alkalinity, Phen(as CaCO3)	mg/L	-	-	-	-	<1.0	<1.0	<1.0	<1.0	11.3	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	8.6	<1.0	<1.0	<1.0	<1.0	-	-	-	<1.0	-	-	-	-	-	-	-	-
Alkalinity, Total (as CaCO3)	mg/L	1,500	1,530	1,560	1,450	1,500	1,450	1,480	1,490	1,500	1,420	1,510	1,550	1,270	1,570	1,280	1330	1,320	1,410	1,320	1,320	1,500	-	708	598	-	645	639	653	638	626	864	876
Ammonia, Total (as N)	µg/L	116	152	70.1	155	276	220	272	242	230	243	186	318	242	241	233	258	0.265	0.229	0.236	0.309	80	-	290	0.317	-	500	470	410	520	660	730	552
Bromide	mg/L	<1.0	<1.0	<1.0	<1.0	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	0.16	0.12	<0.10	<0.10	0.15	<1.00	<0.10	<0.10	0.15	<0.10	-	-	-	<5.00	-	-	-	-	-	-	<5.0	-
Chloride	mg/L	38	36	38	32	33.6	35.1	36.2	35.6	35.5	37.7	36.8	36.7	36.8	37.6	35.3	36.4	36	37.7	34.4	37.6	40.1	-	740	519	-	800	610	582	543	502	589	577
COD - Chemical Oxygen Demand	mg/L	<20	<20	<20	<20	<20	<20	<20	<20	<20	<20	<20	<20	<20	<20	<20	<20	<20	<20	<20	<20	10	-	130	77	-	60	30	40	70	62	53	31
Conductivity	µS/cm	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-					-	-	-		-	-	-	-	-	-	-	-
Conductivity - Field	µS/cm	-	-	-	-	1,870	2,388	2620	2471	2,216	2,525	2,633	2,544	2,405	2,575	-	-			-	-	-	-	-	-	-	-	-	-	-	-	-	-
Dissolved Phosphate	mg/L	-	-	-	-	0.0407	0.0445	0.0794	-	-	-	-	-	-	-	-	-					-	-	-		-	-	-	-	-	-	-	-
DOC - Dissolved Organic Carbon	mg/L	-	-	-	-	2.57	3.45	2.89	2.84	2.12	2.79	2.04	106	2.52	1.71	1.68	4.58	2.49	1.98	2.00	3.08	-	-	-	27.3	-	-	-	-	-	-	-	-
Fluoride	µg/L	3,450	3,000	3,310	3,260	3,100	3,210	3,020	3,290	3,060	3,330	3,190	3,320	3,330	3,510	3,200	3,280	3140	3100	3280	3160	-	-	-	<5.00	-	-	-	-	-	-	1,300	1,390
Hardness (as CaCO3)	mg/L	91.8	90.8	95.2	92	89.6	99.9	90.6	92.8	93.2	85.2	103	107	95.2	90.3	92.8	97.5	92.9	109	92.2	100	83	3,760	3,540	3,410	5,800	4,700	5,170	4,500	5,060	4,480	5,280	4,890
Hydrogen Sulfide	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-					-	-	-		-	-	-	-	-	-	-	-
Nitrate (as N)	µg/L	<100	<100	<100	<100	18	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	< 10	< 10	< 10	< 10	< 50	-	-	<500	-	-	-	<200	-	<1,000	<500	<500
Nitrite (as N)	µg/L	-	-	-	-	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	-	-	-	<0.500	-	-	-	-	-	-	-	-
Ortho-Phosphate	mg/L	0.0886	0.112	0.0674	0.0553	-	-	-	0.0424	< 0.0050	0.0567	0.0558	0.0391	-	-	-	-	0.0382	0.0414			0.08	-	0.057		-	0.007	0.268	0.04	0.003	0.002	-	-
pH (field)	pH	-	-	-	-	7.63	7.62	7.67	7.48	7.5	7.63	7.47	7.47	-	-	-	-					-	-	-		-	-	-	-	-	-	-	-
pH (lab)	pH	8.27	8.34	8.83	8.14	7.98	7.91	8.2	8.22	8.31	8.1	8.16	8.21	8.22	8.19	8.1	8.32	8.26	8	8.14	8.11	-	-	-	7.83	-	-	-	-	-	-	-	-
Phosphate	mg/L	-	-	-	-	0.0407	0.0445	0.0794	-	-	-	-	-	<0.0050	<0.0050	0.0221	0.0083			-	-	-	-	-	-	-	-	-	-	-	-	-	-
Sulfate	mg/L	< 6.0	< 6.0	6	6.6	27.5	19.2	21.8	19.9	17	7.8	11.7	11.8	13.2	17.3	21.6	16.7	16.6	13.7	18.9	17.7	20.4	-	6,590	6,350	-	8,490	9,700	10,900	9,620	9,230	11,100	9,840
Sulfide	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-					-	-	-		-	-	-	-	-	-	-	-
TDS - Solids, Total Dissolved	mg/L	1,620	1,630	1,640	1,650	1,680	1,620	1,430	1,610	1,530	1,600	1,260	1,810	1,140	1,600	1,600	1,460	1,430	1,620	1,530	1,600	1,630	-	14,300	10,400	-	17,800	16,700	17,100	16,400	15,900	17,200	16,200

Associated CARO files available upon request.
Associated Exova file(s): 712940, 714233, 714243, 756693, 756810, 757047, 811364, 811710, 812030, 812741, 812985, 813438, 846260, 878316, 879073, 909346, 909448, 909654.

Table H1: Summary of Groundwater Analytical Results - Inorganics/General - HISTORICAL to 2025

Well ID	GL27-3																GL27-4	GL28-1															
Sample ID	GL27-3-20140605	GL27-3-20141118	GL27-3-20150610	GL27-3-20151104	GL27-3-20160524	GL27-3-20170925	GL27-3-180815	GL27-3-190527	GL27-3-200608	GL27-3-210603	GL27-3-2205331	GL27-3-230525	GL27-3	GL 27-3	GL 27-3		GL27-4-20100812	GL28-1-20091116	GL28-1-20100812	GL28-1-20110627	GL28-1-20120626	GL28-1-20121203	GL28-1-20130708	GL28-1-20140603	GL28-1-20141117	GL28-1-20150611	GL28-1-20151105	GL28-1-20160524	GL28-1-20160920	GL28-1-20170711	GL28-1-20170926	GL28-1-180528	GL28-1-180925
Sample Date	2014 06 05	2014 11 18	2015 06 10	2015 11 04	2016 05 24	2017 09 25	2018 08 15	2019 05 27	2020 06 08	2021 06 03	2022 05 31	2023 05 25	2024-05-21	2025-05-13	2025-08-27		2010 08 12	2009 11 16	2010 08 12	2011 06 27	2012 06 26	2012 12 03	2013 07 08	2014 06 03	2014 11 17	2015 06 11	2015 11 05	2016 05 24	2016 09 20	2017 07 11	2017 09 26	2018 05 28	2018 09 25
Parameter	**Unit**	**Analytical Results**																															
Inorganics / General																																	
Alkalinity, Bicarb(as CaCO3)	mg/L	-	-	-	-	604	-	622	610	586	571	479	510	513	527	573	-	-	-	-	-	-	-	-	-	-	626	624	-	-	-	551	531
Alkalinity, Carb (as CaCO3)	mg/L	-	-	-	-	<1.0	-	<1.0	< 1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	-	-	-	-	-	-	-	-	-	-	<1.0	<1.0	-	-	-	<1.0	<1.0
Alkalinity, Hydro(as CaCO3)	mg/L	-	-	-	-	<1.0	-	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	-	-	-	-	-	-	-	-	-	-	<1.0	<1.0	-	-	-	<1.0	<1.0
Alkalinity, Phen(as CaCO3)	mg/L	-	-	-	-	-	-	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<1.0	<1.0
Alkalinity, Total (as CaCO3)	mg/L	967	947	840	624	604	601	622	610	586	571	479	510	513	527	573	3,370	-	655	346	139	649	368	778	897	730	626	624	612	579	554	551	531
Ammonia, Total (as N)	µg/L	564	416	615	487	582	600	589	57	806	823	933	882	839	498	641	14,000	-	210	< 10	130	220	175	162	165	166	170	179	173	163	145	122	163
Bromide	mg/L	4	<5.0	<5.0	<5.0	<5.0	<5.0	<10.0	<10.0	<50.0	<25.0	1.57	2.44	<10.0	2.36	<10.0	-	-	-	-	-	-	<1.0	<2.5	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<10.0	<0.10
Chloride	mg/L	586	545	600	557	620	543	516	475	442	569	585	594	569	765	518	780	-	64	27	11.3	38.7	28	59	53	48	50	67	54	50	48	45	41.8
COD - Chemical Oxygen Demand	mg/L	47	38	44	33	27	31	<20	<20	21	21	<20	29	25	250	32	360	-	20	10	<10	18	<20	53	<20	30	46	<20	<20	<20	<20	<20	<20
Conductivity	µS/cm	-	-	-	-	-	-	-	-	-	-	-	-				-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Conductivity - Field	µS/cm	-	-	-	-	-	-	9,589	16199	15,172	17,777	14,231	-	-			-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	3,741	3,761
Dissolved Phosphate	mg/L	-	-	-	-	-	-	<0.500	<0.500	-	-	-	-				-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.0050	<0.0050
DOC - Dissolved Organic Carbon	mg/L	-	-	-	-	-	-	9.12	7.11	6.3	8.09	8.76	6.95	6.53	10.7	10.5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	4.85	4.88
Fluoride	µg/L	< 1,000	1,200	<2,000a	<2,000a	<2,000a	<2,000a	970	<10,000a	<50,000a	<25,000a	<1,000	<1,000	<10.0	<1000	<10000	-	-	-	-	-	-	680	1,100	1,070	1,110	1,150	1,510	1,220	1,160	1,110	700	960
Hardness (as CaCO3)	mg/L	5,120	4,560	4,990	4,380	4,850	5,080	5,450	5,350	5,540	6,070	6,640	6,320	6,500	5,970	6,530	4,380	1,680	1,600	944	550	1,680	1,740	1,600	1,690	1,630	1,600	1,710	1,740	1,620	1,620	1,710	1,750
Hydrogen Sulfide	mg/L	-	-	-	-	-	-	-	-	-	-	-	-				-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Nitrate (as N)	µg/L	<250	<500	<500	<500	<500	<500	<1,000	1,470	6,600	<2,500	<1,000	<1,000	<1000	< 100	<1000	-	-	-	-	-	<100	<100	< 250	130	<100	<100	<100	<100	<100	<100	1,480	<1,000
Nitrite (as N)	µg/L	-	-	-	-	-	-	<1,000a	<1,000a	<5,000a	<2,500a	<100	<1,000	<1000	<100	<1000	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<10	<10
Ortho-Phosphate	mg/L	0.0024	0.0055	0.0015	0.0043	0.0025	0.0027	-	-	<2.50	<1.25	-	-		<0.0050	0.0064	4.76	-	0.009	0.009	0.003	<0.002	-	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	0.0014	<0.0010	<0.0010	-	-
pH (field)	pH	-	-	-	-	-	-	7.91	7.45	7.3	7.38	-	-				-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	6.99	7.21
pH (lab)	pH	-	-	8.07	7.88	7.85	7.82	7.71	7.9	7.88	7.95	7.84	7.72	7.84	7.88	7.73	-	-	-	-	-	-	-	-	-	7.93	7.65	7.97	7.69	8.21	7.67	7.72	7.72
Phosphate	mg/L	-	-	-	-	-	-	< 0.500	< 0.500	-	-	<0.0500	<0.0500	-			-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.0050	<0.0050
Sulfate	mg/L	10,600	9,930	11,100	10,400	11,400	10,500	10,200	9,330	10,400	11,400	10,300	12,600	10,500	11,800	11,500	4,900	-	1,840	1,700	954	2,240	1,510	2,230	2,270	2,270	2,280	2,950	2,380	2,270	2,190	2,040	2,150
Sulfide	mg/L	-	-	-	-	-	-	-	-	-	-	-	-				-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TDS - Solids, Total Dissolved	mg/L	16,300	13,300	17,900	16,000	16,200	15,200	18,000	13,500	18,200	19,800	20,000	19,400	18,400	17,900	17,400	13,400	-	3,990	3,060	1,610	3,870	3,530	3,930	3,970	3,920	3,930	3,950	4,080	3,740	3,460	3,730	3,770

Associated CARO files available upon request.
Associated Exova file(s): 712940, 714233, 714243, 756693, 756810, 757047, 811364, 811710, 812030, 812741, 812985, 813438, 846260, 878316, 879073, 909346, 909448, 909654.

Table H1: Summary of Groundwater Analytical Results - Inorganics/General - HISTORICAL to 2025

Well ID		GL28-1															GL28-2																	
Sample ID		GL28-1-190528	GL28-1-190919	GL28-1-200610	GL28-1-201104	GL28-1-210609	GL28-1-211007	GL28-1-220602	GL28-1-221006	GL28-1-230530	GL28-1-231026	GL28-1	GL28-1	GL 28-1	GL 28-1		GL28-2-20091116	GL28-2-20160524	GL28-2-20160920	GL28-2-20170711	GL28-2-20170926	GL28-2-180528	GL28-2-180925	GL28-2-190528	GL28-2-190919	GL28-2-200610	GL28-2-201104	GL28-2-210609	GL28-2-211007	GL28-2-220602	GL28-2-221006	GL28-2-230530	GL28-2-231026	GL28-2
Sample Date		2019 05 28	2019 09 19	2020 06 10	2020 11 04	2021 06 09	2021 10 07	2022 06 02	2022 10 06	2023 05 30	2023 10 26	2024-05-28	2024-09-19	2025-05-26	2025-09-02		2009 11 16	2016 05 24	2016 09 20	2017 07 11	2017 09 26	2018 05 28	2018 09 25	2019 05 28	2019 09 19	2020 06 10	2020 11 04	2021 06 09	2021 10 07	2022 06 02	2022 10 06	2023 05 30	2023 10 26	2024-05-28
Parameter	**Unit**	**Analytical Results**																																
Inorganics / General																																		
Alkalinity, Bicarb(as CaCO3)	mg/L	531	521	554	516	542	550	469	477	496	482	488	478	498	521		-	696	-	-	-	686	700	723	700	587	677	675	728	621	615	511	538	589
Alkalinity, Carb (as CaCO3)	mg/L	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0		-	<1.0	-	-	-	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Alkalinity, Hydro(as CaCO3)	mg/L	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0		-	<1.0	-	-	-	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Alkalinity, Phen(as CaCO3)	mg/L	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0		-	-	-	-	-	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Alkalinity, Total (as CaCO3)	mg/L	531	521	554	516	542	550	469	477	496	482	488	478	498	521		-	696	693	671	670	686	700	723	700	587	677	675	728	621	615	511	538	589
Ammonia, Total (as N)	µg/L	236	98	120	128	82	119	51	90	77	126	0.144	0.153	0.103	0.146		-	5.1	<5.0	< 5.0	< 5.0	24	63	24	48	<50	<50	<50	<50	<50	<50	<50	<50	<50	<0.050
Bromide	mg/L	<1.00	<1.00	<1.00	<10.0	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00		-	<2.5	<2.5	<1.00	<1.00	<10.0	< 0.10	<1.00	<1.00	<1.00	< 0.10	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00
Chloride	mg/L	38.3	40.6	37.8	46.9	57.4	65.4	84	93.5	78.1	85.4	70.5	110	99.5	101		-	46	49	47	50	44	44.2	48.6	51.7	32	42.9	46.3	53	57.8	62.1	36.4	42.7	43.0
COD - Chemical Oxygen Demand	mg/L	<20	<20	<20	<20	25	<20	33	29	<20	36	30	28	31	49		-	<20	<20	<20	<20	<20	24	<20	<20	<20	<20	39	<20	<20	21	<20	<20	<20
Conductivity	µS/cm	-	-	-	-	-	-	-	-	-	-						-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Conductivity - Field	µS/cm	3741	3802	3,321	4,082	3,969	3,843	3,919	4,055	-	-	-	-				-	-	-	-	-	4,680	5,093	5,200	5,225	3,882	5,499	8,381	5,591	5,306	5,599	-	-	-
Dissolved Phosphate	mg/L	<0.0050	-	-	-	-	-	-	-	-	-						-	-	-	-	-	<0.0050	<0.0050	<0.0050	-	-	-	-	-	-	-	-	-	
DOC - Dissolved Organic Carbon	mg/L	4.74	4.47	4.43	6.24	7.14	8	14.7	9.73	11.2	11.6	13.1	15.2	13.4	14		-	-	-	-	-	6.09	8.34	6.36	5.96	4.99	6.26	6.84	6.29	7.77	5.72	5.02	8.4	5.73
Fluoride	µg/L	1,100	1,010	<1,000	1,020	1,270	<1,000	<1,000	<1,000	<1,000	<1,000	1150	<1000	2050	1380		-	<1,000	<1,000	<400	<400	110	140	<1,000	<1,000	<1,000	130	<1,000	<1,000	<1,000	<1,000	<1,000	<1,000	<1000
Hardness (as CaCO3)	mg/L	1,690	1,650	1,770	1,850	1,720	1,860	1,670	1,850	1,880	1,900	1,820	1,980	1,870	1,840		1,530	1,840	1,810	1,680	1,920	1,900	2,280	2,170	2,030	1,730	2,200	1,910	2,460	1,930	1,960	1,810	2,130	2,340
Hydrogen Sulfide	mg/L	-	-	-	-	-	-	-	-	-	-						-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Nitrate (as N)	µg/L	<100	<100	<100	<1,000	<100	<100	187	<100	<100	<100	5120	< 100	< 100	< 100		-	11,200	12,100	13,100	12,100	8,440	9,480	11,600	10,600	9,190	9,400	11,400	10,000	10,800	13,200	8,930	10,400	11400
Nitrite (as N)	µg/L	<100	<100	<100	<10	<100	<100	<100	<100	<100	<100	<100	<100	<100	<100		-	-	-	-	-	<10	<10	<100	<100	<100	<10	<100	<100	<100	<100	<100	<100	<100
Ortho-Phosphate	mg/L	-	<0.0050	<0.0050	<0.0050	<0.0500	<0.0500	-	-	-	-			<0.0050	<0.0050		-	0.0082	0.0097	0.0093	0.0095	-	-	-	<0.0500	<0.0500	<0.0500	<0.0500	<0.0500	-	-	-	-	
pH (field)	pH	7.12	7.39	7.15	7.14	6.99	7.04	-	-	-	-						-	-	-	-	-	6.77	6.97	6.97	7.24	6.95	6.9	6.86	6.84	-	-	-	-	
pH (lab)	pH	7.81	7.78	7.71	7.82	7.83	7.8	7.81	7.73	7.86	7.84	7.76	7.83	7.82	7.84		-	7.72	7.5	8.03	7.48	7.42	7.6	7.7	7.64	7.66	7.7	7.76	7.66	7.76	7.65	7.75	7.74	7.71
Phosphate	mg/L	<0.0050	-	-	-	-	-	<0.0500	<0.0500	<0.0500	<0.0500	-	-				-	-	-	-	-	<0.0500	<0.0500	<0.0500	-	-	-	-	-	<0.0500	<0.0500	<0.0500	<0.0500	-
Sulfate	mg/L	2,060	2,010	2,080	2,240	1,910	1,940	2070	2130	1,970	1,970	2,590	2,210	1,740	2,130		-	2,870	2,760	2,590	2,840	2,690	3,160	2,830	2,790	2,490	3,020	2,670	3,050	3,160	3,120	2,500	2,830	3,230
Sulfide	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
TDS - Solids, Total Dissolved	mg/L	3,650	3,470	3,300	3,840	3,130	3,550	3,450	3,630	3,430	3,510	3,230	3,420	2,790	3,030		-	4,530	4,760	4,400	4,640	4,730	5,370	5,280	5,380	4,250	4,790	4,610	5,450	5,170	5,040	4,260	4,960	5,260

Associated CARO files available upon request.
Associated Exova file(s): 712940, 714233, 714243, 756693, 756810, 757047, 811364, 811710, 812030, 812741, 812985, 813438, 846260, 878316, 879073, 909346, 909448, 909654.

Table H1: Summary of Groundwater Analytical Results - Inorganics/General - HISTORICAL to 2025

Well ID		GL28-2			GL28-3																					GL29-1						
Sample ID		GL28-2	GL 28-2	GL 28-2	GL28-3-20091116	GL28-3-20100812	GL28-3-20160524	GL28-3-20160920	GL28-3-20170711	GL28-3-20170926	GL28-3-180528	GL28-3-180925	GL28-3-190528	GL28-3-190919	GL28-3-200610	GL28-3-201105	GL28-3-210609	GL28-3-211007	GL28-3-220602	GL28-3-221006	GL28-3-230530	GL28-3-231026	GL28-3	GL28-3	GL 28-3	GL 28-3	GL29-1-20130708	GL29-1-20131113	GL29-1-20140603	GL29-1-20141118	GL29-1-20150609	GL29-1-20151105	GL29-1-20160524
Sample Date		2024-09-19	2025-05-26	2025-09-02	2009 11 16	2010 08 12	2016 05 24	2016 09 20	2017 07 11	2017 09 26	2018 05 28	2018 09 25	2019 05 28	2019 09 19	2020 06 10	2020 11 05	2021 06 09	2021 10 07	2022 06 02	2022 10 06	2023 05 30	2023 10 26	2024-05-28	2024-09-19	2025-05-26	2025-09-02	2013 07 08	2013 11 13	2014 06 03	2014 11 18	2015 06 09	2015 11 05	2016 05 24
Parameter	**Unit**	**Analytical Results**																														
Inorganics / General																																
Alkalinity, Bicarb(as CaCO3)	mg/L	569	598	627	-	-	782	-	-	-	870	827	846	865	864	839	872	888	736	782	757	755	756	751	769	796	-	-	-	-	-	-	593
Alkalinity, Carb (as CaCO3)	mg/L	<1.0	<1.0	<1.0	-	-	<1.0	-	-	-	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	-	-	-	-	-	-	<1.0
Alkalinity, Hydro(as CaCO3)	mg/L	<1.0	<1.0	<1.0	-	-	<1.0	-	-	-	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	-	-	-	-	-	-	<1.0
Alkalinity, Phen(as CaCO3)	mg/L	<1.0	<1.0	<1.0	-	-	-	-	-	-	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	-	-	-	-	-	-	-
Alkalinity, Total (as CaCO3)	mg/L	569	598	627	-	702	782	858	840	807	870	827	846	865	864	839	872	888	736	782	757	755	756	751	769	796	910	836	764	708	692	579	593
Ammonia, Total (as N)	µg/L	0.063	<0.050	<0.050	-	< 10	<5.0	<5.0	8.4	<5.0	29	76	40	26	<50	<50	<50	<50	<50	<50	<50	<50	<0.050	<0.050	<0.050	<0.050	216	219	135	253	244	226	61
Bromide	mg/L	<1.00	<1.00	<1.00	-	-	<2.5	<2.5	<2.5	<1.00	<10.0	<0.10	<1.00	<1.00	<1.00	<10.0	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.0	-	<1.0	<1.0	0.29	<1.0	<1.0
Chloride	mg/L	48.8	42.8	52.2	-	60	48	49	48	49	45.9	49.6	49.4	51.7	56.6	49.4	57.1	56.5	67.2	80.8	70.6	74.9	60.4	70.2	67.3	66.9	24	36	48	74	63.5	72	77
COD - Chemical Oxygen Demand	mg/L	20	<20	26	-	30	<20	20	<20	<20	23	35	<20	<20	26	<20	<20	20	29	29	22	33	24	<20	21	33	<20	<20	<20	37	27	74	116
Conductivity	µS/cm				-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-					-	-	-	-	-	-	-
Conductivity - Field	µS/cm	-			-	-	-	-	-	-	6,392	6,777	6,743	6,895	630.3	277.6	7,674	7,571	7,090	8,239	-	-	-	-			-	-	-	-	-	-	-
Dissolved Phosphate	mg/L				-	-	-	-	-	-	<0.0050	<0.0050	<0.0050	-	-	-	-	-	-	-	-	-					-	-	-	-	-	-	-
DOC - Dissolved Organic Carbon	mg/L	6.36	5.18	6.02	-	-	-	-	-	-	10.3	12.1	8.29	8.62	9.25	9.33	11.2	8.42	12.2	9.98	9.77	21.5	8.55	10.3	9.72	8.79	-	-	-	-	-	-	-
Fluoride	µg/L	<1000	<1000	<1000	-	-	<1,000	<1,000	<1,000	<400	230	280	<1,000	<1,000	<1,000	280	<1,000	<1,000	<1,000	<1,000	<1,000	<1,000	<1000	<1000	<1000	<1000	1,000	1,190	1,240	1,230	1,200	1,210	1,220
Hardness (as CaCO3)	mg/L	2,450	2,180	2,250	1,760	1,580	2,740	1,280	2,480	2,520	2,770	3,080	2,880	2,790	2,890	2,870	2,820	3,090	54,500	2,910	3,070	2,840	2,850	3,250	2,790	2,650	444	493	516	699	629	671	682
Hydrogen Sulfide	mg/L				-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-					-	-	-	-	-	-	-
Nitrate (as N)	µg/L	12400	13100	11500	-	-	2,380	<250	690	1,120	5,640	7,780	5,880	4,180	5,160	5,150	5,900	4,890	8,240	9,300	7,100	7,490	8740	7960	8180	7430	<100	<100	<100	<100	< 25	<100	640
Nitrite (as N)	µg/L	<100	<100	<100	-	-	-	-	-	-	<10	47	<100	<100	<100	18	<100	<100	<100	<100	<100	<100	<100	<100	<100	<100	-	-	-	-	-	-	-
Ortho-Phosphate	mg/L		0.0084	0.006	-	0.038	0.018	0.0332	0.0373	0.0358	-	-	-	<0.0500	<0.0500	<0.0500	<0.0500	<0.0500	-	-	-	-			0.0388	0.0333	-	-	0.0088	0.002	0.0097	0.0161	0.0187
pH (field)	pH				-	-	-	-	-	-	6.8	7	7	7.19	6.92	6.96	7	6.87	-	-	-	-					-	-	-	-	-	-	-
pH (lab)	pH	7.79	7.75	7.68	-	-	7.52	7.57	8.13	7.6	7.51	7.6	7.78	7.65	7.67	7.75	7.8	7.69	7.8	7.66	7.89	7.76	7.80	7.73	7.86	7.73	-	-	-	-	8.12	7.85	7.94
Phosphate	mg/L	-			-	-	-	-	-	-	<0.0500	<0.0500	<0.0500	-	-	-	-	-	<0.0500	<0.0500	<0.0500	<0.0500	-	-			-	-	-	-	-	-	-
Sulfate	mg/L	2,740	3,010	3,550	-	1,950	4,070	4,140	4,000	4,100	3,780	4,350	4,040	4,100	4,550	4,500	4,120	4,210	4,510	4,640	4,270	4,120	4,220	3,300	4,240	4,480	186	356	514	958	804	785	667
Sulfide	mg/L				-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-					-	-	-	-	-	-	-
TDS - Solids, Total Dissolved	mg/L	4,580	5,620	4,230	-	4,230	6,310	6,550	6,160	6,150	7,280	7,490	6,780	7,490	7,680	7,810	7,260	7450	7,210	7,700	7,440	7,450	7,060	6,680	7,180	4,590	1,160	1,280	1,430	1,950	1,900	1,780	1,650

Associated CARO files available upon request.
Associated Exova file(s): 712940, 714233, 714243, 756693, 756810, 757047, 811364, 811710, 812030, 812741, 812985, 813438, 846260, 878316, 879073, 909346, 909448, 909654.

Table H1: Summary of Groundwater Analytical Results - Inorganics/General - HISTORICAL to 2025

Well ID		GL29-1																			GL29-2										GL31-1
Sample ID		GL29-1-20160921	GL29-1-20170529	GL29-1-20170926	GL29-1-180604	GL29-1-180919	GL29-1-190603	GL29-1-190924	GL29-1-200612	GL29-1-201120	GL29-1-210611	GL29-1-211006	GL29-1-220606	GL29-1-221006	GL29-1-230706	GL29-1-231026	GL29-1	GL29-1	GL 29-1	GL 29-1	GL29-2-20130627	GL29-2-20131113	GL29-2-210608	GL29-2-211006	GL29-2-220606	GL29-2-221006	GL29-2-230525	GL29-2-231026	GL29-2	GL29-2	GL 29-2	GL 29-2	GL31-3-20130627
Sample Date		2016 09 21	2017 05 29	2017 09 26	2018 06 04	2018 09 19	2019 06 03	2019 09 24	2020 06 12	2020 11 20	2021 06 11	2021 10 06	2022 06 06	2022 10 06	2023 07 06	2023 10 26	2024-05-21	2024-09-17	2025-05-13	2025-08-27	2013 06 27	2013 11 13	2021 06 08	2021 10 06	2022 06 06	2022 10 06	2023 05 25	2023 10 26	2024-05-21	2024-09-17	2025-05-13	2025-08-27	2013 06 27
Parameter	**Unit**	**Analytical Results**																														
Inorganics / General																																
Alkalinity, Bicarb(as CaCO3)	mg/L	-	-	-	450	463	885	820	-	814	859	801	590	617	789	625	540	538	506	532	-	-	331	353	293	316	342	321	300	297	295	317	-
Alkalinity, Carb (as CaCO3)	mg/L	-	-	-	<1.0	<1.0	<1.0	<1.0	-	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	-	-	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	-
Alkalinity, Hydro(as CaCO3)	mg/L	-	-	-	<1.0	<1.0	<1.0	<1.0	-	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	-	-	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	-
Alkalinity, Phen(as CaCO3)	mg/L	-	-	-	<1.0	<1.0	<1.0	<1.0	-	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	-	-	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	-
Alkalinity, Total (as CaCO3)	mg/L	586	642	644	450	463	885	820	758	814	859	801	590	617	789	625	540	538	506	532	335	351	331	353	293	316	342	321	300	297	295	317	2,810
Ammonia, Total (as N)	µg/L	32.2	20.6	15.3	166	137	192	102	199	230	200	222	90	118	181	363	0.488	0.125	0.242	0.126	67.9	99.1	<50	<50	<50	<50	<50	139	<0.050	0.061	<0.050	<0.050	2,300
Bromide	mg/L	<1.0	<0.50	<0.50	<0.10	<0.10	<0.10	<0.10	<1.0	<0.10	<1.0	<0.10	<1.0	<0.10	<1.00	<1.00	<0.10	<0.10	<0.10	<1.00	<2.5	-	<1.0	<1.0	<1.00	<1.00	<1.00	<1.00	0.62	<1.00	<1.00	<1.00	<5.0
Chloride	mg/L	67	57.9	51.6	58.1	63.8	23.3	29.7	21.8	22.9	22.1	26.6	71.2	0.62	34.6	49.4	65.3	65.1	80.5	80.7	243	252	225	215	220	232	200	209	171	174	186	211	863
COD - Chemical Oxygen Demand	mg/L	110	90	72	321	302	21	25	31	<20	<20	<20	188	217	87	194	217	193	174	175	69	53	57	48	39	40	48	50	40	43	25	39	85
Conductivity	µS/cm	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-					-	-	-	-	-	-	-	-					-
Conductivity - Field	µS/cm	-	-	-	1,240	1,389	1,715	1,731	1,380	1,723	1,705	1,660	1,698	1,769	-	-	-	-			-	-	8,180	7,842	6,515	7,809	-	-	-	-			-
Dissolved Phosphate	mg/L	-	-	-	0.0343	<0.0050	<0.0500	-	-	-	-	-	-	-	-	-					-	-	-	-	-	-	-	-					-
DOC - Dissolved Organic Carbon	mg/L	-	-	-	118	93.7	12.8	11.1	6.25	3.16	3.11	6.01	67	85.4	41.6	76.5	71.2	72.4	85.2	69.1	-	-	12.8	12.1	13.7	14.8	12.4	21.7	14.0	15.5	19.1	16.3	-
Fluoride	µg/L	1,230	1,130	1,240	310	470	1,030	1,180	<1,000	1,290	1,320	1,310	<1,000	<100	1,180	<1,000	640	970	870	1080	2,200	1,400	1,900	1,390	1,210	1,500	<1,000	1,360	1860	2550	150	2130	600
Hardness (as CaCO3)	mg/L	639	586	542	659	683	467	448	421	442	460	436	555	548	448	557	639	647	818	848	2,830	2,910	3,020	3,410	3,090	2,920	3,050	2,930	2,790	2,870	2,940	3,000	4,240
Hydrogen Sulfide	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-					-	-	-	-	-	-	-	-					-
Nitrate (as N)	µg/L	260	1,100	415	26,900	23,800	<10	<10	<100	<10	<100	<10	3.01	<10	<10	5,150	7580	5690	5870	3980	<250	<250	<100	<100	<100	<100	<100	<100	<500	< 100	< 100	< 100	<500
Nitrite (as N)	µg/L	-	-	-	<10	88	<10	<10	<100	<10	<100	<10	<100	<10	<10	227	68	0.025	74	204	-	-	<100	<100	<100	<100	<100	<100	<10	<100	<100	<100	-
Ortho-Phosphate	mg/L	0.0231	0.0199	0.0243	-	-	-	<0.0050	<0.0500	<0.0050	<0.0500	<0.0050	-	-	-	-			0.0482	0.0454	-	-	<0.0500	<0.0500	-	-	-	-			0.0205	0.0167	-
pH (field)	pH	-	-	-	7.24	7.38	7.06	7	7.01	7.07	7	7.37	-	-	-	-					-	-	7.14	7.13	-	-	-	-					-
pH (lab)	pH	8.08	8.1	7.88	7.71	7.7	7.76	7.89	7.04	7.84	7.9	7.89	7.98	7.88	7.99	7.89	7.98	7.87	8.01	7.84	-	-	7.82	7.75	7.82	7.72	7.68	7.77	7.79	7.71	7.86	7.64	-
Phosphate	mg/L	-	-	-	0.0343	< 0.0050	< 0.0500	-	-	-	-	-	<0.0500	<0.0050	0.0149	<0.0500	-	-			-	-	-	-	<0.0500	<0.0500	<0.0500	<0.0500	-	-			-
Sulfate	mg/L	573	408	389	161	181	176	211	185	172	183	190	213	2	187	213	285	351	563	609	5,020	4,820	4,730	4,740	5,030	4,710	4,530	4,430	3,970	3,990	4,280	4,280	8,470
Sulfide	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-					-	-	-	-	-	-	-	-					-
TDS - Solids, Total Dissolved	mg/L	1,590	1,300	1,290	1,220	1,190	1,160	1,160	1,110	1,050	1,070	1,100	1,250	1,240	1,130	1,150	1,320	1,420	1,660	1,770	7,910	7,890	8,130	8,200	7,590	7,680	7,530	7,100	6,800	6,880	6,710	7,160	15,300

Associated CARO files available upon request.
Associated Exova file(s): 712940, 714233, 714243, 756693, 756810, 757047, 811364, 811710, 812030, 812741, 812985, 813438, 846260, 878316, 879073, 909346, 909448, 909654.

Table H1: Summary of Groundwater Analytical Results - Inorganics/General - HISTORICAL to 2025

Well ID	GL31-1	GL31-3						GL35-3																GL37		GL39-1						
Sample ID	GL31-3-20141126	GL31-3-20121205	GL31-3-20131114	GL31-3-20140609	GL31-3-20150611	GL31-3-20151109	GL35-3-20121205	GL35-3-20130627	GL35-3-20131113	GL35-3-20140609	GL35-3-20141126	GL35-3-20150611	GL35-3-20151109	GL35-3-20160526	GL35-3-20170926	GL35-3-180815	GL35-3-190530	GL35-3-200608	GL35-3-210610	GL35-3-220531	GL35-3-230525	GL35-3	GL 35-3	GL37-20130708	GL37-20131114	GL39-1-191205	GL39-1-200609	GL39-1-201019	GL39-1-210526	GL39-1-210914	GL39-1-220531	GL39-1-220923
Sample Date	2014 11 26	2012 12 05	2013 11 14	2014 06 09	2015 06 11	2015 11 09	2012 12 05	2013 06 27	2013 11 13	2014 06 09	2014 11 26	2015 06 11	2015 11 09	2016 05 26	2017 09 26	2018 08 15	2019 05 30	2020 06 08	2021 06 10	2022 05 31	2023 05 25	2024-05-14	2025-05-22	2013 07 08	2013 11 14	2019 12 05	2020 06 09	2020 10 19	2021 05 26	2021 09 14	2022 05 31	2022 09 23
Parameter	**Unit**	**Analytical Results**																														
Inorganics / General																																
Alkalinity, Bicarb(as CaCO3)	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2,070	2,000	1,920	1,810	1,530	1,530	1,570	1,680	-	-	576	598	574	659	677	546	637
Alkalinity, Carb (as CaCO3)	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	-	-	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Alkalinity, Hydro(as CaCO3)	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	-	-	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Alkalinity, Phen(as CaCO3)	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	-	-	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Alkalinity, Total (as CaCO3)	mg/L	2,620	2,560	2,700	2,780	2,920	2,590	2,290	2,400	2,380	2,270	2,680	2,340	3,610	2,050	1,990	2,070	2,000	1,920	1,810	1,530	1,530	1,570	1,680	1,590	1,580	576	598	574	659	677	546	637
Ammonia, Total (as N)	µg/L	2,500	2,450	2,240	2,460	2,490	2,640	2,590	2,330	1,310	2,420	3,210	2,490	6,870	2,590	1,870	1,720	1,220	1,490	1,200	1,360	1,530	1510	1740	1,660	1,370	116	56	< 50	< 50	< 50	<50	<50
Bromide	mg/L	<5.0	-	<5.0	4	<5.0	<5.0	-	2.6	-	<2.5	2.8	<2.5	<5.0	2.6	2.6	<10.0	<1.00	<10.0	1.4	<1.00	<1.00	1.14	1.34	<5.0	6.3	<0.10	<10.0	<0.10	<2.50	<1.00	<1.00	<1.00
Chloride	mg/L	866	569	875	833	839	857	520	475	482	460	478	447	676	500	403	341	351	325	343	344	331	356	333	783	1,030	98.1	102	134	144	149	145	149
COD - Chemical Oxygen Demand	mg/L	63	39	58	60	62	34	48	38	46	43	33	50	198	32	21	<20	26	<20	<20	<20	<20	<20	<20	109	44	179	22	29	<20	22	<20	22
Conductivity	µS/cm	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Conductivity - Field	µS/cm	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	6,480	9,132	7,916	8,182	8,148	-	-	-	-	-	-	3,724	4,547	5,480	5,187	4,888	4,961
Dissolved Phosphate	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.0050	<0.0500	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
DOC - Dissolved Organic Carbon	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	7.93	4.72	3.66	3.6	5.42	5.22	5.86	5.04	-	-	8.17	6.4	8.1	8.82	9.04	12.7	8.02
Fluoride	µg/L	416	-	393	<1,000	<2,000a	<2,000a	-	2,200	1,400	1,500	1,600	1,500	<2,000a	1,900	1,400	1,720	1,730	1,410	1,600	<1,000	<1,000	1210	<1000	410	343	1,240	<10,000a	1,230	1,140	1,290	<1,000	<1,000
Hardness (as CaCO3)	mg/L	4,280	4,470	4,310	4,420	4,460	4,060	2,680	2,220	2,280	2,220	2,060	2,170	2,030	2,200	2,010	2,070	2,000	2,180	1,860	1,940	1,910	1,830	1,950	5,860	5,970	1,790	2,120	1,970	3,300	2,630	2,620	2,230
Hydrogen Sulfide	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Nitrate (as N)	µg/L	1,210	< 10,000a	<500	<250	<500	<500	<10,000a	<250	<250	<250	270	<250	<500	<250	<250	<10	<100	<1,000	<100	<100	<100	< 100	< 100	<500	<500	1,640	4,470	5,840	6,500	5,300	4,880	5,880
Nitrite (as N)	µg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	279	<100	<1,000a	<100	<100	<100	<100	<100	-	-	25	<1,000a	<10	<10	<10	<100	<100
Ortho-Phosphate	mg/L	0.0085	0.004	-	0.0049	0.0046	0.0076	0.004	-	-	<0.0010	0.0076	0.0037	1.36	0.0291	<0.0010	-	-	<0.500	<0.0500	-	-		<0.0050	-	-	<0.0050	<0.500	<0.0050	<0.0050	<0.0050	-	-
pH (field)	pH	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	6.98	6.85	6.73	6.67	-	-			-	-	-	7.02	7.03	6.92	6.96	-	-
pH (lab)	pH	-	-	-	-	7.83	7.55	-	-	-	-	-	7.63	7.67	7.59	7.45	7.29	7.58	7.73	7.49	7.62	7.48	7.50	7.57	-	-	7.86	7.81	7.85	7.71	-	7.82	7.87
Phosphate	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.0050	<0.0500	-	-	<0.0500	<0.0500	-		-	-	-	-	-	-	-	<0.0500	<0.0500
Sulfate	mg/L	8,360	3,820	8,510	8,070	8,140	8,440	5,330	4,630	4,250	4,300	4,280	4,170	5,210	4,690	3,750	3,320	3,510	3,410	3,050	2,940	3,080	3,300	3,310	14,500	18,600	1,910	2,110	2,120	460	2,790	2,740	2,670
Sulfide	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TDS - Solids, Total Dissolved	mg/L	14,700	15,400	15,800	14,900	13,400	15,200	10,900	8,910	9,430	8,650	8,860	8,690	12,000	8,300	7,480	8,230	7,760	7,520	6,380	6,730	6,670	6,630	7,030	35,900	28,600	3,610	3,710	4,140	4,660	5,370	4,720	4,700

Associated CARO files available upon request.
Associated Exova file(s): 712940, 714233, 714243, 756693, 756810, 757047, 811364, 811710, 812030, 812741, 812985, 813438, 846260, 878316, 879073, 909346, 909448, 909654.

Table H1: Summary of Groundwater Analytical Results - Inorganics/General - HISTORICAL to 2025

Well ID		GL39-1							GL39-2															GL40-2	GL40-3		GL41-1							
Sample ID		GL39-1-230525	GL39-1-231024	GL39-1	GL39-1	GL 39-1	GL39-1	GL 39-1	GL39-2-191205	GL39-2-200609	GL39-2-201016	GL39-2-210526	GL39-2-210914	GL39-2-220531	GL39-2-220923	GL39-2-230525	GL39-2-231024	GL39-2	GL39-2	GL 39-2	GL39-2	GL 39-2	GL40-2-200611	GL40-3-201117	GL40-3-210610	GL41-1-200616	GL41-1-201102	GL41-1-210525	GL41-1-220615	GL41-1-220923	GL41-1-230531	GL41-1-231026	GL41-1
Sample Date		2023 05 25	2023 10 24	2024-05-27	2024-09-18	2025-03-21	2025-05-21	2025-08-26	2019 12 05	2020 06 09	2020 10 16	2021 05 26	2021 09 14	2022 05 31	2022 09 23	2023 05 25	2023 10 24	2024-05-27	2024-09-18	2025-03-21	2025-05-21	2025-08-26	2020 06 11	2020 11 17	2021 06 10	2020 06 16	2020 11 02	2021 05 25	2022 06 15	2022 09 23	2023 05 31	2023 10 26	2024-05-24
Parameter	**Unit**	**Analytical Results**																																
Inorganics / General																																		
Alkalinity, Bicarb(as CaCO3)	mg/L	576	588	569	580	594	595	628	407	401	374	436	472	351	394	349	353	324	282	313	294	297	2,230	2,190	2,040	497	592	596	623	611	523	432	416
Alkalinity, Carb (as CaCO3)	mg/L	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	< 1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Alkalinity, Hydro(as CaCO3)	mg/L	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	< 1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Alkalinity, Phen(as CaCO3)	mg/L	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	< 1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Alkalinity, Total (as CaCO3)	mg/L	576	588	569	580	594	595	628	407	401	374	436	472	351	394	349	353	324	282	313	294	297	2,230	2,190	2,040	497	592	596	623	611	523	432	416
Ammonia, Total (as N)	µg/L	<50	57	<0.050	<0.050	<0.050	<0.050	<0.050	121	<50	<50	<50	<50	<50	<50	<50	<0.050	0.103	<0.050	<0.050	<0.050	<0.050	5,760	11,400	5,950	54	<50	<50	<50	<50	<50	<50	<0.050
Bromide	mg/L	<1.00	<1.00	0.27	<1.00	<1.00	<1.00	<1.00	< 0.10	< 10.0	<1.00	<2.50	<2.50	<1.00	<1.00	<1.00	<1.00	0.14	<1.00	<1.00	<0.10	<0.10	< 1.00	<1.00	<1.00	<1.00	<0.10	<1.00	<1.00	<0.10	<0.10	<1.00	0.16
Chloride	mg/L	137	162	139	160	126	121	121	176	174	180	154	130	158	126	74.2	106	136	150	141	142	160	253	201	162	399	371	399	297	279	219	140	162
COD - Chemical Oxygen Demand	mg/L	26	33	28	24	22	29	33	152	26	21	<20	30	<20	<20	<20	20	<20	<20	<20	<20	<20	3,070	2,430	1,050	28	23	26	<20	<20	42	<20	<20
Conductivity	µS/cm	-	-						-	-	-	-	-	-	-	-	-						-	-	-	-	-	-	-	-	-	-	-	
Conductivity - Field	µS/cm	-	-	-	-				-	4,140	3,324	3,323	4,281	3,033	2,728	-	-	-	-				4,238	4,621	4,453	2,257	248	2,558	2,146	2,166	-	-	-
Dissolved Phosphate	mg/L	-	-						-	-	-	-	-	-	-	-	-						-	-	-	-	-	-	-	-	-	-	-	
DOC - Dissolved Organic Carbon	mg/L	9.84	14.8	11.7	12.8	11	9.9	11.6	7.99	6.23	6.14	5.28	5.79	5.72	4.32	3.52	6.58	4.47	3.79	3.69	2.94	3.36	1,190	66.4	3.79	6.7	5.81	6.5	5.2	4.98	4.55	4.63	3.35
Fluoride	µg/L	<1,000	<1,000	1430	<1000	<1000	1320	1480	470	<10,000a	500	510	410	<1,000	<1,000	<1,000	<1.00	510	<1000	<1000	550	<1000	< 1,000	<1,000	<1,000	<1,000	720	660	<1,000	860	770	<1000	580
Hardness (as CaCO3)	mg/L	2,450	2,200	2,300	2,400	2,030	1,970	2,390	1,940	1,910	1,240	1,090	1,800	1,060	721	570	611	698	557	560	567	480	201	311	323	661	735	755	589	595	574	342	460
Hydrogen Sulfide	mg/L	-	-						-	-	-	-	-	-	-	-	-						-	-	-	-	-	-	-	-	-	-	-	
Nitrate (as N)	µg/L	7,520	9,910	12000.0	15300	11500	12400	9650	1,140	1,820	1,400	588	1,940	<100	<100	<100	516	705	106	530	74	< 100	< 100	<100	<100	<100	1570	1300	894	421	622	488	2400
Nitrite (as N)	µg/L	<100	<100	<10	<100	<100	<100	<100	12	<1,000a	<10	<10	<10	<100	115	<100	<100	<10	<100	<100	<10	<100	< 100	<100	<100	<100	<10	<10	<10	0.012	<10	<100	<10
Ortho-Phosphate	mg/L	-	-			0.0051	<0.0050	<0.0050	<0.0050	<0.500	<0.0050	<0.0050	<0.0050	-	-	-	-			0.0309	0.0052	0.0053	< 0.0500	<0.0500	<0.0500	<0.0500	0.0142	<0.0050	-	-	-	-	-
pH (field)	pH	-	-						-	7.29	7.35	7.31	7.27	-	-	-	-						7.38	7.31	7.31	7.43	7.56	7.27	-	-	-	-	-
pH (lab)	pH	7.64	7.73	7.59	7.86	7.7	7.88	7.88	7.93	7.85	7.88	7.98	-	7.99	8.09	7.91	7.94	7.73	8.05	8.07	8.07	8.13	7.94	8.09	7.95	8.03	8.03	8.09	8.04	8.15	8.05	8.24	7.90
Phosphate	mg/L	<0.0500	<0.0500	-	-				-	-	-	-	-	<0.0500	<0.0500	<0.0500	<0.0500	-	-				-	-	-	-	-	-	<0.0500	<0.0050	<0.0050	<0.050	-
Sulfate	mg/L	2,490	2,430	2,260	2,490	2,270	1,800	1,920	2,790	2,400	1,540	1,250	2,140	1,410	951	495	643	715	374	505	482	386	179	375	518	185	138	163	183	204	181	90.5	87.9
Sulfide	mg/L	-	-						-	-	-	-	-	-	-	-	-						-	-	-	-	-	-	-	-	-	-	-	
TDS - Solids, Total Dissolved	mg/L	4,410	3,930	4,150	4,030	3,850	3,890	4,150	5,110	4,110	2,990	2,350	3,820	1,820	1,960	1,270	1,160	1,430	1,020	1,220	1,280	1,240	5,190	3,000	2,710	1,400	1,530	2,000	1,160	1,240	1,140	807	841

Associated CARO files available upon request.
Associated Exova file(s): 712940, 714233, 714243, 756693, 756810, 757047, 811364, 811710, 812030, 812741, 812985, 813438, 846260, 878316, 879073, 909346, 909448, 909654.

Table H1: Summary of Groundwater Analytical Results - Inorganics/General - HISTORICAL to 2025

Well ID		GL41-1					GL41-2															GL41-3										
Sample ID		GL41-1	GL 41-1	GL 41-1	GL 41-1	GL 41-1	GL41-2-191205	GL41-2-200612	GL41-2-201022	GL41-2-210525	GL41-2-210907	GL41-2-220615	GL41-2-220923	GL41-2-230531	GL41-2-231023	GL41-2	GL41-2	GL 41-2	GL 41-2	GL 41-2	GL 41-2	GL41-3-200612	GL41-3-201022	GL41-3-210525	GL41-3-210907	GL41-3-220615	GL41-3-220923	GL41-3-230531	GL41-3-231023	GL41-3	GL41-3	GL 41-3	GL 41-3
Sample Date		2024-09-19	2025-03-21	2025-05-28	2025-08-20	2025-10-29	2019 12 05	2020 06 12	2020 10 22	2021 05 25	2021 09 07	2022 06 15	2022 09 23	2023 05 31	2023 05 23	2024-05-24	2024-09-19	2025-03-21	2025-05-28	2025-08-20	2025-10-29	2020 06 12	2020 10 22	2021 05 25	2021 09 07	2022 06 15	2022 09 23	2023 05 31	2023 10 23	2024-05-24	2024-09-19	2025-03-21	2025-05-28
Parameter	**Unit**	**Analytical Results**																														
Inorganics / General																																
Alkalinity, Bicarb(as CaCO3)	mg/L	423	399	397	397	420	558	-	559	595	608	533	554	464	440	415	392	375	355	365	432	-	570	618	622	533	587	471	352	421	395	388	369
Alkalinity, Carb (as CaCO3)	mg/L	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	-	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	-	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Alkalinity, Hydro(as CaCO3)	mg/L	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	-	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	-	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Alkalinity, Phen(as CaCO3)	mg/L	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	-	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	-	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Alkalinity, Total (as CaCO3)	mg/L	423	399	397	397	420	558	563	559	595	608	533	554	464	440	415	392	375	355	365	432	575	570	618	622	533	587	471	352	421	395	388	369
Ammonia, Total (as N)	µg/L	<0.050	<0.050	<0.050	<0.050	<0.050	174	<50	<50	<50	<50	<50	<50	<50	<50	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	141	<50	<50	<50	<50	<50	<50	<50	<0.050	<0.050	<0.050	<0.050
Bromide	mg/L	0.16	0.11	<0.10	<0.10	0.16	<0.10	<1.0	<1.0	<2.50	<0.10	<1.00	0.18	<0.10	<0.10	0.16	<1.00	0.15	<0.10	<0.10	0.15	<1.0	<1.0	<2.50	<0.10	<1.00	0.2	<1.00	<1.00	0.16	<1.00	0.14	<0.10
Chloride	mg/L	156	82.9	101	99.9	105	301	387	402	423	383	232	286	205	197	170	138	110	113	105	118	423	423	471	406	250	337	221	116	161	130	105	123
COD - Chemical Oxygen Demand	mg/L	<20	<20	<20	<20	21	<20	<20	<20	24	<20	28	<20	23	<20	<20	<20	<20	<20	<20	<20	<200	<20	24	26	21	22	<20	<20	<20	26	<20	<20
Conductivity	µS/cm						-	-	-	-	-	-	-	-	-							-	-	-	-	-	-	-	-				
Conductivity - Field	µS/cm	-					-	2,073	2,562	2,498	2,442	1,663	1,928	-	-	-	-					2,133	2,621	2,646	2,545	1,695	2,142	-	-	-	-		
Dissolved Phosphate	mg/L						-	-	-	-	-	-	-	-	-							-	-	-	-	-	-	-	-				
DOC - Dissolved Organic Carbon	mg/L	3.74	3.83	3.43	3.56	3.79	6.32	6.13	6.58	6.37	5.28	3.38	6.17	3.45	4.37	3.08	3.89	2.42	2.5	2.32	3.76	6.68	6.93	6.71	5.94	3.52	4.2	4.81	4.76	2.78	3.52	2.38	2.26
Fluoride	µg/L	920	790	920	830	670	700	<1,000	640	670	580	<1,000	670	640	630	850	<1000	650	780	750	590	<1,000	650	660	590	<1000	630	<1000	<1000	790	<1000	640	780
Hardness (as CaCO3)	mg/L	455	292	354	345	334	530	726	684	753	711	474	556	510	475	469	431	362	388	388	496	755	696	792	723	474	618	499	291	451	410	355	401
Hydrogen Sulfide	mg/L						-	-	-	-	-	-	-	-	-							-	-	-	-	-	-	-	-				
Nitrate (as N)	µg/L	1700	790	1840	1530	1360	1,560	1,500	1,960	1780	2140	1,540	2,020	2,520	2,500	2740	1980	1180	1880	2000	2880	1180	1380	1510	1780	1,320	1,750	1,320	1,290	2740	1770	1070	1740
Nitrite (as N)	µg/L	10	<10	<10	<10	<10	50	<100	<10	<10	<10	<100	17	<10	<10	<10	<100	<10	<10	<10	<10	<100	<10	<10	<10	<100	17	<100	<100	<10	<100	<10	<10
Ortho-Phosphate	mg/L		0.55	0.37	0.298	0.312	<0.0050	<0.0500	<0.0050	<0.0050	<0.0050	-	-	-	-			0.0528	0.145	0.0355	0.0402	<0.0500	<0.0050	<0.0050	<0.0050	-	-	-	-			0.0322	0.0287
pH (field)	pH						-	7.24	7.31	7.17	7.21	-	-	-	-							7.26	7.31	7.2	7.22	-	-	-	-				
pH (lab)	pH	8.06	8.09	8.14	8.15	7.97	8.05	7.44	7.83	8.05	7.91	7.89	8.11	7.91	8.0	7.80	8.04	8.01	8.14	8.07	7.97	7.4	7.86	8.05	7.87	7.88	8.02	8.0	8.04	7.84	8.06	7.98	8.08
Phosphate	mg/L	-					-	-	-	-	-	<0.0500	<0.0050	<0.0050	<0.0050	-	-					-	-	-	-	<0.0500	<0.0050	<0.050	<0.050	-	-		
Sulfate	mg/L	95.4	75.6	77.2	78.6	75.5	138	166	175	151	138	109	122	101	107	92.1	85.1	86.5	75	92.9	152	159	160	160	143	108	133	98	64.7	84.1	80.7	86	75.3
Sulfide	mg/L						-	-	-	-	-	-	-	-	-							-	-	-	-	-	-	-	-				
TDS - Solids, Total Dissolved	mg/L	811	680	678	701	706	1,230	1,390	1,410	1,400	1,320	986	1,080	938	936	845	718	712	686	717	862	1,580	1,400	1,340	1,400	1,010	1,230	856	650	827	693	709	674

Associated CARO files available upon request.
Associated Exova file(s): 712940, 714233, 714243, 756693, 756810, 757047, 811364, 811710, 812030, 812741, 812985, 813438, 846260, 878316, 879073, 909346, 909448, 909654.

Table H1: Summary of Groundwater Analytical Results - Inorganics/General - HISTORICAL to 2025

Well ID		GL41-3		GL42-1									GL42-2	GL42-2								GL43-1					GL44-1			
Sample ID		GL 41-3	GL 41-3	GL42-1-200612	GL42-1-201106	GL42-1-210603	GL42-1-220607	GL42-1-230621	GL42-1-231030	GL42-1	GL 42-1	GL 42-1	GL42-2-200616	GL42-2-201109	GL42-2-210607	GL42-2-220617	GL42-2-230621	GL42-2-231031	GL42-2	GL 42-2	GL 42-2	GL43-1	GL 43-1	GL 43-1	GL 43-1	GL 43-1	GL 44-1	GL44-1	GL 44-1	GL 44-1
Sample Date		2025-08-20	2025-10-29	2020 06 12	2020 11 06	2021 06 03	2022 06 07	2023 06 21	2023 10 30	2024-05-24	2025-03-31	2025-05-22	2020 06 16	2020 11 09	2021 06 07	2022 06 17	2023 06 21	2023 10 31	2024-05-27	2025-03-31	2025-05-22	2024-09-25	2025-05-23	2025-03-21	2025-08-21	2025-10-29	2025-03-25	2024-09-25	2025-06-02	2025-08-28
Parameter	**Unit**	**Analytical Results**																												
Inorganics / General																														
Alkalinity, Bicarb(as CaCO3)	mg/L	365	427	-	3,030	3,560	900	1,560	2,100	2,810	665	693	928	918	1,020	1040	676	748	788	810	840	861	821	842	837	909	655	655	675	703
Alkalinity, Carb (as CaCO3)	mg/L	<1.0	<1.0	-	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Alkalinity, Hydro(as CaCO3)	mg/L	<1.0	<1.0	-	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Alkalinity, Phen(as CaCO3)	mg/L	<1.0	<1.0	-	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Alkalinity, Total (as CaCO3)	mg/L	365	427	2,050	3,030	3,560	900	1,560	2,100	2,810	665	693	928	918	1,020	1040	676	748	788	810	840	861	821	842	837	909	655	655	675	703
Ammonia, Total (as N)	µg/L	<0.050	<0.050	703	743	698	624	254	432	0.564	0.061	0.102	461	83	<50	<50	<50	<50	<0.050	<0.050	<0.050	0.659	<0.050	0.06	<0.050	<0.050	0.283	0.197	0.313	0.321
Bromide	mg/L	<0.10	0.18	<1.0	0.34	0.28	0.33	<1.00	<1.00	<2.50	<1.00	<1.00	<1.0	<10.0	<2.50	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	0.22	<1.00	<1.00	<1.00	<1.00
Chloride	mg/L	98.9	132	36.7	47.6	49.7	48.6	128	102	72.2	221	208	64.3	63.6	70.9	81.5	138	116	115	102	95.5	44.9	40.9	39.8	46.4	44.4	43.7	43.9	48.5	49.8
COD - Chemical Oxygen Demand	mg/L	<20	<20	330	35	76	<20	56	47	<20	29	45	519	89	<20	<20	53	59	27	99	28	66	55	48	40	49	27	<20	<20	<20
Conductivity	µS/cm			-	-	-	-	-	-				-	-	-	-	-	-												
Conductivity - Field	µS/cm			2,332	5,266	5,277	4,808	-	-	-			4,649	5,360	5,808	5031	-	-	-			-						-		
Dissolved Phosphate	mg/L			-	-	-	-	-	-				-	-	-	-	-	-												
DOC - Dissolved Organic Carbon	mg/L	2.77	3.64	2.39	2.95	2.14	3.1	21.7	17.9	7.28	17.2	12.4	6.51	7.7	7.36	5.4	8.35	8.3	6.71	6.77	6.29	18.6	15.4	17.2	17.5	16.7	5.5	5.70	4.6	5.09
Fluoride	µg/L	790	700	<1,000	560	650	580	<1,000	<1,000	480	<1000	<1000	<1,000	590	<2,500a	<1,000	<1,000	<1,000	<1000	<1000	<1000	1120	1320	1180	1920	173	<1000	<1000	2270	1200
Hardness (as CaCO3)	mg/L	364	474	184	171	187	143	1,630	984	465	6,030	5,370	855	1,270	1,230	1390	3430	2650	2,030	1,920	1,770	1,380	1,600	1,230	1,210	1,230	2,530	2,540	2,960	2,840
Hydrogen Sulfide	mg/L			-	-	-	-	-	-				-	-	-	-	-	-												
Nitrate (as N)	µg/L	1530	2020	<100	<10	<10	<10	<100	235	<250	328	310	1,760	883	8,820	9080	10,700	13,000	20900	15200	13000	47100	44000	41400	42500	24400	< 100	< 100	< 100	< 100
Nitrite (as N)	µg/L	<10	<10	<100	<10	<10	<10	<100	<100	<10	<100	<100	232	153	<250	<100	<100	<100	<100	<100	<100	<100	<100	<100	109	49	<100	<100	<100	<100
Ortho-Phosphate	mg/L	0.0294	0.0291	0.058	<0.0050	<0.0050	-	-	-		0.0064	<0.0050	<0.0500	<0.0050	< 0.125	-	-	-		0.0139	0.014		4.09	4.61	4.61	4.88	0.007		<0.0050	<0.0050
pH (field)	pH			7.28	7.27	7.35	-	-	-				7.45	7.34	7.34	-	-	-												
pH (lab)	pH	8.1	7.94	7.12	7.8	8.05	7.55	7.82	7.9	7.92	7.77	7.72	8.08	7.76	8.02	8.01	7.8	7.86	7.67	7.85	7.9	8.06	7.9	8.07	8.15	8	7.83	7.96	7.86	7.93
Phosphate	mg/L			-	-	-	<0.0050	<0.0500	<0.0500	-			-	-	-	<0.0500	<0.0500	<0.0500	-			-						-		
Sulfate	mg/L	76.7	138	20.8	1.3	<10.0	28.2	2,060	918	151	7,500	7,660	2,050	2,250	2,220	2,790	5,090	4,180	2,950	3,210	2,930	1,110	980	1,060	1,170	1,000	3,030	3,250	3,700	3,140
Sulfide	mg/L			-	-	-	-	-	-				-	-	-	-	-	-												
TDS - Solids, Total Dissolved	mg/L	692	822	2,360	3,620	3,170	3,380	4,670	4,030	3,240	13,400	12,700	3,910	4,220	4,340	5080	7,930	7,060	5,670	5,930	5,730	2,630	2,520	2,400	2,560	2,440	5,160	5,210	5,430	5,760

Associated CARO files available upon request.
Associated Exova file(s): 712940, 714233, 714243, 756693, 756810, 757047, 811364, 811710, 812030, 812741, 812985, 813438, 846260, 878316, 879073, 909346, 909448, 909654.

Table H1: Summary of Groundwater Analytical Results - Inorganics/General - HISTORICAL to 2025

Well ID		GL44-2				GL45-1				GL45-2				GL46-1		
Sample ID		GL44-2	GL 44-2	GL 44-2	GL 44-2	GL45-1	GL 45-1	GL 45-1	GL 45-1	GL45-2	GL 45-2	GL 45-2	GL 45-2	GL 46-1	GL 46-1	GL 46-1
Sample Date		2024-09-25	2025-03-25	2025-06-02	2025-08-28	2024-09-26	2025-03-25	2025-06-02	2025-08-28	2024-09-26	2025-03-25	2025-06-02	2025-08-28	2025-04-03	2025-08-26	2025-10-30
Parameter	**Unit**	**Analytical Results**														
Inorganics / General																
Alkalinity, Bicarb(as CaCO3)	mg/L	586	505	583	624	1,060	1,720	1,840	1,280	811	818	802	837	1,950	2,050	2,350
Alkalinity, Carb (as CaCO3)	mg/L	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Alkalinity, Hydro(as CaCO3)	mg/L	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Alkalinity, Phen(as CaCO3)	mg/L	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Alkalinity, Total (as CaCO3)	mg/L	586	505	583	624	1,060	1,720	1,840	1,280	811	818	802	837	1,950	2,050	2,350
Ammonia, Total (as N)	µg/L	0.356	0.226	0.399	0.405	0.459	0.434	0.414	0.479	0.267	0.184	0.137	0.209	0.477	0.475	0.484
Bromide	mg/L	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	0.13	<1.00	<1.00	0.21	<1.00	<1.00
Chloride	mg/L	112	97.4	122	100	42.9	40.1	42.9	42.1	23.9	24.4	23.4	20	60.7	65.5	52.5
COD - Chemical Oxygen Demand	mg/L	36	21	<20	<20	<20	22	<20	<20	<20	<20	<20	<20	<20	<20	<20
Conductivity	µS/cm															
Conductivity - Field	µS/cm	-				-				-						
Dissolved Phosphate	mg/L															
DOC - Dissolved Organic Carbon	mg/L	5.98	5.07	5.79	6.02	6.30	5.56	4.26	5.74	3.29	2.57	2.71	2.74	5.23	4.4	4.8
Fluoride	µg/L	<1000	<1000	1280	<1000	<1000	<1000	1320	1320	<1000	590	1170	<1000	820	1250	1010
Hardness (as CaCO3)	mg/L	2,170	1,670	2,190	2,300	2,100	1,960	1,750	2,150	1,160	1,130	1,180	1,160	509	1,300	522
Hydrogen Sulfide	mg/L															
Nitrate (as N)	µg/L	< 100	< 100	< 100	< 100	123	< 100	< 100	< 100	< 100	<250	< 100	< 100	< 10	< 100	< 100
Nitrite (as N)	µg/L	<100	<100	<100	<100	<100	<100	<100	<100	<100	<10	<100	<100	11	<100	<100
Ortho-Phosphate	mg/L		<0.0050	<0.0050	<0.0050		<0.0050	<0.0050	<0.0050		0.0065	0.0131	0.0057	0.802	0.169	0.165
pH (field)	pH															
pH (lab)	pH	7.91	7.84	7.92	7.92	7.53	7.48	7.37	7.52	7.86	7.9	8.11	8.09	7.98	8.11	8.09
Phosphate	mg/L	-				-				-						
Sulfate	mg/L	2,850	2,440	3,350	2,830	2,660	1,720	2,170	1,940	1,160	1,100	1,190	904	786	1,250	616
Sulfide	mg/L															
TDS - Solids, Total Dissolved	mg/L	4,680	3,940	4,450	5,250	4,700	4,100	4,400	4,840	2,410	2,170	2,220	2,390	3,590	4,610	3,390

Associated CARO files available upon request.
Associated Exova file(s): 712940, 714233, 714243, 756693, 756810, 757047, 811364, 811710, 812030, 812741, 812985, 813438, 846260, 878316, 879073, 909346, 909448, 909654.

Table H3: Summary of Surface Water
Analytical Results - HISTORICAL to 2025

Location		Bredin Pond																											
Sample ID		Bredin Pond-20010611	Bredin Pond-20010815	Bredin Pond-20010920	Bredin Pond-20080506	Bredin Pond-20010920	Bredin Pond-20080506	Bredin Pond-20080507	Bredin Pond-20080520	Bredin Pond-20090521	Bredin Pond-20091119	Bredin Pond-20130429	Bredin Pond-20130528	Bredin Pond-20130718	Bredin Pond-20131016	Bredin Pond-20140331	Bredin Pond-20140528	Bredin Pond-20140828	Bredin Pond-20150311	Bredin Pond-20150616	Bredin Pond-20151029	BREDIN POND-20160518	BREDIN POND-20160914	BREDIN POND-20161116	BREDIN POND-20170418	BREDIN POND-20170607	BREDIN POND-20170907	BREDIN POND-20171101	BREDIN POND-180404	BREDIN POND-180523
Sample Date		2001 06 11	2001 08 15	2001 08 15	2008 05 06	2001 09 20	2008 05 06	2008 05 07	2008 05 20	2009 05 21	2009 11 19	2013 04 29	2013 05 28	2013 07 18	2013 10 16	2014 03 31	2014 05 28	2014 08 28	2015 03 11	2015 06 16	2015 10 29	2016 05 18	2016 09 14	2016 11 16	2017 04 18	2017 06 07	2017 09 07	2017 11 01	2018 04 04	2018 05 23
Parameter	**Units**	**Analytical Results**																											
General																													
Alkalinity, Bicarbonate (as CaCO3)	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	611	581	617	494	477	542	478	390	183	421	572	597	619	570	591	389	504
Alkalinity, Carbonate (as CaCO3)	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	124	158	107	134	184	96.2	162	184	337	171	38.8	61.8	86.4	83.8	26.6	88.2	14.7
Alkalinity, Hydroxide (as CaCO3)	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Alkalinity, Phenolphthalein (as CaCO3)	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	44.1	7.4
Alkalinity, Total (as CaCO3)	mg/L	-	-	-	-	-	546	-	542	-	-	-	-	736	739	724	628	661	638	639	574	520	592	611	659	705	654	617	477	519
Ammonia, Total (as N)	µg/L	-	-	-	-	-	140	-	120	-	-	28.9	90.8	< 5.0	22.4	96.8	12.3	14.5	80	11.7	34.1	18.3	8.5	75.3	61.8	73.6	308	215	176	449
Bicarbonate	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Bromide	mg/L	-	-	-	-	-	-	-	-	-	-	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 0.50	< 0.50	< 0.50	< 0.25	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	0.17	< 0.10
Chloride	mg/L	-	-	-	-	-	79.8	-	94	-	-	128	135	133	140	129	134	131	120	113	107	98.4	112	110	113	125	145	145	128	153
COD - Chemical Oxygen Demand	mg/L	-	-	-	-	-	14	-	20	-	-	42	35	43	43	34	34	64	22	30	32	24	38	36	35	28	71	21	76	< 20
Conductivity - Field	µS/cm	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1,235	1,764
Conductivity - Lab	µS/cm	-	-	-	-	-	1,470	-	1,470	-	-	1,860	1,910	1,990	1,930	1,950	1,960	1,830	1,790	1,520	1,560	1,380	1,540	1,670	1,770	1,880	1,810	1,720	1,450	1,710
DOC - Dissolved Organic Carbon	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Fluoride	µg/L	-	-	-	-	-	-	-	-	-	-	1,530	1,150	1,540	1,010	1,170	1,480	1,820	1,190	1,170	1,100	1,030	1,190	1,160	1,060	1,250	1,150	1,220	870	450
Hardness (as CaCO3)	mg/L	-	-	-	-	-	-	-	728	85	716	757	745	789	766	759	754	673	721	623	553	506	597	611	684	732	685	649	580	604
Hardness, Dissolved (as CaCO3)	mg/L																													
Nitrate (as N)	µg/L	-	-	-	-	-	< 20	-	189	-	-	< 100	< 100	< 100	< 100	460	< 100	< 100	1,080	< 50	356	< 25	< 50	419	192	< 50	< 50	939	897	1,360
Nitrate+Nitrite (as N)	µg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	897	1,410
Nitrite (as N)	µg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	< 10	48
Nitrogen-N, Total	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	3.27	2.69
Ortho-Phosphate	mg/L	-	-	-	-	-	< 0.01	-	< 0.01	-	-	0.0099	0.105	0.176	0.0011	0.056	0.0479	0.0016	0.0697	0.0045	0.0184	0.0048	< 0.0010	0.008	0.0033	0.0213	< 0.0010	0.0284	-	-
pH (field)	pH	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	9.08	8.7
pH (Lab)	pH	-	-	-	-	-	8.46	-	8.39	-	-	8.82	8.56	8.76	8.9	8.66	8.86	9.01	-	-	9.27	-	-	8.52	8.63	8.72	8.73	8.41	8.77	8.36
Phosphate	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.0108	0.1
Phosphorus, Total (as P)	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	0.257
Sulphate	mg/L	320	-	375	-	-	198	-	216	-	-	285	286	309	308	307	315	273	257	238	216	200	222	252	271	306	252	223	144	211
TDS - Solids, Total Dissolved	mg/L	1,180	-	1,360	-	1,400	1,000	-	994	-	-	1,170	1,050	1,230	1,310	1,240	1,280	1,180	1,110	1,040	980	838	980	1,080	1,180	1,170	1,190	1,030	918	1,070
Temperature	C	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	9.4	21.6
TKN - Kjeldahl Nitrogen-N	mg/L	-	-	-	-	-	0.75	-	1.16	-	-	-	-	1.82	1.46	1.09	1	2.32	0.965	0.922	0.938	0.73	0.866	0.895	1.34	0.976	3.61	1.19	2.37	1.28
TOC - Carbon, Total Organic	mg/L	10	-	18	-	16.3	11.2	-	11.8	-	-	11.5	9.4	16.2	11.2	9.83	10.4	15.2	8.52	9.01	8.55	8.31	11.1	9.28	11	10.6	19	7	9.18	7.65
TSS - Solids, Total Suspended	mg/L	-	-	-	-	-	-	< 1	< 1	-	-	< 3.0	< 3.0	10.3	6.3	< 3.0	3.1	13.5	< 3.0	3.2	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0	4.9	22.4	3	65.3	< 3.3
Total Metals																														
Aluminum	µg/L	-	13	-	61	28	-	-	-	-	-	11	< 10	< 10	< 10	14	108	13	11	12	22	< 10	13	14	12	16	29	12	53.8	25.6
Antimony	µg/L	-	< 5	-	< 20a	< 5	-	-	-	-	-	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.20	< 0.20
Arsenic	µg/L	-	< 10	-	< 50	< 10	-	-	-	-	-	1	1.1	1.5	1.4	1.6	1.6	1.6	1.3	1.3	1.5	< 1.0	< 1.0	1.4	1.3	1.6	1.4	1.6	1.11	2.09
Barium	µg/L	-	81	-	12.5	13.1	-	-	-	-	-	65	68	62	67	65	< 20	74	78	38	60	63	< 20	46	79	44	87	94	78.1	82.1
Beryllium	µg/L	-	< 0.5a	-	< 3a	< 0.5a	-	-	-	-	-	< 5.0a	< 5.0a	< 5.0a	< 5.0a	< 5.0a	< 5.0a	< 5.0a	< 5.0a	< 5.0a	< 5.0a	< 5.0a	< 5.0a	< 5.0a	< 5.0a	< 5.0a	< 5.0a	< 5.0a	< 0.10	< 0.10
Bismuth	µg/L	-	10	-	130	11	-	-	-	-	-	-	-	-	-	-	-	-	-	< 200	< 200	-	< 200	< 200	< 200	< 200	< 200	< 200	< 0.10	< 0.10
Boron	µg/L	-	18	-	40	< 2	-	-	-	-	-	< 100	< 100	< 100	< 100	< 100	< 100	< 100	< 100	< 100	< 100	< 100	< 100	< 100	< 100	< 100	< 100	< 100	28.1	31.4
Cadmium	µg/L	-	< 0.5a	-	< 3a	< 0.5a	-	-	-	-	-	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	0.06	< 0.010
Calcium	µg/L	-	7,300	-	7,700	10,600	-	-	29,100	-	-	41,200	32,700	40,600	26,700	38,600	36,500	22,600	42,400	20,400	17,100	10,400	18,300	30,400	46,000	47,400	33,300	41,400	38,700	56,700
Chromium	µg/L	-	< 0.8	-	< 4a	< 0.8	-	-	-	-	-	< 0.50	< 0.50	< 0.50	< 0.50	0.51	< 0.50	< 0.50	< 0.50	< 0.50	0.7	< 0.50	< 0.50	< 0.50	0.53	< 0.50	< 0.50	< 0.50	0.94	0.5
Cobalt	µg/L	-	1.7	-	< 3	1.5	-	-	-	-	-	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	0.14	0.18
Copper	µg/L	-	4	-	< 5a	2	-	-	-	-	-	< 1.0a	< 1.0a	< 1.0a	< 1.0a	< 1.0a	< 1.0a	< 1.0a	< 1.0a	< 1.0a	< 1.0a	< 1.0a	1.1	< 1.0a	1.7	< 1.0a	< 1.0a	1.3	1.56	1.25
Iron	µg/L	-	38	-	448	13	-	-	-	-	-	< 30	< 30	< 30	< 30	< 30	125	< 30	< 30	< 30	< 30	< 30	< 30	< 30	< 30	< 30	41	< 30	92	40
Lead	µg/L	-	7	-	34	< 2	-	-	-	-	-	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 0.20	< 0.20
Lithium	µg/L	-	48	-	37	43	-	-	-	-	-	< 50	< 50	< 50	< 50	< 50	< 50	< 50	< 50	< 50	< 50	< 50	< 50	< 50	< 50	< 50	< 50	< 50	25.4	26.7
Magnesium	µg/L	-	183,000	-	170,000	174,000	-	-	159,000	-	-	159,000	161,000	169,000	170,000	161,000	161,000	150,000	149,000	139,000	124,000	117,000	134,000	130,000	138,000	149,000	146,000	133,000	117,000	112,000
Manganese	µg/L	-	7.6	-	7.5	4	-	-	-	-	-	21	60	72	< 10	30	57	25	11	11	< 10	< 10	< 10	< 10	19	35	74	< 10	8.34	27
Mercury	µg/L	-	-	-	-	-	-	-	-	-	-	< 0.20a	< 0.20a	< 0.20a	< 0.20a	< 0.20a	< 0.20a	< 0.20a	< 0.20a	< 0.20a	< 0.20a	< 0.20a	< 0.20a	< 0.20a	< 0.20a	< 0.20a	< 0.20a	< 0.20a	< 0.010	< 0.010
Molybdenum	µg/L	-	10	-	< 5	16	-	-	-	-	-	11	11	13	10.9	15.2	17.8	15.5	15.7	15	17	13.8	15	14.1	11	13.8	12.5	21.8	18.8	14.1
Nickel	µg/L	-	6	-	27	10	-	-	-	-	-	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	0.96	1.36
Phosphorous	µg/L	-	< 30	-	< 100	30	-	-	-	-	-	-	-	-	-	-	-	-	-	< 300	< 300	-	< 300	< 300	< 300	< 300	< 300	< 300	187	234
Potassium	µg/L	-	25,800	-	20,600	23,100	-	-	-	-	-	-	-	-	-	-	-	-	-	11,000	10,100	-	13,500	13,600	13,500	13,100	14,800	14,200	11,500	13,200
Selenium	µg/L	-	< 4a	-	< 20a	8	-	-	-	-	-	1.2	1	< 1.0	< 1.0	1.2	1.1	1.5	1.6	1.2	1.3	1.6	1.4	1.2	1.3	1.1	1.3	< 1.0	1.94	1.4
Silicon	µg/L	-	2,840	-	12,700	18,900	-	-	-	-	-	-	-	-	-	-	-	-	-	7,460	9,500	-	7,430	7,020	4,970	2,290	13,900	14,100	< 1,000	6,500
Silver	µg/L	-	< 1a	-	< 5a	< 1a	-	-	-	-	-	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050
Sodium	µg/L	-	214,000	-	192,000	209,000	-	-	-	-	-	203,000	196,000	197,000	223,000	195,000	211,000	184,000	191,000	174,000	163,000	155,000	181,000	180,000	186,000	203,000	177,000	170,000	148,000	161,000
Strontium	µg/L	-	218	-	233	371	-	-	-	-	-	-	-	-	-	-	-	-	-	2,620	2,570	-	3,050	2,900	2,870	2,920	2,900	2,870	2,850	2,830
Sulphur	µg/L	-	123,000	-	115,000	128,000	-	-	-	-	-	-	-	-	-	-	-	-	-	75,600	72,900	-	-	-	-	-	-	-	52,700	73,800
Sulfur (As S)	µg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Tellurium	µg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.41	0.35	-	-	0.39	0.25	0.47	0.41	0.4	< 0.50	< 0.50
Thallium	µg/L	-	< 4a	-	< 20a	< 4a	-	-	-	-	-	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.020	< 0.020
Thorium	µg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	< 0.10	< 0.10	-	-	-	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Tin	µg/L	-	< 3	-	< 20	< 3	-	-	-	-	-	-	-	-	-	-	-	-	-	< 30	< 30	-	< 30	< 30	< 30	< 30	< 30	< 30	< 0.20	< 0.20
Titanium	µg/L	-	2.7	-	12	< 0.4	-	-	-	-	-	< 50	< 50	< 50	< 50	< 50	< 50	< 50	< 50	< 50	< 50	< 50	< 50	< 50	< 50	< 50	< 50	< 50	< 5.0	< 5.0
Tungsten	µg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	< 1.0	< 1.0
Uranium	µg/L	-	-	-	-	-	-	-	-	-	-	27.7	23.2	24.6	20.1	29.5	31.6	25.8	28.3	24.2	23.7	22	22.3	20.6	21.5	23.4	20.9	38.1	27.4	23.6
Vanadium	µg/L	-	8	-	10	4	-	-	-	-	-	< 30	< 30	< 30	< 30	< 30	< 30	< 30	< 30	< 30	< 30	< 30	< 30	< 30	< 30	< 30	< 30	< 30	3.5	3.4
Zinc	µg/L	-	0.8	-	< 3	1	-	-	-	-	-	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	5.3	33.5	15.6	< 5.0	< 5.0	< 5.0	12.2	< 5.0	8.1	< 5.0	9.6	8.7
Zirconium	µg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	< 0.30	-	-	< 0.30	< 0.30	< 0.30	< 0.30	< 0.30	0.12	< 0.10
Microbiological																														
Coliforms, Fecal (Q-Tray)	MPN/100ml	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Coliforms, Total (Q-Tray)	MPN/100ml	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Associated CARO file(s) available on request
Associated Exova file(s): 107524, 115040, 417280, 438503, 47748, 593413, 610415, 653618, 683622, 714220, 714240, 95223., 8040426, 8041402, 8041784, 8050436, 8052167, 8061543, 8071280, 8090442, 8110640, 8110821, 9032473, 9050543, 9060474, 9090312, N000861, 0040546, 0060737, 0091922, 20J3095.

All terms defined within the body of Keltech's report

Table H3: Summary of Surface Water
Analytical Results - HISTORICAL to 2025

Location		Bredin Pond																											
Sample ID		BREDIN POND-180906	BREDIN POND-181107	BREDIN POND-190329	BREDIN POND-190605	BREDIN POND-190904	BREDIN POND-191023	BREDINPOND-200407	BREDINPOND-200605	BREDINPOND-200917	BREDINPOND-201028	BREDIN POND-210323	BREDIN POND-210616	BREDIN POND-211019	BREDIN POND-220322	BREDIN POND-220621	BREDIN POND-220912	BREDIN POND-221019	BREDIN POND-230329	BREDIN POND-230518	BREDIN POND-230927	BREDIN POND-231101	Bredin Pond	Bredin Pond	Bredin Pond	Bredin Pond	Bredin Pond	Bredin Pond	Bredin Pond	Bredin Pond
Sample Date		2018 09 06	2018 11 07	2019 03 29	2019 06 05	2019 09 04	2019 10 23	2020 04 07	2020 06 05	2020 09 17	2020 10 28	2021 03 23	2021 06 16	2021 10 19	2022 03 22	2022 06 21	2022 09 12	2022 10 19	2023 03 29	2023 05 18	2023 09 27	2023 11 01	2024-03-21	2024-05-10	2024-09-11	2024-10-22	2025-03-11	2025-05-15	2025-09-22	2025-11-05
Parameter	**Units**	**Analytical Results**																											
General																													
Alkalinity, Bicarbonate as CaCO3	mg/L	471	501	-	451	328	557	452	356	409	559	528	502	679	533	524	436	419	418	398	333	404	335	373	345	483	446	375	364	403
Alkalinity, Carbonate (as CaCO3)	mg/L	< 1.0	7.3	< 1.0	202	296	< 1.0	29.3	137	199	105	39.5	210	20	51	123	251	189	80.6	98.8	311	165	169	128	146	29.3	16.8	75.3	128	93
Alkalinity, Hydroxide (as CaCO3)	mg/L	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1	<1.0
Alkalinity, Phenolphthalein as CaCO3)	mg/L	< 1.0	3.6	< 1.0	101	148	< 1.0	14.6	68.5	99.3	52.4	19.7	105	10	25.5	61.5	126	94.4	40.3	49.4	155	82.5	84.4	64.0	72.8	14.7	8.4	37.7	63.8	46.5
Alkalinity, Total (as CaCO3)	mg/L	471	509	556	653	624	557	481	493	608	664	568	713	700	584	647	688	608	499	496	644	569	504	500	490	511	463	450	491	496
Ammonia, Total (as N)	µg/L	439	880	128	54	135	42	206	< 50	84	115	< 50	76	1,670	<50	<50	0.163	<50	<50	<50	98	127	0.061	<0.050	0.133	0.836	233	92	230	<50
Bicarbonate	mg/L	-	-	556	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-								
Bromide	mg/L	< 0.10	< 1.00	0.15	< 0.10	< 0.10	< 0.10	< 0.10	0.12	< 0.10	< 0.10	< 1.00	< 0.10	< 0.10	<0.10	<0.10	<1.00	<0.10	<0.10	<0.10	<1.00	<1.00	0.12	0.11	<0.10	0.25	<1.00	0.13	0.13	<0.10
Chloride	mg/L	129	149	142	160	178	169	166	159	164	157	151	170	188	177	167	185	184	166	151	180	163	130	140	142	125	105	97	131	133
COD - Chemical Oxygen Demand	mg/L	58	29	21	< 20	27	22	< 20	< 20	62	53	50	39	21	25	31	37	40	48	21	35	23	<20	20	27	<20	<20	<20	59	32
Conductivity - Field	µS/cm	1,580	1,389	1,418	1,671	1,715	1,788	1,470	1,344	1,945	2,025	1,736.00	1,963.00	2,038.00	1,784	1,888	2,044	1,984	-	-	-	-	1692	1675	1540	1572	1,403	1,368	1,544	1,404
Conductivity - Lab	µS/cm	1,560	1,600	1,680	1,880	1,870	1,790	1,630	1,460	1,860	2,010	1,590	1,880	2,010	1,800	1,870	2,010	1,980	-	-	-	-	1,460	1,630	1,560	1,580	1,420	1,380	1,420	1,410
DOC - Dissolved Organic Carbon	mg/L	-	-	-	-	9.45	6.89	5.93	6.99	11.7	14.8	8.39	9.53	9.33	6.03	7.72	10.8	8.44	6.52	6.91	10.4	8.33	6.17	6.81	8.06	7.24	5.33	5.47	8.48	7.23
Fluoride	µg/L	870	760	830	880	980	840	680	600	970	990	780	1,030	1,030	780	1,000	<1,000	1,170	870	870	1,150	1,010	1080	980	1110	1020	<1.00	0.78	0.9	0.77
Hardness (as CaCO3)	mg/L	581	586	640	750	721	663	627	565	736	755	696	797	832	650	626	707	759	653	596	714	675	616	584	575	542	519	502	550	493
Hardness, Dissolved (as CaCO3)	mg/L																						-	-	-	-	517	518	507	505
Nitrate (as N)	µg/L	556	1,110	2,150	33	< 10	562	664	< 10	< 10	301	195	< 10	68	<10	<10	<100	11	<10	<10	<10	247	<100	<100	<10	<100	0.625	<0.100	<0.01	0.213
Nitrate+Nitrite (as N)	µg/L	595	1,190	2,170	48.6	< 10.0	577	685	< 10.0	-	380	195	< 10.0	113	<10	<10	100	29.9	<10	<10	11.9	306	<100	<100	<10	<100	0.625	<0.100	<0.01	0.213
Nitrite (as N)	µg/L	39	82	18	16	< 10	15	21	< 10	< 10	79	< 10	< 10	45	<10	<10	100	20	<10	<10	12	59	<10	<10	<10	<10	<0.100	<0.010	<0.01	<0.010
Nitrogen-N, Total	mg/L	1.9	2.6	2.98	0.875	1.04	1.53	1.92	0.615	2.25	3.06	1.44	1.17	2.86	1.59	1.03	1.62	1.49	0.885	0.623	1.31	1.39	0.719	0.635	0.996	1.45	1,400	641	3,030	1,160
Ortho-Phosphate	mg/L	-	-	-	-	0.0068	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0500	-	-	-	-	-	-	-	-	-	-	-	-	0.154	0.0695	<0.005	<0.0050
pH (field)	pH	9.03	8.24	8.16	8.62	9.63	9.43	9.05	8.76	8.98	8.85	8.9	8.83	8.41	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
pH (Lab)	pH	8.87	8.31	8.24	8.84	9.17	8.6	8.44	8.8	8.89	8.62	8.5	8.82	8.35	8.51	8.69	8.98	8.79	8.59	8.65	9.09	8.74	8.78	8.83	8.88	8.44	8.37	8.64	8.83	8.62
Phosphate	mg/L	< 0.0050	0.0653	0.108	< 0.0050	-	-	-	-	-	-	-	-	-	<0.0050	<0.0050	<0.0500	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	-	0.0120	-	-				
Phosphorus, Total (as P)	mg/L	0.159	0.172	0.253	0.288	0.112	0.0803	0.092	0.0593	0.146	0.219	0.0774	0.123	0.295	0.121	0.2	0.118	0.102	0.056	0.0432	0.0362	0.0868	0.0377	0.0420	0.0728	0.17	0.204	0.0976	0.217	0.184
Sulphate	mg/L	206	207	197	296	281	224	184	155	280	296	209	296	275	203	255	315	289	211	171	295	267	190	201	168	156	118	107	140	125
TDS - Solids, Total Dissolved	mg/L	1,020	964	986	1,330	1,220	1,120	1,040	935	1,270	1,300	1,070	1,310	1,340	1,030	1,210	1,270	1,260	1020	1050	1210	1120	961	850	960	958	826	818	892	885
Temperature	C	19.4	8	8.8	21.7	21.6	9.6	8.8	19.4	21.6	5.5	6.7	20.1	11.2	-	-	-	-	-	-	-	-	-	-	-	-				
TKN - Kjeldahl Nitrogen-N	mg/L	1.3	1.42	0.81	0.826	1.04	0.95	1.24	0.615	2.25	2.68	1.25	1.17	2.74	1.59	1.03	1.52	1.46	0.885	0.623	1.3	1.08	0.719	0.635	0.996	1.45	0.775	0.641	3.03	0.947
TOC - Carbon, Total Organic	mg/L	10.8	7.15	6.38	8.11	10.5	7.25	6.84	7.04	13.4	14.8	8.57	9.62	9.68	-	-	-	-	-	-	-	-	-	-	-	-	5.49	5.58	9.36	7.84
TSS - Solids, Total Suspended	mg/L	3.4	2.6	2.3	3	5	7.7	7.2	2	21.2	18.7	22	2.8	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2.8	-	4.4
Total Metals																														
Aluminum	µg/L	33.1	41.2	41.2	15	37.3	173	87.1	28.7	56.3	70.9	27.4	9.8	36.9	86.5	13.4	6.9	30.5	14	8.6	22.6	21.2	39.1	30.7	5.5	15.2	47.7	24.1	28.6	51.2
Antimony	µg/L	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	0.101	0.128	0.181	0.173	0.12	0.159	0.133	<0.250	0.107	0.127	0.123	0.09	0.089	0.136	0.131	0.073	0.107	0.081	0.071	0.084	0.092	0.105	0.088
Arsenic	µg/L	1.71	1.28	1.54	2.28	1.89	1.4	0.875	0.963	2.48	2.46	1.08	1.69	1.48	0.699	1.59	1.79	1.55	0.744	1.04	1.56	1.5	0.863	1.01	0.971	0.899	0.766	0.996	1.04	0.963
Barium	µg/L	90.6	95.2	98.2	97	99.3	102	72.4	76.8	65.6	95.2	113	85.8	124	104	71.7	110	103	93.8	87.2	108	95.8	89.2	83.5	86	83.5	85.8	88.8	104	91.4
Beryllium	µg/L	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	<0.050	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.01	<0.010
Bismuth	µg/L	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	<0.050	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.01	<0.010
Boron	µg/L	21.9	23.5	29.4	48.7	22.3	27.8	25.9	27.8	41.9	51.5	48.7	42.8	46.7	30.1	35.7	43.5	36.6	26.6	30.6	32.7	25.4	25.1	22.4	17.8	16	21.4	29.6	40.3	30.3
Cadmium	µg/L	0.02	< 0.010	< 0.010	0.012	< 0.010	0.014	0.0073	0.0056	0.0046	0.0053	0.0081	0.008	0.0055	<0.0100	<0.0060	<0.0040	<0.0060	<0.0020	<0.0030	<0.0060	<0.0120	<0.0040	<0.0040	<0.0040	<0.0040	<0.0060	<0.0040	<0.0066	0.0127
Calcium	µg/L	35,000	53,300	61,600	55,600	22,400	39,500	54,900	44,300	36,300	40,900	53,400	48,100	52,400	42,600	47,500	21,400	25,800	37,500	35,800	18,700	22,400	30,600	31,400	22,600	30,100	43500	43700	24000	31200
Chromium	µg/L	0.68	< 0.50	0.74	< 0.50	< 0.50	0.89	1.06	0.32	0.29	0.38	0.81	0.48	0.38	0.78	0.27	0.26	0.31	0.48	<0.50	0.52	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.5	<0.50
Cobalt	µg/L	0.19	0.12	0.16	0.19	0.18	0.22	0.183	0.149	0.182	0.244	0.174	0.195	0.166	0.147	0.161	0.128	0.139	0.122	0.12	0.128	0.114	0.113	0.121	0.0716	0.0786	0.0989	0.116	0.111	0.107
Copper	µg/L	1.88	1.44	1.35	1.02	0.57	1.19	1.1	1	0.62	0.88	0.73	0.65	0.33	<1.00	0.56	0.23	0.32	1.4	0.41	0.56	0.37	0.49	0.50	7.16	0.21	0.61	0.51	1.21	0.47
Iron	µg/L	44	47	50	17	55	227	120	35.8	73.3	88.1	41.2	25.4	65.7	76.7	16.6	9.8	40.8	24.9	13.7	36	34.3	26.1	36.8	7.6	19.9	69.4	32	40.9	45.6
Lead	µg/L	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	0.21	0.14	0.056	0.058	0.094	0.055	< 0.050	0.053	<0.250	0.066	<0.050	<0.050	<0.050	<0.050	0.055	<0.050	<0.050	<0.050	<0.050	<0.050	0.066	0.053	<0.05	<0.050
Lithium	µg/L	27.2	24.8	28.2	33.5	37.4	32.1	31.7	27.4	33.2	36.5	28.9	35.9	39.3	28.7	27.8	35.2	32	28.4	27.6	36.9	33.8	31.6	29.7	35.8	28.9	27.4	24.7	33.2	27
Magnesium	µg/L	120,000	110,000	118,000	148,000	161,000	137,000	119,000	110,000	157,000	159,000	137,000	164,000	170,000	132,000	123,000	159,000	169,000	136,000	123,000	162,000	150,000	131,000	123,000	126,000	113,000	99,500	95,400	119,000	101,000
Manganese	µg/L	51.4	26.8	78.3	21.9	12.8	18.6	36.4	13	39.1	44.5	26.1	29.2	64	48.3	45.6	48.4	38	37.1	16.4	35.9	18.4	10.6	15.3	22.6	31.9	19.8	27.8	52.1	8.43
Mercury	µg/L	< 0.010	< 0.010	< 0.040a	< 0.040a	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.01	<0.010
Molybdenum	µg/L	9.74	10.3	11.1	14.3	14.7	13.5	10.2	8.84	10.4	10.8	10.5	14.3	14.4	12.3	15.6	14	15.1	12.5	13.2	14.3	16.9	15.0	13.7	12.3	12.9	10.6	12	11.5	13.9
Nickel	µg/L	1.2	1.17	1.22	1.48	1.33	1.49	1.09	0.941	1.39	1.59	1.35	1.66	1.35	1.04	1.22	1.25	1.39	1.01	1.07	1.31	1.2	0.976	0.912	0.71	0.728	0.707	0.758	0.657	0.797
Phosphorous	µg/L	145	175	257	311	129	84	87	50	168	269	144	163	318	112	195	105	106	67	52	92	87	35	38	89	157	215	125	210	<70
Potassium	µg/L	11,600	10,800	11,000	11,600	13,000	12,400	10,700	9,510	14,800	15,700	12,600	12,300	15,800	11,000	10,700	13,700	14,100	12,000	10,900	15,000	13,500	12,200	11,200	12,100	11,500	11,000	10,400	14,100	11,700
Selenium	µg/L	1.29	1.02	1.39	1.03	1.36	1.28	1.19	0.9	0.67	0.7	0.98	0.64	0.68	0.8	0.69	0.92	0.88	0.9	0.93	1.11	1.02	0.88	0.93	0.86	0.63	0.82	0.85	0.92	0.91
Silicon	µg/L	9,200	11,500	9,300	8,800	9,600	11,000	10,500	410	4,730	800	2,820	2,950	12,000	1,710	5,350	10,700	11,300	5,190	4,290	5,330	7,310	290	380	10,100	14,200	9,820	5,820	18,900	17,800
Silver	µg/L	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	0.014	< 0.010	< 0.010	0.011	< 0.010	< 0.010	< 0.010	<0.050	<0.010	<0.010	0.012	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	0.011	<0.01	0.01
Sodium	µg/L	165,000	143,000	152,000	213,000	214,000	174,000	151,000	140,000	213,000	225,000	178,000	221,000	224,000	173,000	165,000	217,000	240,000	187,000	164,000	225,000	207,000	181,000	166,000	169,000	154,000	127,000	127,000	149,000	137,000
Strontium	µg/L	2,940	2,840	3,090	3,260	3,450	3,440	3,400	3,430	3,220	3,430	>100,000,000	3,190	4,140	3,030	2,980	3,400	3,360	3,220	2,990	3,300	3,130	2,980	2,880	3,060	2,840	2,640	2,770	2,850	2,750
Sulphur	µg/L	87,500	65,900	76,900	108,000	109,000	86,900	68,100	58,100	113,000	120,000	82,000	117,000	99,800	66,800	78,800	108,000	104,000	76,100	72,300	108,000	95,500	79,000	68,800	60,300	58,300	-	47,100	51,400	47,100
Sulfur (As S)	µg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	47,300	-	-	-
Tellurium	µg/L	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	<0.250	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.05	<0.050
Thallium	µg/L	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.0040	< 0.0040	< 0.0040	< 0.0040	< 0.0040	< 0.0040	< 0.0040	<0.0200	<0.0040	<0.0040	<0.0040	<0.0040	<0.0040	<0.0040	<0.0040	<0.0040	<0.0040	<0.0040	<0.0040	<0.0040	<0.0040	<0.004	<0.0040
Thorium	µg/L	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	0.015	< 0.010	0.011	0.016	< 0.010	< 0.010	< 0.010	<0.050	<0.010	<0.010	<0.010	0.039	<0.010	0.073	0.013	<0.010	<0.010	0.011	0.015	<0.010	<0.010	<0.01	<0.010
Tin	µg/L	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	0.05	< 0.050	< 0.050	< 0.050	0.103	< 0.050	< 0.050	<0.250	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.100	<0.100	<0.1	<0.100
Titanium	µg/L	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	9.2	4.55	1.31	2.67	3.39	1.92	0.82	2.32	2.6	0.61	0.34	1.47	1.25	0.43	1.26	0.93	1.60	1.24	0.24	0.65	2.58	1.13	1.41	2.52
Tungsten	µg/L	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	<1.00	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.2	<0.20
Uranium	µg/L	17.8	22	25.6	29.9	26.6	26.9	24.7	20.2	20.1	20.9	22.4	26.1	27.4	20.3	24.3	21.5	24.5	22.3	23.6	22.6	25.2	23.3	23.6	19.4	18.2	18.8	20.3	16	19
Vanadium	µg/L	2.8	2.8	2.9	4.4	3	3.4	2.94	2.95	2.63	2.24	2.2	1.7	0.97	4.28	2.35	2.06	2.93	2.46	2.8	2.49	2.74	2.47	2.44	1.08	<1.00	2.12	2.51	2.28	3.55
Zinc	µg/L	5.9	8.6	10.6	< 4.0	< 4.0	7.4	3.7	1.3	3	3.6	3.5	1.7	2.9	<5.0	1.3	<1.0	1.2	1.5	<1.0	2.6	1.9	<1.0	<1.0	1.5	2.2	2	1.2	1.1	1.1
Zirconium	µg/L	0.12	0.13	0.15	0.11	< 0.10	0.19	0.207	0.091	0.183	0.251	0.198	0.1	0.139	0.142	0.151	0.094	0.126	0.151	0.084	0.087	0.095	0.147	0.085	0.027	0.053	0.124	0.082	0.056	0.108
Microbiological																														
Coliforms, Fecal (Q-Tray)	MPN/100ml	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	4	4	58	20	46	56	162	10
Coliforms, Total (Q-Tray)	MPN/100ml	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	204	46	1,410	770	579	365	1,550	185

Associated CARO file(s) available on request
Associated Exova file(s): 107524, 115040, 417280, 438503, 47748, 593413, 610415, 653618, 683622, 714220, 714240, 95223., 8040426, 8041402, 8041784, 8050436, 8052167, 8061543, 8071280, 8090442, 8110640, 8110821, 9032473, 9050543, 9060474, 9090312, N000861, 0040546, 0060737, 0091922, 20J3095.

All terms defined within the body of Keltech's report

Table H3: Summary of Surface Water
Analytical Results - HISTORICAL to 2025

Location		NE Pond																												
Sample ID		NE Pond-20130429	NE Pond-20130528	NE Pond-20130718	NE Pond-20131016	NE Pond-20140331	NE Pond-20140528	NE Pond-20140828	NE Pond-20150311	NE Pond-20150616	NE Pond-20151029	NE SAMPLE-20160518	NE POND-20160914	NE POND-20161116	NE POND-20170418	NE POND-20170607	NE POND-20170907	NE POND-20171101	NORTHEAST POND-180404	NORTHEAST POND-180523	NORTHEAST POND-180906	NORTHEAST POND-181107	Northeast Pond	Northeast Pond	Northeast Pond	NE Pond	NEPOND-200407	NEPOND-200605	NEPOND-200918	NEPOND-201028
Sample Date		2013 04 29	2013 05 28	2013 07 18	2013 10 16	2014 03 31	2014 05 28	2014 08 28	2015 03 11	2015 06 16	2015 10 29	2016 05 18	2016 09 14	2016 11 16	2017 04 18	2017 06 07	2017 09 07	2017 11 01	2018 04 04	2018 05 23	2018 09 06	2018 11 07	2019 03 29	2019 06 05	2019 09 04	2019 10 23	2020 04 07	2020 06 05	2020 09 18	2020 10 28
Parameter	**Units**	**Analytical Results**																												
General																														
Alkalinity, Bicarbonate as CaCO3	mg/L	-	-	684	726	696	659	581	660	727	690	747	871	939	766	719	530	651	568	542	1,020	725	-	712	584	987	753	662	703	798
Alkalinity, Carbonate (as CaCO3)	mg/L	-	-	186	145	112	127	199	131	161	258	196	217	53	85.4	157	403	294	189	175	99.6	61.8	46.7	146	323	< 1.0	68.3	208	289	109
Alkalinity, Hydroxide (as CaCO3)	mg/L	-	-	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Alkalinity, Phenolphthalein as CaCO3)	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	94.3	87.6	49.8	30.9	23.4	72.9	161	< 1.0	34.2	104	144	54.5
Alkalinity, Total (as CaCO3)	mg/L	-	-	870	871	808	785	780	791	888	949	943	1,090	992	852	876	933	945	757	717	1,120	787	603	858	907	987	821	870	992	907
Ammonia, Total (as N)	µg/L	95.1	56.9	65.1	149	8.2	62.2	17.6	180	15.1	50.3	21.9	26.4	2,090	73.4	11.2	71.8	122	40	67	154	133	24	195	60	225	< 50	199	422	180
Bicarbonate	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	556	-	-	-	-	-	-	-
Bromide	mg/L	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	0.48	< 0.10	< 1.00	< 1.00	0.23	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	0.26	< 0.10
Chloride	mg/L	137	145	150	157	133	137	150	143	155	183	167	212	185	146	155	192	207	13.2	133	176	164	113	161	180	194	167	160	194	139
COD - Chemical Oxygen Demand	mg/L	43	51	41	48	39	37	80	44	49	55	47	74	52	33	35	57	53	59	< 20	116	67	49	32	40	35	34	48	93	69
Conductivity - Field	µS/cm	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1,965	2,436	385	2,050	1,577	2,267	2,484	2,659	2,264	2,311	2,914	2,758
Conductivity - Lab	µS/cm	2,220	2,360	2,400	2,430	2,230	2,190	2,160	2,240	2,240	2,780	2,760	3,160	2,960	2,460	2,500	2,790	2,740	2,400	2,440	3,100	2,170	1,910	2,570	2,620	2,710	2,470	2,460	2,750	2,660
DOC - Dissolved Organic Carbon	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	14	11.2	11	14.5	25.8	18.4
Fluoride	µg/L	2,080	1,640	1,820	1,700	1,400	1,800	1,940	1,390	1,540	1,540	1,440	1,820	1,560	1,320	1,560	1,570	1,790	1,210	920	2,260	1,360	1,010	1,260	1,670	1,600	1,370	1,310	1,660	1,220
Hardness (as CaCO3)	mg/L	899	948	951	937	858	814	775	810	870	941	913	1,060	1,010	944	967	1,050	1,060	961	937	1,180	1,030	724	1,010	1,040	1,040	1,000	1,050	1,030	1,030
Hardness, Dissolved (as CaCO3)	mg/L																													
Nitrate (as N)	µg/L	< 100	< 100	< 100	< 100	< 100	< 100	< 100	< 100	< 100	< 100	< 100	< 100	< 100	< 100	< 100	< 100	< 100	17	< 10	< 100	< 10	< 10	< 10	< 10	224	< 10	< 10	< 10	31
Nitrate+Nitrite (as N)	µg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	16.8	< 10.0	< 100	< 10.0	< 10.0	< 10.0	< 10.0	224	< 10.0	< 10.0	-	31.1
Nitrite (as N)	µg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	< 10	< 10	< 100	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10
Nitrogen-N, Total	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.955	0.988	3.4	2.37	1.36	1.33	1.22	1.25	0.863	1.33	3.66	2.33
Ortho-Phosphate	mg/L	0.369	0.503	0.445	0.157	0.27	0.353	0.114	0.199	0.307	0.146	0.172	0.125	0.357	0.085	0.3	0.15	0.226	-	-	-	-	-	-	< 0.0050	< 0.0050	< 0.0050	0.104	0.0212	< 0.0050
pH (field)	pH	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	8.95	8.72	8.84	8.61	8.72	8.33	9.62	9.04	9	8.67	8.85	8.69
pH (Lab)	pH	8.72	8.76	8.83	8.78	8.66	8.77	8.96	-	-	9.08	-	-	8.47	8.62	8.86	9.31	9.11	8.81	8.8	8.52	8.45	8.49	8.6	8.98	8.52	8.46	8.72	8.82	8.5
Phosphate	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.133	0.0154	0.066	0.0951	0.109	< 0.0050	-	-	-	-	-	-
Phosphorus, Total (as P)	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.48	0.081	1.24	0.452	0.383	0.31	0.144	0.347	0.314	0.357	0.457	0.322
Sulphate	mg/L	417	465	446	432	405	379	363	413	486	551	598	744	644	539	586	685	676	483	431	518	456	349	506	546	523	543	488	541	397
TDS - Solids, Total Dissolved	mg/L	1,260	1,670	1,540	1,750	1,490	1,190	1,440	1,510	1,670	2,060	1,950	2,310	2,130	1,630	1,730	2,070	1,980	1,670	1,740	2,210	1,570	1,080	1,800	1,710	1,850	1,810	1,820	2,380	1,580
Temperature	C	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	8.8	24.1	17.91	7.7	10.9	22.4	19.8	9	9.3	20.2	18.4	4.5
TKN - Kjeldahl Nitrogen-N	mg/L	-	-	1.88	1.59	1.29	1.17	2.35	1.59	1.28	1.58	1.29	2.71	3.17	1.11	1.05	2.13	1.32	0.938	0.988	3.4	2.37	1.36	1.33	1.22	1.02	0.863	1.33	3.66	2.3
TOC - Carbon, Total Organic	mg/L	14.9	13.5	17.7	16.9	12.1	11	18.8	12.8	14.1	16.9	17.2	20.6	15.9	13	15	20.7	15.8	12.8	13.8	20.8	18.3	8.16	12.1	14.5	11.5	11	15.2	26.3	19
TSS - Solids, Total Suspended	mg/L	3.1	4	< 3.0	6	5.5	< 3.0	10.3	8.8	3.4	3.6	< 3.0	14.1	4.5	3.6	6.9	4.2	3.6	6.4	< 2.5	106	41.5	28.5	7.2	8.7	3.8	2.4	3.2	10.2	12.4
Total Metals																														
Aluminum	µg/L	73	36	15	56	84	23	23	56	26	64	< 10	44	69	62	31	159	100	98.2	23.6	1,660	588	331	140	142	35.1	27.2	17.6	73.4	77.9
Antimony	µg/L	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	0.23	0.27	0.44	0.21	< 0.20	0.23	0.28	0.2	0.178	0.219	0.345	0.22
Arsenic	µg/L	2.1	3.1	2.7	3.1	2.3	2.5	3.4	2	3.6	4.3	4.2	5.8	3.7	2.4	4.1	6.5	5.3	4.08	4.63	9.04	3.25	2.59	3.77	4.42	3.48	3.37	3.95	6.45	3.76
Barium	µg/L	53	< 20	< 20	73	69	52	89	96	56	83	72	104	107	82	96	110	90	67.1	79.9	150	117	64.8	93.4	84.7	64.8	39.2	15.4	115	105
Beryllium	µg/L	< 5.0a	< 5.0a	< 5.0a	< 5.0a	< 5.0a	< 5.0a	< 5.0a	< 5.0a	< 5.0a	< 5.0a	< 5.0a	< 5.0a	< 5.0a	< 5.0a	< 5.0a	< 5.0a	< 5.0a	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.010	< 0.010	< 0.010	0.196
Bismuth	µg/L	-	-	-	-	-	-	-	-	< 200	< 200	-	< 200	< 200	< 200	< 200	< 200	< 200	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.010	< 0.010	< 0.010	< 0.010
Boron	µg/L	< 100	< 100	< 100	< 100	< 100	< 100	< 100	< 100	< 100	< 100	< 100	100	< 100	< 100	< 100	< 100	< 100	53.4	66.3	131	102	56.9	102	34.2	48.7	61	87.1	78	89.7
Cadmium	µg/L	0.101	< 0.050	< 0.050	< 0.10	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.010	0.01	0.035	0.019	0.024	0.026	< 0.010	0.013	0.0056	0.0069	0.0061	0.0084
Calcium	µg/L	43,900	51,200	48,200	43,500	49,700	45,300	23,300	45,500	31,800	22,500	32,300	26,400	34,300	51,400	46,400	17,200	24,900	42,300	44,700	64,800	67,000	53,900	52,700	24,300	33,200	53,000	52,600	39,400	40,500
Chromium	µg/L	< 0.50	0.6	< 0.50	< 1.0	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	4.42	1.6	0.9	< 0.50	0.92	< 0.50	0.58	0.14	0.36	0.27
Cobalt	µg/L	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	0.42	0.36	1.64	0.93	0.62	0.56	0.37	0.53	0.324	0.245	0.545	0.621
Copper	µg/L	< 1.0a	1.4	< 1.0a	< 1.0a	< 1.0a	< 1.0a	< 1.0a	< 1.0a	< 1.0a	< 1.0a	< 1.0a	2	< 1.0a	< 1.0a	< 1.0a	1.6	1.1	1.42	1.17	9.73	5.35	1.54	1.92	0.72	0.48	0.67	0.32	0.66	10.6
Iron	µg/L	93	59	< 30	69	119	32	30	94	< 30	94	< 30	63	84	81	32	162	111	155	39	2,440	942	555	194	202	62	55.4	36.8	149	151
Lead	µg/L	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 0.20	< 0.20	1.35	0.58	0.51	0.21	< 0.20	< 0.20	0.06	< 0.050	0.117	0.157
Lithium	µg/L	< 50	< 50	< 50	< 50	< 50	< 50	< 50	< 50	< 50	< 50	< 50	< 50	< 50	< 50	< 50	< 50	< 50	32	31.7	48	40.3	27.7	44.9	53.6	45.4	44.1	40.2	34.8	48.2
Magnesium	µg/L	192,000	199,000	208,000	201,000	178,000	170,000	174,000	169,000	192,000	215,000	202,000	242,000	225,000	198,000	207,000	244,000	241,000	208,000	200,000	247,000	211,000	143,000	214,000	237,000	232,000	211,000	223,000	226,000	225,000
Manganese	µg/L	59	99	202	22	87	59	116	113	43	47	29	65	97	71	65	25	141	181	44.6	701	183	180	119	81.1	220	176	132	318	261
Mercury	µg/L	< 0.20a	< 0.20a	< 0.20a	< 0.20a	< 0.20a	< 0.20a	< 0.20a	< 0.20a	< 0.20a	< 0.20a	< 0.20a	< 0.20a	< 0.20a	< 0.20a	< 0.20a	< 0.20a	< 0.20a	< 0.010	< 0.010	< 0.010	< 0.010	< 0.040a	< 0.040a	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010
Molybdenum	µg/L	13.3	16.7	15.4	20.3	18.2	16.9	13.2	11.2	16.2	17.9	15.1	19.6	21.4	18.9	17.7	19.6	24.7	22.1	23.9	12	23.3	11.9	27.3	30	32.9	22.2	18.6	18.6	22
Nickel	µg/L	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	2.88	2.57	6.57	3.78	3.11	3.54	2.87	4.34	2.94	2.45	3.01	3.28
Phosphorous	µg/L	-	-	-	-	-	-	-	-	390	< 300	-	350	410	< 300	390	< 300	< 300	354	90	1,260	575	345	325	149	246	350	343	555	344
Potassium	µg/L	-	-	-	-	-	-	-	-	17,400	18,800	-	27,300	22,700	17,000	17,300	17,700	18,700	16,700	19,200	24,200	19,200	11,500	16,000	15,800	16,100	15,900	17,600	22,100	17,600
Selenium	µg/L	< 1.0	< 1.0	< 1.0	< 2.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	0.38	0.28	0.33	0.22
Silicon	µg/L	-	-	-	-	-	-	-	-	3,730	6,970	-	8,680	7,500	3,590	3,040	3,460	2,580	5,000	< 1,000	15,800	13,200	8,100	2,300	2,000	3,000	5,480	2,760	10,400	10,000
Silver	µg/L	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	0.152	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.010	< 0.010	< 0.010	< 0.010
Sodium	µg/L	256,000	263,000	285,000	296,000	230,000	235,000	225,000	244,000	286,000	349,000	352,000	442,000	388,000	300,000	316,000	363,000	370,000	343,000	279,000	360,000	288,000	192,000	317,000	329,000	304,000	298,000	328,000	322,000	323,000
Strontium	µg/L	-	-	-	-	-	-	-	-	3,060	3,450	-	3,690	3,520	3,240	3,360	3,500	3,430	3,300	3,640	4,880	3,880	2,780	3,840	4,120	4,160	3,890	4,210	3,670	4,230
Sulphur	µg/L	-	-	-	-	-	-	-	-	147,000	181,000	-	-	-	-	-	-	-	191,000	224,000	228,000	169,000	135,000	197,000	206,000	202,000	198,000	211,000	176,000	194,000
Sulfur (As S)	µg/L																													
Tellurium	µg/L	-	-	-	-	-	-	-	-	0.61	< 0.40	-	-	< 0.40	< 0.40	0.55	0.44	< 0.40	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.050	< 0.050	< 0.050	< 0.050
Thallium	µg/L	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.020	< 0.020	0.02	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.0040	< 0.0040	< 0.0040	< 0.0040
Thorium	µg/L	-	-	-	-	-	-	-	-	< 0.10	< 0.20	-	-	-	< 0.20	< 0.10	< 0.20	< 0.20	< 0.10	< 0.10	0.14	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	0.011	< 0.010	0.016	0.026
Tin	µg/L	-	-	-	-	-	-	-	-	< 30	< 30	-	< 30	< 30	< 30	< 30	< 30	< 30	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.050	< 0.050	< 0.050	< 0.050
Titanium	µg/L	< 50	< 50	< 50	< 50	< 50	< 50	< 50	< 50	< 50	< 50	< 50	< 50	< 50	< 50	< 50	< 50	< 50	6.2	< 5.0	95	33.9	18	7.8	7.8	< 5.0	2.04	1.32	5.71	6.83
Tungsten	µg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 0.20	< 0.20	< 0.20	< 0.20
Uranium	µg/L	25.3	27.9	23.3	28.6	26.2	27.2	22.1	17.5	21	21.4	24	26.5	27.7	28.6	25.6	28.7	34.4	31.2	32.3	29.1	36.6	25.1	41	40.8	54.4	40.9	33.6	26.6	32.6
Vanadium	µg/L	< 30	< 30	< 30	< 30	< 30	< 30	< 30	< 30	< 30	< 30	< 30	< 30	< 30	< 30	< 30	< 30	< 30	2.8	3.3	8	3.6	2.7	4.6	2.2	1.6	2.12	2.5	4.09	3.41
Zinc	µg/L	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	15.8	< 5.0	< 6.0	< 4.0	4.4	8.5	4.4	4.2	< 4.0	< 4.0	< 4.0	< 1.0	< 1.0	3	2.4
Zirconium	µg/L	-	-	-	-	-	-	-	-	-	< 0.60	-	-	0.69	0.78	0.61	0.46	0.45	0.71	0.19	0.39	0.66	0.52	0.55	0.23	0.35	0.572	0.345	0.716	0.948
Microbiological																														
Coliforms, Fecal (Q-Tray)	MPN/100ml	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Coliforms, Total (Q-Tray)	MPN/100ml	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Associated CARO file(s) available on request
Associated Exova file(s): 107524, 115040, 417280, 438503, 47748, 593413, 610415, 653618, 683622, 714220, 714240, 95223., 8040426, 8041402, 8041784, 8050436, 8052167, 8061543, 8071280, 8090442, 8110640, 8110821, 9032473, 9050543, 9060474, 9090312, N000861, 0040546, 0060737, 0091922, 20J3095.

All terms defined within the body of Keltech's report

Table H3: Summary of Surface Water
Analytical Results - HISTORICAL to 2025

Location		NE Pond																		Alki L				Slough					
Sample ID		NE POND-210323	NE POND-210616	NE POND-211019	NE POND-220322	NE POND-220621	NE POND-220912	NE POND-221019	NE POND-230329	NE POND-230518	NE POND-230927	NE POND-231101	NE Pond	NE Pond	NE Pond	NE Pond	NE Pond	NE Pond	NE Pond	NE Pond	Alki Lake-20080506	Alki Lake-20080507	Alki Lake-20080520	Alki Lake-20091119	Slough-20010619	Slough-20010815	Slough-20010920	Slough-20090521	Slough-20010920	Slough-20090521
Sample Date		2021 03 23	2021 06 16	2021 10 19	2022 03 22	2022 06 21	2022 09 12	2022 10 19	2023 03 29	2023 05 18	2023 09 27	2023 11 01	2024-03-21	2024-05-10	2024-09-11	2024-10-22	2025-03-11	2025-05-15	2025-09-22	2025-11-05	2008 05 06	2008 05 07	2008 05 20	2009 11 19	2001 06 19	2001 08 15	2001 08 15	2009 05 21	2001 09 20	2009 05 21
Parameter	**Units**	**Analytical Results**																											
General																													
Alkalinity, Bicarbonate (as CaCO3)	mg/L	801	724	846	847	714	430	593	616	648	526	673	656	664	455	571	311	509	613	708	-	-	-	-	-	-	-	-	-	-
Alkalinity, Carbonate (as CaCO3)	mg/L	50	266	172	60.7	230	590	334	64.9	158	421	213	131	179	485	400	130	203	330	263	-	-	-	-	-	-	-	-	-	-
Alkalinity, Hydroxide (as CaCO3)	mg/L	< 1.0	< 1.0	< 1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1	<1.0	-	-	-	-	-	-	-	-	-	-
Alkalinity, Phenolphthalein as CaCO3)	mg/L	25	133	86.2	30.3	115	295	167	32.4	79.1	211	107	65.4	89.0	242	200	64.8	101	165	132	-	-	-	-	-	-	-	-	-	-
Alkalinity, Total (as CaCO3)	mg/L	851	990	1,020	907	944	1020	928	681	806	947	886	787	843	940	971	440	712	943	971	7,420	-	8,220	-	-	-	-	-	-	-
Ammonia, Total (as N)	µg/L	< 50	112	735	<50	59	266	<50	69	85	163	509	0.238	<0.050	0.094	0.069	52	<50	66	<50	490	-	1,770	-	-	-	-	-	-	-
Bicarbonate	mg/L	-	-	-	-	-	-	-	-	-	-	-									-	-	-	-	-	-	-	-	-	-
Bromide	mg/L	< 1.00	< 0.10	< 1.00	0.31	<1.00	<0.10	<0.10	<0.10	<0.10	<1.00	<0.10	0.24	0.25	<0.10	0.26	<1.00	0.2	<0.1	<0.10	-	-	-	-	-	-	-	-	-	-
Chloride	mg/L	143	186	201	173	184	220	210	166	182	248	228	172	196	240	221	96.7	150	208	238	1,050	-	1,130	-	-	-	-	-	-	-
COD - Chemical Oxygen Demand	mg/L	42	45	41	126	50	65	46	<20	45	43	44	39	39	57	54	35	45	105	59	556	-	440	-	-	-	-	-	-	-
Conductivity - Field	µS/cm	2,392.00	2,729	2,980.80	2,640	2,833	2,915	2,900	-	-	-	-	1487	680	1519	3076	1,577	2,416	3,049	2,899	-	-	-	-	-	-	-	-	-	-
Conductivity - Lab	µS/cm	2,200	2,420	2,960	2,630	2,660	2,850	2,890	-	-	-	-	2,460	2,910	3,100	3,140	1,580	2,400	2,860	2,890	20,000	-	22,000	-	-	-	-	-	-	-
DOC - Dissolved Organic Carbon	mg/L	12.4	13.4	14.8	11.1	26	19.4	18.2	13.4	9.49	20.4	16.6	9.89	13.7	17.1	18.5	10.5	13.6	22.2	18.8	-	-	-	-	-	-	-	-	-	-
Fluoride	µg/L	1,380	1,660	1,840	1,440	1,130	2,000	1,900	1,350	1,540	1,380	1,470	1590	1600	1880	1760	<1000	1240	1310	<1000	-	-	-	-	-	-	-	-	-	-
Hardness (as CaCO3)	mg/L	963	1,080	1,220	977	942	1,140	1,250	933	1,010	1,130	1,160	1,060	1,080	1,200	1,240	553	884	1,000	1,020	-	-	1,070	1,120	-	-	-	-	-	13
Hardness, Dissolved (as CaCO3)	mg/L												-	-	-	-	541	912	1,090	1,060										
Nitrate (as N)	µg/L	< 10	< 10	< 10	<10	<100	<10	20	<10	<500	<100	<10	<100	<100	<100	<100	0.141	<0.100	<0.01	<0.100	23	-	25	-	-	-	-	-	-	-
Nitrate+Nitrite (as N)	µg/L	< 10.0	< 10.0	25	<10	<100	<10	20.3	<10	<500	<100	38.8	<100	<100	<10	<100	0.141	<0.100	<0.01	<0.100	-	-	-	-	-	-	-	-	-	-
Nitrite (as N)	µg/L	< 10	< 10	25	<10	<10	<10	<10	<10	<10	<10	39	<10	<10	<10	<10	<0.100	<0.010	<0.01	<0.100	-	-	-	-	-	-	-	-	-	-
Nitrogen-N, Total	mg/L	0.965	1.43	1.95	1.21	1.66	1.79	1.4	0.87	1.28	1.66	1.98	1.04	1.11	1.8	1.61	1.15	1.22	2.92	1.64	-	-	-	-	-	-	-	-	-	-
Ortho-Phosphate	mg/L	< 0.0050	< 0.0050	< 0.0500	-	-	-	-	-	-	-	-	-	-	-	-	0.0533	0.0736	0.0091	<0.0050	< 1.00	-	< 1.00	-	-	-	-	-	-	-
pH (field)	pH	8.5	8.83	8.7	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
pH (Lab)	pH	8.42	8.89	8.6	8.43	8.72	9.42	8.97	8.47	8.67	9.07	8.76	8.53	8.75	9.33	9.16	8.9	8.94	9.11	8.88	9.49	-	9.43	-	-	-	-	-	-	-
Phosphate	mg/L	-	-	-	<0.0050	0.128	<0.0050	<0.0050	<0.0050	0.0119	<0.0050	<0.0050	-	0.161	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Phosphorus, Total (as P)	mg/L	0.243	0.227	0.218	0.36	0.512	0.179	0.123	0.22	0.339	0.147	0.227	0.146	0.256	0.15	0.0967	0.134	0.131	0.377	0.214	-	-	-	-	-	-	-	-	-	-
Sulphate	mg/L	424	541	569	513	545	655	624	502	547	708	658	509	591	664	639	285	430	556	553	4,680	-	4,980	-	6,850	-	17,800	-	-	-
TDS - Solids, Total Dissolved	mg/L	1,640	1,800	2,040	1,740	1,950	1,840	1,870	1,430	1,910	2,700	1,800	1,610	1,870	2,150	2,390	1,020	1,630	2,160	2,060	17,500	-	18,400	-	24,200	-	53,500	-	91,500	-
Temperature	C	6.5	23.6	10.8	-	-	-	-	-	-	-	-	-	-	-	-					-	-	-	-	-	-	-	-	-	-
TKN - Kjeldahl Nitrogen-N	mg/L	0.965	1.43	1.92	1.21	1.66	1.79	1.38	0.87	1.28	1.66	1.94	1.04	1.11	1.8	1.61	1.01	1.22	2.92	1.64	13.1	-	20.8	-	-	-	-	-	-	-
TOC - Carbon, Total Organic	mg/L	14.1	13.8	17	-	-	-	-	-	-	-	-	-	-	-	-	11.2	14	24.7	20.6	285	-	307	-	260	-	810	-	1,440	-
TSS - Solids, Total Suspended	mg/L	6	9.2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	7		13.8	-	242	88	-	-	-	-	-	-	-
Total Metals																														
Aluminum	µg/L	117	198	79.9	114	58.2	210	198	31	233	113	278	81.2	124	86.9	89.3	245	22.2	39.4	184	-	-	-	-	190	260	-	-	460580	-
Antimony	µg/L	0.201	0.214	0.187	<0.250	0.172	0.236	0.199	0.128	0.174	0.308	0.246	0.156	0.215	0.339	0.338	0.167	0.256	0.389	0.267	-	-	-	-	< 50a	< 100a	-	< 200a	< 200a	-
Arsenic	µg/L	2.53	3.31	2.65	2	3.71	4.11	3.49	2.08	3.06	4.35	3.62	2.27	3.16	5.12	5.06	2.21	3.93	5.47	3.88	-	-	-	-	140	< 200a	-	< 500a	530	-
Barium	µg/L	60.5	55.1	129	86.3	94.6	119	123	82.2	107	112	117	102	115	128	92.8	43.1	16.3	31.2	106	-	-	-	-	430	108	-	95	255	-
Beryllium	µg/L	< 0.010	< 0.010	< 0.010	<0.050	<0.010	<0.010	<0.010	<0.010	0.012	<0.010	0.011	<0.010	<0.010	<0.010	<0.010	0.01	<0.010	<0.01	<0.010	-	-	-	-	< 50a	< 10a	-	< 30a	< 30a	-
Bismuth	µg/L	< 0.010	< 0.010	< 0.010	<0.050	<0.010	<0.010	0.015	<0.010	0.013	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.01	<0.010	-	-	-	-	< 70	< 200	-	< 400	< 400	-
Boron	µg/L	92.7	65.5	48.8	49	70.7	57.3	49	50.1	64.5	42.7	41.9	50.2	56.3	35.4	29.7	24.8	42.3	74.3	68.8	-	-	-	-	2,470	3,840	-	5,480	8,110	-
Cadmium	µg/L	0.0067	0.0087	0.0117	0.0147	<0.0080	<0.0080	0.0102	0.0086	<0.0120	<0.0120	<0.0360	<0.0100	<0.0130	<0.0100	<0.0100	<0.0120	<0.0060	<0.008	<0.0100	-	-	-	-	< 5a	< 10a	-	< 30a	< 30a	-
Calcium	µg/L	57,300	38,300	40,400	47,200	52,500	16,600	19,400	40,700	47,500	22,600	26,300	44,000	47,000	14,500	14,300	22900	26500	18900	18800	-	-	18,000	-	2,700	< 5,000	-	< 10,000	< 10,000	-
Chromium	µg/L	0.49	0.62	0.36	<0.50	0.27	0.66	0.65	0.14	0.62	<0.50	0.7	<0.50	<0.50	<0.50	19.8	<0.50	<0.50	<0.5	<0.50	-	-	-	-	< 8a	< 20a	-	< 40a	< 40a	-
Cobalt	µg/L	0.492	0.495	0.392	0.455	0.368	0.415	0.397	0.301	0.48	0.341	0.497	0.368	0.370	0.266	0.469	0.355	0.249	0.172	0.298	-	-	-	-	32	65	-	< 30a	130	-
Copper	µg/L	1.15	0.96	0.48	<1.00	0.9	0.66	0.85	3.62	1.19	0.56	0.92	0.85	1.02	0.54	0.97	1.28	0.91	1.15	0.45	-	-	-	-	10	30	-	< 50a	< 50a	-
Iron	µg/L	187	329	160	151	65.5	296	292	51.9	338	133	366	79.5	134	96.1	156	257	28.8	59.1	191	-	-	-	-	240	400	-	310	420	-
Lead	µg/L	0.122	0.222	0.084	<0.250	0.121	0.19	0.196	0.057	0.289	0.113	0.241	0.077	0.146	0.137	0.129	0.146	0.055	0.106	0.133	-	-	-	-	22	63	-	140	< 100a	-
Lithium	µg/L	33.8	47.7	54.6	36.1	33.3	57.4	42	33.5	35.1	50.3	45.2	39.0	41.9	54.7	51.4	20.8	35.3	39.9	37.8	-	-	-	-	106	210	-	320	310	-
Magnesium	µg/L	199,000	239,000	272,000	209,000	197,000	266,000	292,000	202,000	217,000	260,000	266,000	231,000	235,000	282,000	293,000	120,000	199,000	232,000	237,000	-	-	249,000	-	139,000	124,000	-	135,000	194,000	-
Manganese	µg/L	112	105	118	214	113	54.2	46.1	132	326	28.9	54.1	41.0	25.3	21	14.8	80.3	33.9	98.9	35.9	-	-	-	-	8	7.5	-	< 10	20	-
Mercury	µg/L	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.01	<0.010	-	-	-	-	-	-	-	-	-	-
Molybdenum	µg/L	24.3	31.9	45.7	25.7	26	24.4	31.3	23	23.1	46.9	47.4	32.3	35.4	28.8	30.5	15	20.9	16.1	22.3	-	-	-	-	37	60	-	50	55	-
Nickel	µg/L	3.41	3.81	3.69	3.41	2.9	3.18	3.64	2.58	3.33	3.37	3.85	3.03	3.18	2.72	11.7	2.09	2.31	2.15	2.54	-	-	-	-	59	70	-	85	220	-
Phosphorous	µg/L	297	262	260	455	509	157	164	225	517	220	253	154	270	179	112	147	159	285	130	-	-	-	-	1,700	1,600	-	3,200	8,600	-
Potassium	µg/L	15,100	15,700	19,700	14,100	16,500	17,300	17,900	14,300	16,200	20,100	19,100	16,500	16,300	18,700	18,900	9,110	14,800	20,600	19,400	-	-	-	-	447,000	725,000	-	1,000,000	1,570,000	-
Selenium	µg/L	0.26	0.21	0.26	<0.50	0.32	0.31	0.29	0.43	0.49	0.44	0.42	0.62	0.45	0.45	0.35	0.2	0.28	0.32	0.34	-	-	-	-	< 40a	< 100a	-	< 200a	< 200a	-
Silicon	µg/L	5,270	6,120	4,040	6,200	940	2,600	3,060	4,640	2,390	1,940	3,160	2,100	500	3,790	560	2,630	820	3,210	3,130	-	-	-	-	1,720	4,340	-	4,050	2,860	-
Silver	µg/L	< 0.010	< 0.010	0.021	<0.050	0.011	<0.010	0.02	<0.010	<0.010	<0.010	0.01	<0.010	<0.010	<0.010	<0.010	<0.010	0.013	0.013	0.011	-	-	-	-	< 10a	< 30a	-	< 50a	< 50a	-
Sodium	µg/L	278,000	321,000	379,000	294,000	279,000	355,000	403,000	281,000	300,000	408,000	391,000	334,000	333,000	405,000	419,000	171,000	300,000	359,000	365,000	-	-	-	-	8,930,000	12,700,000	-	19,100,000	29,700,000	-
Strontium	µg/L	7,730	4,020	4,770	3,410	3,680	4,050	3,890	3,380	3,810	3,950	4,170	3,920	4,070	4,430	4,190	1,830	3,220	3,800	3,720	-	-	-	-	532	535	-	595	845	-
Sulphur	µg/L	165,000	198,000	220,000	177,000	187,000	216,000	229,000	180,000	197,000	261,000	229,000	232,000	231,000	242,000	274,000	-	197,000	203,000	204,000	-	-	-	-	2,600,000	4,040,000	-	5,760,000	9,400,000	-
Sulfur (As S)	µg/L												-	-	-	-	105,000	-	-	-										
Tellurium	µg/L	< 0.050	< 0.050	< 0.050	<0.250	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.05	<0.050	-	-	-	-	-	-	-	-	-	-
Thallium	µg/L	< 0.0040	< 0.0040	< 0.0040	<0.0200	<0.0040	<0.0040	<0.0040	<0.0040	<0.0040	<0.0040	<0.0040	<0.0040	<0.0040	<0.0040	<0.0040	<0.0040	<0.0040	<0.004	0.0055	-	-	-	-	< 40a	< 100a	-	< 200a	< 200a	-
Thorium	µg/L	0.013	0.024	0.01	<0.050	0.013	0.028	0.03	0.072	0.042	0.104	0.046	0.016	0.030	0.032	0.041	0.045	0.012	0.014	0.027	-	-	-	-	-	-	-	-	-	-
Tin	µg/L	0.097	< 0.050	0.055	<0.250	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.100	<0.100	<0.1	<0.100	-	-	-	-	< 30	< 80	-	< 200	< 200	-
Titanium	µg/L	6.88	13.2	5.75	5.56	2.89	10.6	11.4	2.04	12.6	6.28	14.1	4.20	8.91	5.34	4.52	12	1.24	2.87	10.3	-	-	-	-	5	63	-	70	205	-
Tungsten	µg/L	< 0.20	0.26	0.25	<1.00	0.29	0.21	0.28	<0.20	0.22	0.37	0.39	0.24	0.32	0.26	0.28	<0.20	0.22	<0.2	<0.20	-	-	-	-	-	-	-	-	-	-
Uranium	µg/L	35.8	40.1	51	34	34.8	32.1	40.3	34.1	35.9	47.4	51.2	42.6	48.3	41.5	42.4	20.2	31	26.6	31.9	-	-	-	-	-	-	-	-	-	-
Vanadium	µg/L	2.9	3.12	1.1	3.73	2.77	2.6	2.92	1.33	3	3.92	4.51	3.15	4.31	3.35	4.73	2.29	2.92	2.3	3.14	-	-	-	-	< 10	53	-	< 50	90	-
Zinc	µg/L	1.7	2.3	1.4	<5.0	1.3	1.8	1.4	1.8	2.6	1.1	2	1.5	1.9	3.7	2.3	1.9	<1.0	2.1	1.2	-	-	-	-	< 6	< 20a	-	< 30a	85	-
Zirconium	µg/L	0.782	0.382	0.84	0.724	0.684	0.259	0.484	0.649	0.721	0.871	0.995	1.19	1.17	0.302	0.494	0.532	0.276	0.288	0.699	-	-	-	-	-	-	-	-	-	-
Microbiological																														
Coliforms, Fecal (Q-Tray)	MPN/100ml	-	-	-	-	-	-	-	-	-	-	-	6	1	579	2	7	2	68	25	-	-	-	-	-	-	-	-	-	-
Coliforms, Total (Q-Tray)	MPN/100ml	-	-	-	-	-	-	-	-	-	-	-	816	65	1,450	242	548	225	> 242000	1,730	-	-	-	-	-	-	-	-	-	-

Associated CARO file(s) available on request
Associated Exova file(s): 107524, 115040, 417280, 438503, 47748, 593413, 610415, 653618, 683622, 714220, 714240, 95223., 8040426, 8041402, 8041784, 8050436, 8052167, 8061543, 8071280, 8090442, 8110640, 8110821, 9032473, 9050543, 9060474, 9090312, N000861, 0040546, 0060737, 0091922, 20J3095.

All terms defined within the body of Keltech's report

Table H3: Summary of Surface Water
Analytical Results - HISTORICAL to 2025

Location		Slough																											
Sample ID		Slough-20130429	Slough-20130528	Slough-20130718	Slough-20131016	Slough-20140331	Slough-20140528	Slough-20140828	Slough-20150311	Slough-20150616	Slough-20151029	SLOUGH-20160518	SLOUGH-20160914	SLOUGH-20161116	SLOUGH-20170418	SLOUGH-20170607	SLOUGH-20170907	SLOUGH-20171101	SLOUGH-180404	SLOUGH-180523	SLOUGH-180906	SLOUGH-181107	Slough	Slough	Slough	Slough	SLOUGH-200407	SLOUGH-200605	SLOUGH-200918	SLOUGH-201028
Sample Date		2013 04 29	2013 05 28	2013 07 18	2013 10 16	2014 03 31	2014 05 28	2014 08 28	2015 03 11	2015 06 16	2015 10 29	2016 05 18	2016 09 14	2016 11 16	2017 04 18	2017 06 07	2017 09 07	2017 11 01	2018 04 04	2018 05 23	2018 09 06	2018 11 07	2019 03 29	2019 06 05	2019 09 04	2019 10 23	2020 04 07	2020 06 05	2020 09 18	2020 10 28
Parameter	**Units**	**Analytical Results**																											
General																													
Alkalinity, Bicarbonate as CaCO3	mg/L	-	-	4,000	6,010	1,560	4,350	6,440	2,630	5,760	3,030	2,730	4,370	5,350	1,400	1,650	3,410	2,820	656	1,220	3,480	1,270	-	1,230	1,740	2,430	810	973	821	1,140
Alkalinity, Carbonate (as CaCO3)	mg/L	-	-	5,320	9,190	1,200	2,260	11,600	700	19.2	200	1,130	3,950	3,100	672	505	1,300	1,220	246	322	< 1.0	552	245	435	848	< 1.0	365	457	1,280	864
Alkalinity, Hydroxide (as CaCO3)	mg/L	-	-	< 5.0	< 100	< 1.0	< 100	< 100	< 100	< 1.0	< 1.0	< 5.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	-	-	-
Alkalinity, Phenolphthalein as CaCO3)	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	123	161	< 1.0	276	122	217	424	< 1.0	182	229	642	432
Alkalinity, Total (as CaCO3)	mg/L	-	-	9,320	15,200	2,760	6,600	18,100	3,330	5,780	3,230	3,860	8,330	8,450	2,070	2,160	4,700	4,050	902	1,540	3,480	1,830	946	1,660	2,590	2,430	1,170	1,430	2,100	2,010
Ammonia, Total (as N)	µg/L	1,330	428	364	998	1,310	491	1,760	1,910	87.8	465	509	815	1,300	913	574	1,090	701	168	1,330	516	926	138	627	281	408	192	382	211	115
Bicarbonate	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	701	-	-	-	-			
Bromide	mg/L	12.8	10.5	17.2	20.1	5.4	12.3	35	5.8	10	32	6.8	16.5	13.1	2.8	4.1	5.6	6.8	1.09	< 2.50	3.9	1.14	< 1.00	< 1.00	2.95	3.5	1.44	1.62	< 2.50	< 2.50
Chloride	mg/L	1,260	1,480	1,780	2,740	621	1,230	3,660	715	1,130	3,700	881	2,110	1,630	466	504	944	1,060	274	391	695	544	257	438	748	759	365	385	699	648
COD - Chemical Oxygen Demand	mg/L	618	559	920	1,050	294	514	1,680	296	458	1,210	449	838	694	242	245	644	630	250	299	627	355	176	241	399	525	281	199	291	291
Conductivity - Field	µS/cm	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2,328	6,029	11,069	6,117	3,169	5,270	9,072	9,820	4,428	5,012	9,004	8,543
Conductivity - Lab	µS/cm	20,000	22,400	27,200	38,900	9,940	19,100	48,700	11,600	13,700	46,700	14,100	28,200	22,400	7,460	7,660	13,500	15,000	3,660	6,050	12,100	6,930	3,670	6,270	10,200	10,200	5,070	5,220	8,600	8,480
DOC - Dissolved Organic Carbon	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	135	132	74.6	78.6	117	121
Fluoride	µg/L	2,700	831	996	< 2,000a	< 1,000	764	588	< 1,000	< 2,000a	< 2,000a	< 2,000a	< 2,000a	< 2,000a	< 1,000	< 1,000	< 2,000a	< 2,000a	660	590	1,230	< 1,000	< 1,000	< 1,000	< 1,000	< 1,000	500	530	710	590
Hardness (as CaCO3)	mg/L	715	789	803	567	531	665	911	535	732	999	687	1,300	974	681	738	1,070	1,210	744	840	1,170	1,120	662	879	1,010	1,090	778	867	893	895
Hardness, Dissolved (as CaCO3)	mg/L																													
Nitrate (as N)	µg/L	< 500	< 500	< 500	< 500	< 250	< 500	< 500	< 250	< 500	< 500	< 500	< 500	< 500	< 250	< 250	< 500	< 500	1,080	< 250	< 100	101	< 100	< 100	< 100	< 100	< 10	< 10	< 10	< 250
Nitrate+Nitrite (as N)	µg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1,190	< 250	< 100	101	< 100	< 100	< 100	< 100	< 10.0	33.8	-	< 250
Nitrite (as N)	µg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	108	< 10	< 100	< 100	< 100	< 100	< 100	< 100	< 10	34	< 10	< 10
Nitrogen-N, Total	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	9.47	10.5	20	12.5	6.49	8.16	13.5	13.7	9.78	6.93	7.88	10.7
Ortho-Phosphate	mg/L	5.65	6.54	6.3	10.5	2.21	5.33	12.4	2.97	4.31	12	4.06	8.68	6.67	2.25	2.54	5.6	5.68	-	-	-	-	-	-	1.12	0.825	0.36	0.864	< 0.0050	< 0.0050
pH (field)	pH	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	8.85	8.63	9.16	8.97	9.11	8.69	9.21	9.44	9.41	9.01	9.63	9.56
pH (Lab)	pH	9.51	9.46	9.65	9.73	9.46	9.37	9.58	-	-	9.59	-	-	9.38	9.23	9.04	9.03	9.1	8.94	8.82	9.02	9.04	8.94	8.92	9.11	9.14	9.03	9.02	9.61	9.29
Phosphate	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	2.57	2.28	1.94	0.797	0.814	-	-	-	-	-	-
Phosphorus, Total (as P)	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2.78	3.46	6.33	2.67	1.44	2.34	2.65	3.61	1.67	1.77	0.196	1.19
Sulphate	mg/L	5,110	6,030	7,630	12,100	2,360	5,030	15,600	2,910	4,610	16,300	3,540	8,560	6,800	1,880	2,010	3,580	3,980	791	1,310	2,480	1,910	766	1,470	2,460	2,560	1,210	1,280	2,280	2,080
TDS - Solids, Total Dissolved	mg/L	18,000	20,100	25,900	37,600	7,580	15,200	49,700	8,970	13,600	42,700	10,800	24,000	20,000	5,860	5,880	11,000	12,000	2,440	4,440	10,200	5,520	2,470	4,620	7,930	8,030	3,770	4,260	7,100	6,200
Temperature	C	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	10.5	26.3	18.9	7.4	9.8	21	21.3	11	9.9	20.6	18.6	3.6
TKN - Kjeldahl Nitrogen-N	mg/L	-	-	36.9	24.4	9.17	19.4	56.4	9.19	12	31.7	11.3	23.1	19.3	7.41	6.85	17.2	19.4	8.28	10.5	20	12.4	6.49	8.16	13.5	13.7	9.78	6.89	7.88	10.7
TOC - Carbon, Total Organic	mg/L	163	187	251	286	96	159	506	90.4	149	464	151	284	224	77.3	89	232	261	65.1	117	306	193	53	89.2	139	142	84.3	80	119	137
TSS - Solids, Total Suspended	mg/L	154	72.7	356	142	34.8	59.1	321	12.6	36.3	47.9	16	43.8	49.4	10.3	11.3	15.8	39.6	41	11.5	26.2	41.2	20	14.8	43.7	97.7	37.5	18.4	13.8	39.7
Total Metals																														
Aluminum	µg/L	-	2,530	1,530	< 150	1,750	3,080	2,330	3,070	3,010	1,540	2,860	3,600	1,490	444	395	395	1,030	397	66.5	141	577	208	293	1,250	4,400	679	648	131	930
Antimony	µg/L	-	13.5	12.9	20.9	4.5	11.3	22	7.3	8.7	14	6.1	10.3	6.9	2.9	3.4	4.9	4.6	1.12	2.07	5.51	2.57	1.28	3.22	3.09	3.86	2.12	2.04	4.15	3.48
Arsenic	µg/L	-	91.7	106	162	35.5	80.4	198	45.6	71.5	153	51.3	124	79.5	24.6	29.2	63	63.4	16.3	23.6	64.5	33.7	14.7	31.6	41.8	46.2	19.1	20.9	37.5	32.2
Barium	µg/L	-	< 100	< 100	< 200	< 50	< 100	< 200	63	< 50	< 200	52	< 200	< 100	45	45	< 50	48	56	69.1	59.3	68.4	59.9	55.2	43.8	79.3	51.1	50.9	22.8	31.5
Beryllium	µg/L	-	< 50a	< 50a	< 100a	< 25a	< 50a	< 100a	< 25a	< 25a	< 100a	< 25a	< 100a	< 50a	< 15a	< 15a	< 25a	< 5.0a	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	0.17	0.028	0.026	< 0.010	0.044
Bismuth	µg/L	-	-	-	-	-	-	-	-	< 1,000	< 4,000	-	< 4,000	< 2,000	< 600	< 600	< 1,000	< 200	0.14	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	0.023	0.016	0.013	0.025
Boron	µg/L	-	1,400	1,700	2,100	520	1,000	3,100	560	900	2,500	710	< 2,000a	1,300	370	440	1,010	1,070	195	387	786	501	197	471	717	708	319	449	366	486
Cadmium	µg/L	-	< 2.5a	< 2.5a	< 2.5a	< 0.50a	< 1.0a	< 2.5a	< 0.50a	< 0.10	< 0.50a	< 0.10	< 0.25	< 0.25	0.056	< 0.050	< 0.050	0.072	0.116	0.098	0.047	0.038	0.023	0.027	0.033	0.097	0.0265	0.0152	0.0191	0.0298
Calcium	µg/L	-	14,200	9,300	6,400	24,700	12,500	7,400	24,400	14,900	10,100	24,000	12,100	14,100	35,800	44,200	37,400	33,200	66,800	75,900	50,900	64,000	52,400	54,900	17,500	28,500	47,900	45,400	8,200	16,600
Chromium	µg/L	-	< 25a	< 25a	< 25a	6.5	< 10a	< 25a	8.4	7.4	< 10a	8.4	7.9	5.3	2.3	2.3	3.3	4.7	3.36	4.58	5.75	3.72	1.55	1.67	3.73	12.5	2.8	1.98	0.96	2.74
Cobalt	µg/L	-	< 5.0a	< 5.0a	< 5.0a	2.8	4.3	< 5.0a	3.2	3.1	< 10a	3.1	< 5.0a	< 5.0a	1.1	1.2	2	2.1	1.56	2.04	2.19	1.89	0.85	1.06	1.62	5.05	1.61	1.26	0.589	1.35
Copper	µg/L	-	< 25a	< 25a	< 25a	9.2	10	< 25a	10.4	11	< 50a	12	< 25a	< 25a	6.4	5.4	8.5	10.9	20.3	12.4	4.53	6.82	3.31	3.23	5.07	14	6.35	4.45	3.64	4.18
Iron	µg/L	-	3,580	2,160	< 600	2,360	4,520	4,420	4,180	3,550	2,330	3,790	4,870	2,100	655	517	630	1,380	817	413	387	1,060	327	451	1,710	6,620	988	915	209	1,190
Lead	µg/L	-	4.8	< 2.5	< 2.5	1.2	1.7	< 2.5	1.8	1.9	< 5.0	1.9	< 2.5	< 2.5	< 1.0	< 1.0	< 1.0	1.6	1.56	1.57	0.65	0.93	0.46	0.4	0.93	3.32	0.683	0.498	0.297	0.772
Lithium	µg/L	-	< 100	< 100	< 200	< 50	< 100	< 200	< 50	64	< 200	57	< 200	< 100	< 50	< 50	68	77	31.9	39.3	67.3	58.7	32.7	53.4	75.4	76.1	49.1	56.3	54	71
Magnesium	µg/L	-	183,000	188,000	134,000	114,000	154,000	217,000	115,000	169,000	236,000	152,000	308,000	228,000	144,000	152,000	237,000	273,000	140,000	158,000	252,000	232,000	129,000	180,000	235,000	246,000	160,000	183,000	212,000	207,000
Manganese	µg/L	-	68	< 50	< 100	73	84	< 100	109	85	< 100	104	100	80	98	86	101	105	144	250	169	144	118	46.8	43.8	169	60.2	25.1	7.14	48.4
Mercury	µg/L	-	< 0.20a	< 0.20a	< 0.20a	< 0.20a	< 0.20a	< 0.20a	< 0.20a	< 0.20a	< 0.20a	< 0.20a	< 0.20a	< 0.20a	< 0.20a	< 0.20a	< 0.20a	< 0.20a	< 0.010	< 0.010	< 0.010	< 0.010	< 0.040a	< 0.040a	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010
Molybdenum	µg/L	-	60.3	78.1	86.3	27.6	41	91	30.1	44.3	153	36.4	76.9	60.9	18.5	19.3	27.7	29.8	18.2	21.9	20.4	21.3	10.5	24.4	55.1	68.8	25.9	24.7	33.2	31.7
Nickel	µg/L	-	34	30	37	13.8	27	43	16.3	23	< 50	21	35	28	8	9	19	19.2	7.36	10	17.2	12.7	5.26	9.26	14.6	26.1	9.18	9	8.75	11.4
Phosphorous	µg/L	-	-	-	-	-	-	-	-	5,000	11,700	-	8,900	8,200	2,770	3,160	6,000	7,330	2,290	3,300	5,310	3,510	1,480	2,510	2,560	3,760	1,840	1,530	213	1,280
Potassium	µg/L	-	-	-	-	-	-	-	-	209,000	662,000	-	430,000	346,000	111,000	115,000	279,000	341,000	110,000	172,000	324,000	203,000	79,200	144,000	270,000	299,000	138,000	151,000	250,000	229,000
Selenium	µg/L	-	< 50a	< 50a	< 50a	< 10a	< 20a	< 50a	< 10a	< 1.0	< 5.0a	< 1.0	< 2.5a	< 2.5a	< 1.0	< 1.0	1.2	1.1	1.11	0.89	1.02	1.03	0.73	0.72	0.68	0.9	0.69	0.51	0.43	0.67
Silicon	µg/L	-	-	-	-	-	-	-	-	7,200	2,600	-	13,500	5,280	4,200	2,280	4,050	5,100	4,200	2,500	< 1,000	7,300	6,600	1,900	5,100	16,900	7,620	2,450	1,610	5,060
Silver	µg/L	-	0.56	< 0.50	0.87	0.12	0.3	0.96	0.2	0.21	< 1.0	< 0.20	< 0.50	< 0.50	< 0.10	< 0.10	< 0.10	0.11	0.054	0.071	< 0.050	< 0.050	< 0.050	< 0.050	0.081	0.117	0.016	0.012	< 0.010	0.022
Sodium	µg/L	-	6,780,000	8,690,000	12,100,000	2,480,000	5,250,000	17,000,000	2,970,000	4,720,000	15,600,000	3,610,000	8,390,000	7,000,000	1,900,000	1,790,000	3,220,000	3,880,000	813,000	1,100,000	2,780,000	1,820,000	671,000	1,400,000	2,360,000	2,530,000	1,030,000	1,060,000	1,660,000	2,010,000
Strontium	µg/L	-	-	-	-	-	-	-	-	1,520	920	-	1,450	948	1,790	2,120	2,310	2,170	2,640	2,880	3,610	3,480	2,600	2,990	1,970	2,180	2,620	3,040	1,740	1,530
Sulphur	µg/L	-	-	-	-	-	-	-	-	1,430,000	4,710,000	-	-	-	-	-	-	-	324,000	545,000	1,140,000	726,000	312,000	555,000	932,000	1,050,000	457,000	530,000	741,000	847,000
Sulfur (As S)	µg/L																													
Tellurium	µg/L	-	-	-	-	-	-	-	-	< 4.0	< 20	-	-	< 10	< 2.0	< 2.0	< 2.0	< 2.0	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.050	< 0.050	0.058	< 0.050
Thallium	µg/L	-	< 5.0a	< 5.0a	< 5.0a	< 1.0a	< 2.0a	< 5.0a	< 1.0a	< 0.20	< 1.0a	< 0.20	< 0.50	< 0.50	< 0.20	< 0.20	< 0.20	< 0.20	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	0.05	0.006	0.0065	< 0.0040	0.0108
Thorium	µg/L	-	-	-	-	-	-	-	-	< 2.0	< 10	-	-	-	< 1.0	< 1.0	< 1.0	< 1.0	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	0.15	0.48	0.089	0.083	0.024	0.136
Tin	µg/L	-	-	-	-	-	-	-	-	< 150	< 600	-	< 600	< 300	< 90	< 90	< 150	< 30	0.46	0.76	1.33	0.64	0.27	0.39	0.67	1.47	0.451	0.448	0.34	0.667
Titanium	µg/L	-	140	< 100	< 200	104	160	< 200	159	133	< 200	131	220	< 100	< 50	< 50	< 50	54	28.3	14.8	21.9	38	13.2	17	69.5	285	39.4	35.5	9.83	55.7
Tungsten	µg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1.3	2.8	5.8	3.2	1.1	2.8	5.2	5.8	2.04	2.41	4.74	4.72
Uranium	µg/L	-	195	255	436	81.8	158	491	109	162	543	126	309	230	68.2	67.4	92.7	96.8	41.7	44.5	66.6	59.7	25.6	46.8	70	91.5	46.1	41.8	46.5	53
Vanadium	µg/L	-	< 300a	< 300a	< 600a	< 150a	< 300a	< 600a	< 150a	< 150a	< 600a	< 150a	< 600a	< 300a	< 90	< 90	< 150a	< 30	6.8	9	12.3	10	5.4	11.8	12	36.1	13.3	11.7	7.07	10.8
Zinc	µg/L	-	< 50	< 50	< 100	< 25	< 50	< 100	< 25	< 25	< 100	29	< 100	< 50	15	< 15	< 25	< 30	38.2	38.1	12	17.1	9.3	6.5	13.6	28.4	7.3	3.9	4.6	8.1
Zirconium	µg/L	-	-	-	-	-	-	-	-	-	336	-	-	94	18.8	15.5	22.5	26.9	3.02	7.43	16.6	7.37	2.4	6.88	12.3	19.5	4.99	6.12	3.85	7.07
Microbiological																														
Coliforms, Fecal (Q-Tray)	MPN/100ml	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Coliforms, Total (Q-Tray)	MPN/100ml	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Associated CARO file(s) available on request
Associated Exova file(s): 107524, 115040, 417280, 438503, 47748, 593413, 610415, 653618, 683622, 714220, 714240, 95223., 8040426, 8041402, 8041784, 8050436, 8052167, 8061543, 8071280, 8090442, 8110640, 8110821, 9032473, 9050543, 9060474, 9090312, N000861, 0040546, 0060737, 0091922, 20J3095.

All terms defined within the body of Keltech's report

Table H3: Summary of Surface Water
Analytical Results - HISTORICAL to 2025

Location		Slough																			Tutt Pond								
Sample ID		SLOUGH-210323	Slough	SLOUGH-210921	SLOUGH-211020	SLOUGH-220322	SLOUGH-220621	SLOUGH-220909	SLOUGH-221019	SLOUGH-230329	SLOUGH-230518	SLOUGH-230927	SLOUGH-231101	Slough	Slough	Slough	Slough	Slough	Slough	Slough	Slough	Tutt Pond-20010611	Tutt Pond-20010815	Tutt Pond-20010920	Tutt Pond-20080506	Tutt Pond-20010920	Tutt Pond-20080506	Tutt Pond-20080507	Tutt Pond-20080520	Tutt Pond-20090521
Sample Date		2021 03 23	2021 06 17	2021 09 21	2021 10 20	2022 03 22	2022 06 21	2022 09 09	2022 10 19	2023 03 29	2023 05 18	2023 09 27	2023 11 01	2024-03-21	2024-05-10	2024-09-11	2024-10-22	2025-03-11	2025-05-15	2025-09-22	2025-11-05	2001 06 11	2001 08 15	2001 08 15	2008 05 06	2001 09 20	2008 05 06	2008 05 07	2008 05 20	2009 05 21
Parameter	**Units**	**Analytical Results**																												
General																														
Alkalinity, Bicarbonate (as CaCO3)	mg/L	827	1,270	1,630	1,550	605	1,130	1,470	1,400	627	1,010	961	1,250	566	1,500	1,730	2,150	670	1,280	2,310	1,360	-	-	-	-	-	-	-	-	-
Alkalinity, Carbonate (as CaCO3)	mg/L	247	317	1,280	1,340	566	259	775	814	307	192	1,780	828	661	287	2,090	2,330	269	380	3,080	637	-	-	-	-	-	-	-	-	-
Alkalinity, Hydroxide (as CaCO3)	mg/L	-	-	-	-	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1	<1.0	-	-	-	-	-	-	-	-	-
Alkalinity, Phenolphthalein (as CaCO3)	mg/L	124	158	642	672	283	129	388	407	153	96	888	414	331	143	1,050	1,170	134	190	1,540	318	-	-	-	-	-	-	-	-	-
Alkalinity, Total (as CaCO3)	mg/L	1,070	1,590	2,910	2,890	1,170	1,390	2,240	2,210	934	1,210	2,740	2,080	1,230	1,780	3,820	4,480	939	1,660	5,390	2,000	-	-	-	-	-	605	-	636	-
Ammonia, Total (as N)	µg/L	559	2,460	331	255	148	4,120	425	273	0.131	3.04	0.382	1.69	0.146	3.61	5.92	3.52	260	2010	73	4710	-	-	-	-	-	240	-	230	-
Bicarbonate	mg/L					-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Bromide	mg/L	1.07	1.44	3.7	3.45	1.29	<1.00	<1.00	3.38	1.21	1.36	5.62	2.64	1.46	<5.00	10.3	6.17	<1.00	<0.10	<10	1.41	-	-	-	-	-	-	-	-	-
Chloride	mg/L	322	439	1,040	911	397	487	880	1000	391	497	1920	1200	465	640	2,300	1,610	332	588	2,270	765	-	-	-	-	-	123	-	142	-
COD - Chemical Oxygen Demand	mg/L	154	214	455	489	258	196	463	417	219	220	1,690	586	432	471	2,280	1,740	244	361	1,920	984	-	-	-	-	-	28	-	31	-
Conductivity - Field	µS/cm	4,350	6,399.00	12,713.00	12,068	2,695	6,174	10,445	11,216	-	-	-	-	5992	8782	23648	28608	4,876	7,811	29,750	8,120	-	-	-	-	-	-	-	-	-
Conductivity - Lab	µS/cm	3,900	5,850	12,500	13,200	5,210	6,020	10,100	10,900	-	-	-	-	5,500	8,610	23,800	25,100	4,970	7,960	27,300	9,390	-	-	-	-	-	2,130	-	2,000	-
DOC - Dissolved Organic Carbon	mg/L	50.2	66.5	125	132	54.5	66.3	138	125	63.7	70.2	229	208	185	137	377	403	67	114	429	227	-	-	-	-	-	-	-	-	-
Fluoride	µg/L	< 1,000	< 1,000	< 1,000	< 1,000	< 1,000	< 1,000	< 1,000	< 1,000	< 1,000	550	< 2,500	< 1,000	650	670	<1000	<1000	<1.00	0.44	<10	<1.00	-	-	-	-	-	-	-	-	-
Hardness (as CaCO3)	mg/L	918	1,170	2,050	1,650	837	970	1,290	1,690	945	1,030	1,480	1,630	1,020	1,410	1,580	1,750	662	1,060	1,360	1,010	-	-	-	-	-	-	-	850	150
Hardness, Dissolved (as CaCO3)	mg/L													-	-	-	-	681	1,020	1,220	986									
Nitrate (as N)	µg/L	< 100	< 100	< 100	< 100	< 100	< 100	< 100	< 100	< 100	< 500	< 250	< 100	<250	<500	<100	<100	<0.100	<0.010	<1	<0.100	-	-	-	-	-	65	-	60	-
Nitrate+Nitrite (as N)	µg/L	< 100	< 100	< 100	< 100	<100	110	<100	<100	< 100	< 500	< 250	< 100	<250	<500	<100	<100	<0.100	<0.0100	<1	<0.100	-	-	-	-	-	-	-	-	-
Nitrite (as N)	µg/L	< 100a	< 100a	< 100a	< 100a	< 100	110	< 100	< 100	< 100	19	< 250	< 100	<10	<10	<100	<100	<0.100	<0.010	<1	<0.100	-	-	-	-	-	-	-	-	-
Nitrogen-N, Total	mg/L	4.5	8.12	16.2	17.2	7.5	9.28	13.4	14.3	8,880	7,780	44,200	17,800	13.5	17.6	117.0	66.2	10,500	12,200	53,100	33,400	-	-	-	-	-	-	-	-	-
Ortho-Phosphate	mg/L	0.205	1.21	0.221	0.11	-	-	-	-	-	-	-	-	-	-	-	-	0.55	1.49	0.149	2.51	-	-	-	-	-	0.15	-	0.3	-
pH (field)	pH	9.03	8.73	9.23	9.52	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
pH (Lab)	pH	8.78	8.74	9.25	9.33	9.28	8.66	9.17	9.16	8.96	8.68	9.68	9.14	9.33	8.73	9.39	9.36	9.06	8.92	9.47	9.14	-	-	-	-	-	8.35	-	8.3	-
Phosphate	mg/L	-	-	-	-	0.199	0.92	0.244	0.19	0.094	0.603	<0.125	0.09	-	1.66	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Phosphorus, Total (as P)	mg/L	0.83	1.37	1.83	2.18	1.35	2.05	1.34	1.73	1.31	1.74	4.37	1.44	1.81	3.22	5.33	4.99	1.21	1.85	3.79	6.24	-	-	-	-	-	-	-	-	-
Sulphate	mg/L	941	1,590	3,840	3,380	1,340	1,640	3,030	3,530	1,370	1,820	7,220	4,630	1,560	2,160	7,940	6,220	952	1,860	8,340	2,030	89	-	1,200	-	-	318	-	371	-
TDS - Solids, Total Dissolved	mg/L	3,190	4,980	9,900	8,700	3,760	4,690	8,110	8,760	3,530	4,850	16,800	10,100	4,010	6,560	20,400	21,200	3,170	5,900	24,700	7,180	630	-	4,140	-	300	1,320	-	1,420	-
Temperature	C	8.5	19.4	17.5	8.7	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TKN - Kjeldahl Nitrogen-N	mg/L	4.5	8.12	16.2	17.2	7.5	9.18	13.4	14.3	8.88	7.76	44.2	17.8	13.5	17.6	117	66.2	10.5	12.2	53.1	33.4	-	-	-	-	-	1.07	-	1.58	-
TOC - Carbon, Total Organic	mg/L	53.2	72.4	127	134	-	-	-	-	-	-	-	-	-	-	-	-	69.6	118	487	262	31.7	-	44	-	14.8	18.1	-	20	-
TSS - Solids, Total Suspended	mg/L	30.4	34.4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	31.3	-	87.8	-	-	-	-	-	-	3	2	-
Total Metals																														
Aluminum	µg/L	397	550	1,330	933	469	677	711	667	432	436	573	490	164	2620	228	212	892	1,270	61.5	345	-	83	-	< 40	89	-	-	-	-
Antimony	µg/L	2.73	2.44	2.89	4.48	2.92	4.21	4.05	3.9	3.44	3.48	9.79	17.3	6.43	5.88	19.1	23.5	3.5	4.77	25.6	10.9	-	< 20a	-	< 20a	< 5	-	-	-	-
Arsenic	µg/L	20.2	25.3	44.8	44.1	23.1	33.2	47.5	40.5	29.5	34	70.6	115	39.2	51.5	129	161	22.5	40.2	158	66.1	-	< 50	-	< 50	< 10	-	-	-	-
Barium	µg/L	56.2	25.1	41.2	47.4	47	55.6	35.4	32.7	42.7	20.5	26.3	44.1	48.5	72.5	30.6	21.6	37.4	15.2	19.4	58.2	-	21	-	43.5	19	-	-	-	-
Beryllium	µg/L	0.016	0.026	0.041	0.034	<0.100	<0.050	<0.050	<0.050	0.025	<0.050	<0.100	<0.050	<0.050	0.106	<0.100	<0.050	0.035	0.044	<0.1	<0.050	-	< 3a	-	< 3a	< 0.5a	-	-	-	-
Bismuth	µg/L	0.017	0.014	0.03	0.025	<0.100	<0.050	<0.050	0.056	<0.020	<0.050	<0.100	<0.050	<0.050	0.055	<0.100	<0.050	0.026	0.024	<0.1	<0.050	-	55	-	73	< 7	-	-	-	-
Boron	µg/L	210	440	472	761	225	373	536	577	226	397	1010	586	456	720	1,890	2,070	304	670	2,360	779	-	177	-	178	12	-	-	-	-
Cadmium	µg/L	0.0197	0.0163	0.0339	0.029	0.0365	<0.0150	0.0312	0.0234	0.0184	<0.0100	<0.0400	0.0107	0.0562	0.0603	<0.0200	<0.0200	0.0334	0.0188	<0.02	0.0451	-	< 3a	-	< 3a	< 0.5a	-	-	-	-
Calcium	µg/L	55,000	31,800	16,200	13,700	38,100	50,600	18,000	16,200	42,900	44,700	11,300	28,600	55,900	55,800	9,180	12,600	24900	38200	10700	41800	-	< 4	-	< 4	< 0.8	-	-	67,900	-
Chromium	µg/L	1.83	1.48	3.61	2.85	1.99	1.72	2.45	2.01	1.68	<2.50	<5.00	<2.50	2.86	7.09	<5.00	<2.50	2.84	3.1	<5	3.03	-	10	-	< 3a	< 0.7	-	-	-	-
Cobalt	µg/L	0.998	0.796	1.65	1.81	1.16	1.25	1.35	1.26	1.14	0.931	3.14	1.14	2.53	3.65	2.89	1.43	1.49	1.69	0.885	1.45	-	6	-	< 5a	6	-	-	-	-
Copper	µg/L	3.05	2.27	4.54	3.85	4.29	2.67	3.79	2.37	3.31	1.54	7.15	1.42	8.32	8.25	3.38	2.46	5.73	4.36	<2	3.21	-	33	-	48	< 2a	-	-	-	-
Iron	µg/L	628	609	1,750	1,460	623	836	998	918	600	594	1220	658	446	3,930	403	334	1,160	1,640	101	580	-	69	-	69	6	-	-	-	-
Lead	µg/L	0.436	0.458	1.03	0.815	<0.500	0.6	0.686	0.545	0.394	0.311	0.581	0.428	1.20	2.21	<0.500	0.525	1.12	0.557	<0.5	0.465	-	< 5a	-	< 5a	< 1	-	-	-	-
Lithium	µg/L	45.6	68.6	78.6	103	40.5	54.4	75.8	73.1	39.4	51.7	118	72.8	55.5	78.7	156	176	37.1	66.9	177	70.9	-	22	-	32	4	-	-	-	-
Magnesium	µg/L	189,000	264,000	488,000	393,000	180,000	205,000	303,000	399,000	203,000	224,000	353,000	378,000	214,000	307,000	379,000	417,000	146,000	233,000	323,000	220,000	-	1,720	-	2,420	310	-	-	165,000	-
Manganese	µg/L	80	32.9	51.7	38.6	63.2	35.6	54.1	36	75.1	28.7	57.5	51.4	105	146	41.3	38.1	60.5	60.2	18.6	74.2	-	43	-	< 20	< 4	-	-	-	-
Mercury	µg/L	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	0.171	<0.010	<0.010	<0.010	<0.01	<0.010	-	-	-	-	-	-	-	-	-
Molybdenum	µg/L	15.5	18	50.9	71.7	18	16.1	24.5	30.7	12.4	12.1	46.2	15.1	24.6	23.6	36.8	16.2	15.8	20.4	28.7	10.6	-	2,570	-	2,730	6,790	-	-	-	-
Nickel	µg/L	6.68	8.03	14.4	14.4	6.79	9.11	11.9	14	6.88	8.46	17.4	11.6	12.0	18.8	19.8	21.3	6.94	12	17.2	9.24	-	< 5	-	< 5	< 1	-	-	-	-
Phosphorous	µg/L	1,080	1,740	2,120	1,960	1,170	1,950	1,170	1,940	1,320	1,620	6,090	1,550	1,800	3,300	6,200	5,520	1,250	2,340	4,480	6,610	-	3,780	-	3,770	437	-	-	-	-
Potassium	µg/L	106,000	150,000	349,000	334,000	103,000	138,000	279,000	306,000	120,000	152,000	619,000	332,000	196,000	265,000	823,000	891,000	133,000	219,000	1,020,000	329,000	-	431,000	-	438,000	25,800	-	-	-	-
Selenium	µg/L	0.65	0.52	0.93	1.39	<1.00	0.76	0.6	0.78	0.7	1.52	1.57	0.83	0.92	0.82	1.62	7.66	0.44	0.69	1.4	0.74	-	< 20a	-	< 20a	< 4a	-	-	-	-
Silicon	µg/L	3,130	4,420	4,710	4,360	4,970	4,000	3,570	3,560	4,790	3,300	2,680	3,870	3,720	7,270	2,400	2,820	5,640	4,290	2,900	6,210	-	< 20	-	< 20	< 3	-	-	-	-
Silver	µg/L	0.01	< 0.010	0.018	0.018	<0.100	<0.050	<0.050	<0.050	<0.020	<0.050	<0.100	<0.050	<0.050	<0.050	<0.100	<0.050	0.028	0.023	<0.1	<0.050	-	10	-	20.5	< 0.04	-	-	-	-
Sodium	µg/L	793,000	1,470,000	3,020,000	3,370,000	996,000	1,050,000	2,010,000	2,780,000	962,000	1,130,000	5,420,000	3,230,000	1,180,000	1,750,000	6,020,000	7,560,000	1,010,000	1,750,000	8,530,000	2,690,000	-	35	-	9	5	-	-	-	-
Strontium	µg/L	2,620	2,680	1,400	1,440	2,090	2,780	1,610	1,680	2,560	3,020	828	2,860	2,600	3,190	1,020	927	1,390	2,310	955	3,390	-	4.5	-	3	1.3	-	-	-	-
Sulphur	µg/L	412,000	637,000	1,520,000	1,410,000	445,000	544,000	959,000	1,260,000	514,000	613,000	2,850,000	1,610,000	674,000	897,000	2,910,000	3,930,000	-	877,000	3,660,000	1,150,000	-	35,300	-	41,100	23,900	-	-	-	-
Sulfur (As S)	µg/L													-	-	-	-	500,000	-	-	-									
Tellurium	µg/L	< 0.050	0.065	0.094	0.123	<0.500	<0.250	<0.250	<0.250	<0.100	<0.250	<0.500	<0.250	<0.250	<0.250	<0.500	<0.250	<0.050	<0.100	<0.5	<0.250	-	-	-	-	-	-	-	-	-
Thallium	µg/L	0.0049	0.0104	0.0122	0.011	<0.0400	<0.0200	<0.0200	<0.0200	<0.0080	<0.0200	<0.0400	<0.0200	<0.0200	<0.0200	<0.0400	<0.0200	0.0114	<0.0080	<0.04	<0.0200	-	198,000	-	203,000	15,500	-	-	-	-
Thorium	µg/L	0.046	0.054	0.136	0.105	<0.100	0.081	0.104	0.101	0.171	0.065	1.79	0.117	0.272	0.215	0.618	0.337	0.086	0.065	<0.1	<0.050	-	-	-	-	-	-	-	-	-
Tin	µg/L	0.658	0.211	0.419	0.588	0.518	0.304	0.382	0.374	0.531	<0.250	0.626	2.18	0.745	0.878	1.37	2.61	0.534	0.5	3.27	1.05	-	1,160,000	-	1,200,000	67,800	-	-	-	-
Titanium	µg/L	27.1	27.7	68.5	59.7	25.3	32	38.5	32.4	25.6	21.7	40.1	20.1	13.7	122	9.31	11.5	44.4	52.5	3.36	19.1	-	19,000	-	19,000	2,800	-	-	-	-
Tungsten	µg/L	1.5	2.22	6.16	6.71	<2.00	2.14	4.32	4.8	1.43	2.2	9.27	3.76	2.05	3.19	11.8	11.3	1.58	3.08	12.6	5.09	-	-	-	-	-	-	-	-	-
Uranium	µg/L	41.7	37.7	100	120	38	42.8	52.9	68.4	33.1	35.2	120	75.4	42.7	49.3	124	127	35.8	41.4	164	57.9	-	-	-	-	-	-	-	-	-
Vanadium	µg/L	7.09	5.11	12.2	17	10.3	11	8.22	8.84	6.71	9.65	<10.0	9.1	10.8	14.3	<10.0	8.01	9.52	12	<10	8.11	-	130	-	175	103	-	-	-	-
Zinc	µg/L	5.5	5.8	9.3	10.2	<10.0	5.5	6.6	6.5	5.7	<5.0	27.9	6.4	11.5	26.6	22.4	10.3	7.8	8.9	<10	19.3	-	25	-	74	8.5	-	-	-	-
Zirconium	µg/L	2.98	3.79	9.17	11.9	2.37	2.77	3.56	6.12	2.76	3.05	5.22	4.84	5.27	4.80	5.14	8.1	3.09	6.58	10.2	3.38	-	-	-	-	-	-	-	-	-
Microbiological																														
Coliforms, Fecal (Q-Tray)	MPN/100ml	-	-	-	-	-	-	-	-	-	-	-	-	563	13	<100	46	138	56	3	259	-	-	-	-	-	-	-	-	-
Coliforms, Total (Q-Tray)	MPN/100ml	-	-	-	-	-	-	-	-	-	-	-	-	563	18	41,100	> 242000	742	51,700	7,220	17,800	-	-	-	-	-	-	-	-	-

Associated CARO file(s) available on request
Associated Exova file(s): 107524, 115040, 417280, 438503, 47748, 593413, 610415, 653618, 683622, 714220, 714240, 95223., 8040426, 8041402, 8041784, 8050436, 8052167, 8061543, 8071280, 8090442, 8110640, 8110821, 9032473, 9050543, 9060474, 9090312, N000861, 0040546, 0060737, 0091922, 20J3095.

All terms defined within the body of Keltech's report

Table H3: Summary of Surface Water Analytical Results - HISTORICAL to 2025

Location		Tutt Pond																												
Sample ID		Tutt Pond-20091119	Tutt Pond-20130429	Tutt Pond-20130528	Tutt Pond-20130718	Tutt Pond-20130819	Tutt Pond-20130911	Tutt Pond-20131016	Tutt Pond-20140331	Tutt Pond-20140528	Tutt Pond-20140731	Tutt Pond-20140828	Tutt Pond-20140930	Tutt Pond-20150311	Tutt Pond-20150616	Tutt Pond-20150902	Tutt Pond-20151029	TUTT POND-20160518	TUTT POND-20160914	TUTT POND-20161116	TUTT POND-20170418	TUTT POND-20170607	TUTT POND-20170907	TUTT POND-20171101	TUTT POND-180404	TUTT POND-180417	TUTT POND-180503	TUTT POND-180523	TUTT POND-180615	TUTT POND-180712
Sample Date		2009 11 19	2013 04 29	2013 05 28	2013 07 18	2013 08 19	2013 09 11	2013 10 16	2014 03 31	2014 05 28	2014 07 31	2014 08 28	2014 09 30	2015 03 11	2015 06 16	2015 09 02	2015 10 29	2016 05 18	2016 09 14	2016 11 16	2017 04 18	2017 06 07	2017 09 07	2017 11 01	2018 04 04	2018 04 17	2018 05 03	2018 05 23	2018 06 15	2018 07 12
Parameter	**Units**	**Analytical Results**																												
General																														
Alkalinity, Bicarbonate as CaCO3	mg/L	-	-	-	535	584	623	733	637	614	531	564	649	554	537	669	681	537	608	621	570	586	680	749	401	449	413	500	539	433
Alkalinity, Carbonate (as CaCO3)	mg/L	-	-	-	130	116	116	31.6	73.4	96.7	143	141	71.9	112	129	48.4	39.8	68.4	78.6	31.6	63	96.2	64	31.4	74.8	61.2	61.2	30.3	33.7	152
Alkalinity, Hydroxide (as CaCO3)	mg/L	-	-	-	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Alkalinity, Phenolphthalein as CaCO3	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	37.4	30.6	30.6	15.2	16.9	76.2
Alkalinity, Total (as CaCO3)	mg/L	-	-	-	665	699	739	764	710	710	674	705	720	665	667	718	721	606	687	652	633	682	744	780	476	510	475	530	573	586
Ammonia, Total (as N)	µg/L	-	335	81.6	20	52	18.5	1,520	440	48.4	63	15.7	1,160	15.3	13.3	712	1,090	34.9	234	720	99.2	9.5	58.9	973	135	39	442	161	78	46
Bicarbonate	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Bromide	mg/L	-	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 0.50	< 1.0	< 1.0	< 1.0	0.24	0.18	< 0.10	< 0.10	0.21	< 1.00
Chloride	mg/L	-	176	182	184	191	197	205	190	204	219	232	214	182	189	212	195	181	193	169	146	164	203	216	141	145	157	182	174	160
COD - Chemical Oxygen Demand	mg/L	-	35	37	36	44	53	38	34	35	44	52	52	58	39	45	39	36	44	38	34	38	47	36	73	34	24	< 20	44	32
Conductivity - Field	µS/cm	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2,158	2,184	1,539	1,987	1,821	1,902
Conductivity - Lab	µS/cm	-	2,340	2,460	2,430	2,540	2,550	2,700	2,510	2,680	2,740	2,870	2,680	2,190	2,170	2,960	2,840	2,480	2,660	2,310	2,090	2,220	2,790	2,930	1,970	2,080	1,740	1,930	2,140	2,050
DOC - Dissolved Organic Carbon	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Fluoride	µg/L	-	1,300	900	1,300	1,430	970	820	920	1,190	1,240	1,510	1,280	1,070	980	940	920	850	940	1,000	840	1,070	980	990	720	570	650	540	930	830
Hardness (as CaCO3)	mg/L	967	831	894	869	874	906	943	923	984	964	967	999	822	864	1,060	960	843	960	820	777	860	1,010	1,100	792	799	681	708	831	748
Hardness, Dissolved (as CaCO3)	mg/L																													
Nitrate (as N)	µg/L	-	< 100	< 100	< 100	< 100	< 100	< 100	530	< 100	< 100	< 100	< 100	< 100	< 100	110	160	< 100	< 100	310	59	< 100	< 100	150	11	4,930	584	803	225	< 100
Nitrate+Nitrite (as N)	µg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	11.2	4,930	606	868	256	< 100
Nitrite (as N)	µg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	< 10	< 10	22	65	32	< 10
Nitrogen-N, Total	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1.93	12.6	3.13	2.11	2.15	1.01
Ortho-Phosphate	mg/L	-	0.355	0.33	0.273	0.353	0.43	0.679	0.332	0.187	0.236	0.277	0.664	0.068	0.137	0.602	0.464	0.103	0.318	0.348	0.107	0.166	0.23	0.502	-	-	-	-	-	-
pH (field)	pH	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	8	8.66	8.02	8.49	8.83	9.04
pH (Lab)	pH	-	8.65	8.71	8.82	8.69	8.82	8.5	8.56	8.68	8.79	8.78	8.54	-	-	8.5	8.46	-	-	8.44	8.63	8.75	8.54	8.39	8.68	8.64	8.62	8.46	8.46	8.82
Phosphate	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.0069	< 0.0050	0.024	0.0578	0.018	0.0821
Phosphorus, Total (as P)	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.388	0.0651	0.0873	0.227	0.232	0.197
Sulphate	mg/L	-	529	540	542	566	573	623	565	693	753	780	706	454	594	784	740	627	702	571	462	510	743	852	409	443	225	276	364	354
TDS - Solids, Total Dissolved	mg/L	-	1,620	1,670	1,560	1,720	1,920	1,920	1,690	1,810	1,940	2,140	1,840	1,460	1,530	2,100	1,910	1,660	1,860	1,610	1,420	1,500	2,020	2,100	1,390	1,470	1,110	1,210	1,420	1,410
Temperature	C	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	6.6	9.3	6.1	22.4	17.9	23.7
TKN - Kjeldahl Nitrogen-N	mg/L	-	-	-	1.26	1.43	1.98	2.67	1.63	0.977	1.24	1.36	2.37	3.33	1.05	1.84	2.3	0.927	1.36	1.71	0.987	0.957	1.32	2.2	1.92	7.67	2.52	1.24	1.89	1.01
TOC - Carbon, Total Organic	mg/L	-	12.6	11.6	12.3	13.5	16.7	13.3	11.8	11.4	13.4	13.1	25.6	12.8	12.3	12.6	10.9	12.4	12	11.7	10.8	13.1	14.8	12.8	14.3	11	10.6	9.64	10.6	11.6
TSS - Solids, Total Suspended	mg/L	-	7.1	3.3	3	3.9	16.3	< 3.0	3.1	3	< 3.0	15.4	< 3.0	11.8	< 3.0	8.8	4.4	< 3.0	< 3.0	4.7	< 3.0	3.3	< 3.0	6	63.3	22.7	< 5.0	< 2.0	7.3	3
Total Metals																														
Aluminum	µg/L	-	157	30	21	49	104	48	84	119	26	372	198	65	22	305	131	35	117	199	73	26	42	45	291	181	22.8	1,170	34.7	57.3
Antimony	µg/L	-	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.20	< 0.20	0.22	< 0.20	< 0.20	< 0.20
Arsenic	µg/L	-	3.3	3.9	4.3	4.4	5	4.6	2.7	3.8	4.7	5.3	5.6	2.5	3.2	5.9	4.6	2.5	3.9	3.6	2	2.2	3.6	4.1	2.05	1.82	1.95	2.28	2.7	2.81
Barium	µg/L	-	66	66	54	56	66	74	75	66	< 20	39	66	71	58	85	75	62	72	63	72	80	56	74	56.5	60.1	69.3	83.2	84.5	80.7
Beryllium	µg/L	-	< 5.0a	< 5.0a	< 5.0a	< 5.0a	< 5.0a	< 5.0a	< 5.0a	< 5.0a	< 5.0a	< 5.0a	< 5.0a	< 5.0a	< 5.0a	< 5.0a	< 5.0a	< 5.0a	< 5.0a	< 5.0a	< 5.0a	< 5.0a	< 5.0a	< 5.0a	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Bismuth	µg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	< 200	< 200	< 200	-	< 200	< 200	< 200	< 200	< 200	< 200	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Boron	µg/L	-	< 100	< 100	< 100	< 100	< 100	< 100	< 100	< 100	< 100	< 100	< 100	< 100	< 100	< 100	< 100	< 100	< 100	< 100	< 100	< 100	< 100	< 100	39.8	47.6	46.6	34.9	37.9	41.1
Cadmium	µg/L	-	< 0.050	< 0.050	< 0.10	< 0.050	< 0.050	< 0.10	< 0.050	< 0.10	< 0.10	< 0.10	< 0.10	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	0.011	< 0.010	0.017	< 0.010	0.011	0.014
Calcium	µg/L	-	69,800	74,300	56,800	56,600	63,800	74,600	81,100	85,400	52,300	64,700	77,600	70,600	47,300	91,600	89,300	78,600	79,300	72,400	76,500	79,100	90,900	120,000	70,600	67,200	56,900	68,200	73,800	53,000
Chromium	µg/L	-	< 0.50	< 0.50	< 1.0	< 0.50	< 0.50	< 1.0	< 0.50	< 1.0	< 1.0	< 1.0	< 1.0	< 0.50	< 0.50	0.64	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	1.02	1.12	0.68	10.2	< 0.50	< 0.50
Cobalt	µg/L	-	0.58	0.52	< 0.50	< 0.50	< 0.50	< 0.50	0.53	0.61	< 0.50	0.62	0.64	< 0.50	< 0.50	0.79	0.72	< 0.50	< 0.50	0.66	< 0.50	< 0.50	< 0.50	0.56	0.57	0.53	0.29	0.38	0.34	0.32
Copper	µg/L	-	1.1	1.6	< 1.0a	< 1.0a	1	< 1.0a	< 1.0a	1.4	< 1.0a	1.2	1.1	1.3	1.1	< 1.0a	< 1.0a	2	< 1.0a	1.4	1.3	1.3	1.1	< 1.0a	4.76	1.89	2.5	2.14	1.8	2.28
Iron	µg/L	-	207	38	< 30	61	124	82	119	146	32	461	253	90	< 30	383	149	44	139	220	87	32	50	71	419	269	37	104	59	80
Lead	µg/L	-	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20
Lithium	µg/L	-	< 50	< 50	< 50	< 50	< 50	< 50	< 50	< 50	< 50	< 50	< 50	< 50	< 50	< 50	< 50	< 50	< 50	< 50	< 50	< 50	< 50	< 50	25.5	25.3	30.1	27.7	34.9	31.1
Magnesium	µg/L	-	159,000	172,000	178,000	179,000	182,000	184,000	175,000	187,000	202,000	195,000	195,000	157,000	181,000	202,000	179,000	157,000	185,000	155,000	142,000	161,000	190,000	194,000	149,000	153,000	131,000	131,000	157,000	150,000
Manganese	µg/L	-	114	43	32	71	77	208	157	41	55	156	320	51	13	279	251	20	102	164	55	20	70	314	61.5	61	23.4	53.1	45.6	26.8
Mercury	µg/L	-	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 0.20a	< 0.20a	< 0.20a	< 0.20a	< 0.20a	< 0.20a	< 0.20a	< 0.20a	< 0.20a	< 0.20a	< 0.20a	< 0.20a	< 0.20a	< 0.20a	< 0.20a	< 0.20a	< 0.010	< 0.010	-	< 0.010	< 0.010	< 0.010
Molybdenum	µg/L	-	8.2	9.3	8.7	8.6	8.4	7.1	9.3	9.6	8.6	8.6	8.8	12.1	11	10.3	13.2	13.6	12.1	12.6	10.7	11.1	10.9	10.5	14.8	14.6	15.6	14.3	14.9	13.7
Nickel	µg/L	-							< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	2.31	2.41	1.55	8.73	1.93	1.87
Phosphorous	µg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	< 300	660	500	-	390	410	< 300	< 300	300	610	226	115	82	219	244	221
Potassium	µg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	13,100	15,900	12,700	-	14,800	14,000	12,400	13,300	14,800	15,300	13,600	13,000	14,800	14,700	13,900	13,100
Selenium	µg/L	-	< 1.0	< 1.0	< 2.0	< 1.0	< 1.0	< 2.0	< 1.0	< 2.0	< 2.0	< 2.0	< 2.0	< 1.0	< 1.0	< 1.0	< 1.0	1	< 1.0	< 1.0	< 1.0	1	< 1.0	< 1.0	1.38	1.1	1.48	1.23	1.05	0.86
Silicon	µg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	1,610	9,670	9,270	-	7,550	8,100	6,190	470	5,170	10,400	< 1,000	< 1,000	2,000	3,500	3,300	4,600
Silver	µg/L	-	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050
Sodium	µg/L	-	278,000	292,000	282,000	304,000	305,000	330,000	284,000	329,000	364,000	337,000	338,000	247,000	286,000	359,000	302,000	281,000	333,000	267,000	234,000	265,000	304,000	329,000	249,000	248,000	200,000	206,000	246,000	230,000
Strontium	µg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	4,130	5,280	4,950	-	4,990	3,990	3,650	3,850	4,790	5,790	3,690	3,590	3,090	3,610	3,820	3,410
Sulphur	µg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	188,000	269,000	239,000	-	-	-	-	-	-	-	162,000	183,000	98,500	114,000	149,000	137,000
Sulfur (As S)	µg/L																													
Tellurium	µg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	0.61	0.54	0.71	-	-	< 0.40	0.35	0.59	0.48	0.55	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50
Thallium	µg/L	-	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020
Thorium	µg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	< 0.20	< 0.20	< 0.20	-	-	-	< 0.10	< 0.10	< 0.20	< 0.20	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Tin	µg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	< 30	< 30	< 30	-	< 30	< 30	< 30	< 30	< 30	< 30	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20
Titanium	µg/L	-	< 50	< 50	< 50	< 50	< 50	< 50	< 50	< 50	< 50	< 50	< 50	< 50	< 50	< 50	< 50	< 50	< 50	< 50	< 50	< 50	< 50	< 50	18.3	10.6	< 5.0	< 5.0	< 5.0	< 5.0
Tungsten	µg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Uranium	µg/L	-	34.2	33.5	31.7	28.1	30.8	27.7	33.4	38	29.3	31.1	31.2	30.6	31	40.6	41.8	43.4	40.1	36.9	31.9	32.2	43	49.4	38.7	38	26.4	26.9	31.2	26.1
Vanadium	µg/L	-	< 30	< 30	< 30	< 30	< 30	< 30	< 30	< 30	< 30	< 30	< 30	< 30	< 30	< 30	< 30	< 30	< 30	< 30	< 30	< 30	< 30	< 30	4	3.6	4.4	4.3	3.7	3.2
Zinc	µg/L	-	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	5.7	< 5.0	< 5.0	6.4	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 6.0	6.5	5.2	7.2	8	5.3	< 4.0
Zirconium	µg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.7	0.63	-	-	< 0.60	0.69	< 0.30	0.38	0.58	0.46	0.36	0.24	0.16	0.16	0.13
Microbiological																														
Coliforms, Fecal (Q-Tray)	MPN/100ml	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Coliforms, Total (Q-Tray)	MPN/100ml	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Associated CARO file(s) available on request
Associated Exova file(s): 107524, 115040, 417280, 438503, 47748, 593413, 610415, 653618, 683622, 714220, 714240, 95223., 8040426, 8041402, 8041784, 8050436, 8052167, 8061543, 8071280, 8090442, 8110640, 8110821, 9032473, 9050543, 9060474, 9090312, N000861, 0040546, 0060737, 0091922, 20J3095.

All terms defined within the body of Keltech's report

Table H3: Summary of Surface Water
Analytical Results - HISTORICAL to 2025

Location		Tutt Pond																											
Sample ID		TUTT POND-180906	TUTT POND-181107	Tutt Pond	Tutt Pond	Tutt Pond	Tutt Pond	Tutt Pond	TUTTPOND-200407	TUTTPOND-200605	TUTTPOND-200918	TUTTPOND-201028	TUTT POND-210323	TUTT POND-210616	TUTT POND-210921	TUTT POND-211020	TUTT POND-220322	TUTT POND-220621	TUTT POND-220909	TUTT POND-221019	TUTT POND-230329	TUTT POND-230518	TUTT POND-230927	TUTT POND-231101	Tutt Pond	Tutt Pond	Tutt Pond	Tutt Pond	Tutt Pond	Tutt Pond
Sample Date		2018 09 06	2018 11 07	2019 03 29	2019 05 06	2019 06 05	2019 09 04	2019 10 23	2020 04 07	2020 06 05	2020 09 18	2020 10 28	2021 03 23	2021 06 16	2021 09 21	2021 10 20	2022 03 22	2022 06 21	2022 09 09	2022 10 19	2023 03 29	2023 05 18	2023 09 27	2023 11 01	2024-03-21	2024-05-08	2024-09-11	2024-10-22	2025-03-11	2025-05-15
Parameter	**Units**	**Analytical Results**																											
General																													
Alkalinity, Bicarbonate as CaCO3	mg/L	441	562	-	582	525	510	688	523	468	558	748	589	654	568	651	594	539	635	655	523	458	423	542	375	621	430	492	478	438
Alkalinity, Carbonate (as CaCO3)	mg/L	85.9	23.9	< 1.0	46.6	139	170	< 1.0	28.4	140	108	< 1.0	35.2	117	130	69.9	66.8	113	110	52.5	24.2	95.5	224	78.4	176	<1.0	155	121	26	109
Alkalinity, Hydroxide (as CaCO3)	mg/L	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Alkalinity, Phenolphthalein as CaCO3)	mg/L	42.9	11.9	< 1.0	23.3	69.6	85.1	< 1.0	14.2	70.1	53.8	< 1.0	17.6	58.4	65	34.9	33.4	56.6	55	26.3	12.1	47.8	112	39.2	88.0	<1.0	77.6	60.6	13	54.6
Alkalinity, Total (as CaCO3)	mg/L	527	586	498	628	664	680	688	551	608	665	748	624	771	698	721	661	652	745	707	547	554	647	620	551	621	586	613	504	547
Ammonia, Total (as N)	µg/L	337	297	248	191	94	181	669	132	< 50	226	1,590	< 50	169	153	244	<50	<50	137	332	192	68	125	731	<0.050	0.150	0.128	0.499	715	132
Bicarbonate	mg/L	-	-	498	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Bromide	mg/L	< 1.00	< 1.00	0.13	0.16	< 0.10	< 0.10	< 0.10	< 0.10	0.16	< 1.00	0.26	< 1.00	< 0.10	< 0.10	< 1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<0.10	<2.50	<1.00	0.24	0.25	0.42	<1.00	<1.00	0.31
Chloride	mg/L	177	175	136	192	182	202	211	199	189	212	227	185	240	258	272	219	218	284	268	226	254	261	259	191	219	248	234	172	197
COD - Chemical Oxygen Demand	mg/L	49	39	28	45	31	52	32	29	35	53	48	46	46	< 20	37	28	46	42	47	23	29	39	38	32	42	38	41	30	33
Conductivity - Field	µS/cm	228.3	1,882	1,618	2,076	2,031	2,312	2,818	2,032	1,981	2,688	3,131	2,541	2,976.00	3,201.00	2,967.00	2,695	2,597	3,305	3,393	-	-	-	-	2380	2848	2839	2903	2,133	2,930
Conductivity - Lab	µS/cm	2,300	2,150	1,940	2,400	2,260	2,500	2,860	2,330	2,140	2,520	3,050	2,250	2,670	3,180	3,330	2,660	2,500	3,170	3,380	-	-	-	-	2,320	2,390	2,890	2,910	2,110	2,430
DOC - Dissolved Organic Carbon	mg/L	-	-	-	-	-	12.1	11.3	8.99	10.5	16.2	19.4	7.67	15.7	12.6	14.2	10.3	11.5	15.7	15	11.3	10.5	13.5	15.7	12.3	12.0	16.2	12	9.08	10.1
Fluoride	µg/L	1,280	790	600	650	740	870	820	690	640	840	790	670	780	800	< 1,000	< 1,000	< 1,000	< 1,000	< 1,000	< 1,000	670	900	<1.00	1010	1030	1150	<1000	<1.00	0.75
Hardness (as CaCO3)	mg/L	857	909	792	975	865	912	1,040	842	819	917	1,130	990	1,140	1,250	1,270	948	869	1,050	1,270	994	975	1,080	1,110	811	969	924	963	709	785
Hardness, Dissolved (as CaCO3)	mg/L																								-	-	-	-	715	810
Nitrate (as N)	µg/L	157	500	1,180	64	174	< 10	44	15	< 10	< 10	10	< 10	< 10	< 10	< 100	< 100	< 100	< 100	< 100	< 100	< 500	< 250	< 100	<250	<10	<10	<100	259	<250
Nitrate+Nitrite (as N)	µg/L	157	552	1,200	75.3	188	< 10.0	86.6	14.8	< 10.0	-	10.2	< 10.0	< 10.0	< 10.0	< 100	< 100	< 100	< 100	108	< 100	< 500	< 250	115	<250	<10	<10	<100	259	<250
Nitrite (as N)	µg/L	< 100	53	23	12	14	< 10	42	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 100a	< 100	< 100	< 100	110	< 100	< 10	< 10	115	<10	<10	<10	<100	<100	<10
Nitrogen-N, Total	mg/L	1.46	1.71	2.5	1.02	1.27	1.37	1.74	1.02	0.947	1.38	3.16	1.32	1.49	1.43	1.12	1.33	1.6	1.62	1.72	1.15	0.885	1.15	1.98	0.908	1.22	1.55	1.61	1,880	1,020
Ortho-Phosphate	mg/L	-	-	-	-	-	0.0082	0.0988	0.0128	0.0982	0.0431	< 0.0050	< 0.0050	< 0.0050	0.0127	< 0.0500	-	-	-	-	-	-	-	-	-	-	-	-	0.254	0.166
pH (field)	pH	8.9	8.37	8.33	8.5	8.67	8.84	8.76	8.95	8.72	8.7	8.07	8.63	8.49	8.56	8.54	-	-	-	-	-	-	-	-	-	-	-	-	-	-
pH (Lab)	pH	8.64	8.39	8.22	8.47	8.69	8.76	8.48	8.4	8.68	8.58	8.12	8.42	8.53	8.62	8.49	8.5	8.62	8.56	8.42	8.39	8.58	8.8	8.5	8.74	8.52	8.82	8.69	8.42	8.7
Phosphate	mg/L	< 0.0500	0.132	0.23	0.0646	0.0075	-	-	-	-	-	-	-	-	-	-	<0.0500	0.073	<0.100	0.059	<0.0500	<0.0050	<0.0050	0.081	-	-	-	-	-	
Phosphorus, Total (as P)	mg/L	0.362	0.322	0.472	0.233	0.33	0.343	0.494	0.124	0.312	0.306	0.935	0.164	0.371	0.231	0.453	0.199	0.305	0.453	0.541	0.102	0.133	0.17	0.501	0.0617	0.329	0.413	0.368	0.319	0.21
Sulphate	mg/L	507	504	396	636	484	565	723	536	442	591	788	573	752	926	818	656	605	886	997	687	799	886	853	527	632	702	682	386	474
TDS - Solids, Total Dissolved	mg/L	1,620	1,400	1,230	1,660	1,690	1,660	2,080	1,630	1,560	2,050	2,040	1,780	2,180	2,340	2,370	1,870	1,880	2,380	2,630	1,570	1,930	2,070	2,000	1,480	1,720	1,810	1,940	1,390	1,510
Temperature	C	18.7	7.9	9	17.3	21.6	21.3	9.3	8	19.1	19.1	6.1	7.7	20	15.9	10.1	-	-	-	-	-	-	-	-	-	-	-	-	-	
TKN - Kjeldahl Nitrogen-N	mg/L	1.3	1.16	1.3	0.944	1.08	1.37	1.65	1	0.947	1.38	3.14	1.32	1.49	1.43	1.12	1.33	1.6	1.62	1.61	1.15	0.885	1.15	1.86	0.908	1.22	1.55	1.61	1.62	1.02
TOC - Carbon, Total Organic	mg/L	14.2	11.1	7.49	9.54	9.46	13	11.3	9.2	11	16.4	19.4	11.7	15.8	12.7	14.6	-	-	-	-	-	-	-	-	-	-	-	-	9.44	10.6
TSS - Solids, Total Suspended	mg/L	15.2	8.4	12.3	5.4	4.6	10.7	3	4.4	3.4	3	9.3	9.2	3.6	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	5.6
Total Metals																													
Aluminum	µg/L	472	138	202	76.2	43.6	119	47.9	41.9	31.2	47.8	178	126	59.9	61	51.1	283	82.2	98.6	97.7	143	49.6	97	98.5	168	97.3	48.2	80.6	226	85
Antimony	µg/L	0.24	< 0.20	< 0.20	< 0.20	< 0.20	0.27	0.29	0.149	0.207	0.276	0.318	0.202	0.744	0.232	0.289	0.267	0.169	0.229	0.227	0.169	0.185	0.243	0.292	0.189	0.203	0.332	0.331	0.143	0.191
Arsenic	µg/L	3.26	2.77	2.25	2.6	3.08	4.27	4.72	2.33	2.66	4.25	4.84	2.36	3.24	3.85	4.48	2.45	2.78	4.38	4.78	2.59	2.99	4.85	5.25	2.73	3.48	5.87	5.12	2.24	3
Barium	µg/L	99.5	96.3	91.7	86.7	76.6	96.1	92.2	60.9	63.4	73.2	94.7	88.7	57.1	68.5	76.3	85.4	42.7	62.3	71.3	75	69	75.8	76.4	71.7	68.7	59.2	57.5	67.1	60.3
Beryllium	µg/L	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.010	< 0.010	< 0.010	0.013	< 0.010	< 0.010	< 0.010	< 0.010	<0.050	<0.010	<0.010	<0.020	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	0.011	<0.010
Bismuth	µg/L	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	0.011	< 0.010	< 0.010	<0.050	<0.010	<0.010	<0.020	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010
Boron	µg/L	37.1	45.7	31.1	33.1	45.3	37.5	43.7	57.6	34.6	30.2	44	57.4	42.3	23.3	29.5	30.5	36.1	41.4	43.9	38.7	40.7	39.5	36.3	34.6	36.8	44.7	40.4	31.8	42.7
Cadmium	µg/L	0.022	< 0.010	0.018	0.01	0.01	< 0.010	< 0.010	0.0053	0.0062	0.009	0.0133	0.008	0.0073	0.0049	0.0055	0.0148	<0.0060	0.0058	<0.0080	0.0077	<0.0050	<0.0060	<0.0120	<0.0080	<0.0080	<0.0040	<0.0060	0.0084	<0.0060
Calcium	µg/L	69,200	91,600	93,900	111,000	78,400	61,900	94,300	84,100	81,800	77,200	114,000	95,200	104,000	85,000	105,000	85,500	77,200	84,600	94,600	87,300	82,700	66,300	63,200	42,200	68,700	45,100	52,000	50500	58800
Chromium	µg/L	1.54	0.58	0.73	< 0.50	< 0.50	0.67	0.66	0.95	0.21	0.3	0.71	0.66	0.44	0.34	0.41	0.92	0.32	0.41	0.45	0.47	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	0.52	<0.50
Cobalt	µg/L	0.9	0.58	0.62	0.58	0.39	0.64	0.61	0.446	0.418	0.624	0.811	0.648	0.767	0.45	0.465	0.698	0.507	0.621	0.636	0.531	0.454	0.449	0.5	0.494	0.481	0.307	0.35	0.443	0.519
Copper	µg/L	3.91	2	2.02	1.89	1.04	1.76	0.74	0.85	1.19	1.23	1.48	1.44	1.91	0.96	0.94	1.64	1.26	1.03	0.85	1.71	0.95	0.83	0.63	1.05	0.69	0.49	0.51	1.03	1.03
Iron	µg/L	719	234	308	122	66	178	92	65.6	59.8	87.2	273	198	103	88.8	89.6	434	93.1	135	151	205	70.7	106	156	234	119	70.8	122	323	96.2
Lead	µg/L	0.35	< 0.20	0.25	< 0.20	< 0.20	< 0.20	< 0.20	0.05	0.054	0.083	0.178	0.134	0.133	0.072	0.081	0.305	0.118	0.094	0.106	0.107	0.076	0.093	0.12	0.113	0.084	0.077	0.1	0.144	0.071
Lithium	µg/L	28.9	29.7	26.6	31.7	33.8	34.4	33.5	33.1	28.7	23.6	33.5	28.4	32.2	35.4	39.1	27.5	24.7	30.5	28.6	29	30	34.9	34.2	32.4	29.6	33.9	29.9	26.6	29
Magnesium	µg/L	166,000	165,000	135,000	169,000	162,000	184,000	196,000	154,000	149,000	176,000	205,000	183,000	214,000	252,000	245,000	178,000	164,000	202,000	250,000	188,000	187,000	223,000	231,000	171,000	194,000	197,000	202,000	141,000	155,000
Manganese	µg/L	141	116	301	102	55.8	128	147	92.1	39	131	470	190	149	31.1	55.7	200	56.6	101	161	167	48.3	46	148	17.4	103	94.5	49.8	60.5	37.9
Mercury	µg/L	< 0.010	< 0.010	< 0.040a	< 0.040a	< 0.040a	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010
Molybdenum	µg/L	13.5	12	8.58	9.12	12	13.7	12.8	10.1	10.1	13.7	11	10.1	14.1	12.5	12.8	10.2	12.1	14.5	13.3	11.3	11.6	13.6	13.2	12.7	11.4	10.2	10.4	10.5	11.7
Nickel	µg/L	3.49	3.1	4.08	2.34	2.06	2.66	2.92	2.01	1.98	2.61	3.85	3.11	3.71	2.81	2.87	3.91	2.29	3.04	3.33	2.52	2.61	2.55	2.66	2.42	2.59	1.97	2.18	2.11	2.66
Phosphorous	µg/L	329	368	541	227	358	381	539	132	296	335	1,120	191	423	283	450	175	341	401	625	172	132	314	612	69	318	430	406	341	279
Potassium	µg/L	14,500	14,400	11,900	11,400	11,900	14,900	14,400	11,800	12,300	16,700	16,400	13,600	16,800	15,600	16,700	12,100	13,300	16,600	16,900	13,700	13,400	16,600	15,800	14,000	13,900	15,500	15,000	12,300	13,400
Selenium	µg/L	1.09	1.05	0.89	0.8	0.72	1.09	0.95	0.88	0.7	0.78	1.69	1.38	1.32	1.41	1.18	0.71	0.67	0.88	0.85	0.74	0.83	0.71	0.62	0.59	0.60	0.49	0.45	0.46	0.47
Silicon	µg/L	10,800	9,600	8,700	1,100	1,100	10,300	11,700	8,960	550	6,820	8,250	2,100	2,800	8,730	8,600	4,370	2,010	8,600	8,440	5670	1230	4070	4200	370	1,080	4,710	6,150	7,290	1,620
Silver	µg/L	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.010	< 0.010	< 0.010	< 0.010	0.051	< 0.010	< 0.010	< 0.010	<0.050	<0.010	<0.010	<0.020	<0.010	0.011	0.017	<0.010	0.011	0.016	<0.010	<0.010	<0.010	0.01
Sodium	µg/L	271,000	262,000	214,000	285,000	263,000	296,000	326,000	245,000	237,000	286,000	364,000	310,000	364,000	432,000	433,000	307,000	265,000	365,000	448,000	320,000	317,000	396,000	397,000	301,000	323,000	354,000	368,000	243,000	296,000
Strontium	µg/L	4,550	4,190	4,190	5,450	4,100	4,720	5,930	4,710	4,810	4,490	5,650	4,290	4,690	5,940	5,920	4,520	4,130	5,340	5,900	4870	4830	5650	5980	4,540	4,840	5,260	4,910	3,660	4,400
Sulphur	µg/L	206,000	189,000	175,000	230,000	177,000	206,000	272,000	186,000	168,000	196,000	314,000	233,000	287,000	355,000	359,000	226,000	205,000	297,000	374,000	257,000	272,000	326,000	318,000	242,000	240,000	253,000	269,000	-	216,000
Sulfur (As S)	µg/L																								-	-	-	-	154,000	-
Tellurium	µg/L	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.050	< 0.050	0.068	< 0.050	< 0.050	< 0.050	< 0.050	0.053	<0.250	<0.050	<0.050	<0.100	<0.050	<0.050	<0.050	0.052	<0.050	<0.050	0.056	<0.050	<0.050	<0.050
Thallium	µg/L	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.0040	< 0.0040	< 0.0040	< 0.0040	< 0.0040	< 0.0040	< 0.0040	< 0.0040	<0.0200	<0.0040	<0.0040	<0.0080	<0.0040	<0.0040	<0.0040	<0.0040	<0.0040	<0.0040	<0.0040	<0.0040	<0.0040	<0.0040
Thorium	µg/L	0.1	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	0.013	< 0.010	0.013	0.034	0.024	0.014	0.011	0.011	<0.050	0.014	0.022	<0.020	0.073	0.013	0.108	0.029	0.111	0.105	0.021	0.017	0.039	0.014
Tin	µg/L	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.050	< 0.050	< 0.050	< 0.050	0.168	0.062	< 0.050	< 0.050	<0.250	<0.050	<0.050	<0.100	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.100	<0.100
Titanium	µg/L	29.2	8.5	13.7	< 5.0	< 5.0	8.1	< 5.0	2.72	1.78	3.75	11.3	8.39	4.8	4.03	3.52	18	5.63	5.46	5.27	8.03	2.75	4.91	5.28	8.77	5.06	2.68	4.35	12.2	4.43
Tungsten	µg/L	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	0.2	<1.00	<0.20	0.22	<0.40	<0.20	<0.20	0.24	0.26	<0.20	0.21	0.26	0.29	0.2	0.27
Uranium	µg/L	34.3	36.6	33	44.5	38	39.5	49.7	37	33.6	36	49.1	46.3	52.9	54	55	36.6	35.7	47.4	53.5	37.5	41.8	40	40.2	26.9	33.7	27.6	29.7	24.1	29.3
Vanadium	µg/L	6.3	4.7	3.7	3.4	4.8	5.4	5.5	3.82	4.67	5.49	4.95	3.76	4.67	4.48	3.01	5.47	3.73	5.07	5.04	3.64	4.02	4.7	4.49	3.85	4.19	3.88	4.14	3.13	4.09
Zinc	µg/L	6.8	5.1	10	< 4.0	< 4.0	< 4.0	< 4.0	1.8	< 1.0	1.3	2.5	2.2	3.3	1.1	2	<5.0	1.1	<1.0	<2.0	1.9	<1.0	1.2	1.1	1.3	<1.0	<1.0	1.1	1.7	1
Zirconium	µg/L	0.67	0.38	0.39	0.26	0.19	0.41	0.44	0.407	0.276	0.646	1.04	0.777	0.895	0.335	0.5	0.527	0.545	0.613	0.57	0.541	0.426	0.459	0.476	0.603	0.723	0.349	0.408	0.484	0.535
Microbiological																														
Coliforms, Fecal (Q-Tray)	MPN/100ml	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	10	1	13	14	14	15
Coliforms, Total (Q-Tray)	MPN/100ml	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	36	> 2420	917	175	117	23

Associated CARO file(s) available on request
Associated Exova file(s): 107524, 115040, 417280, 438503, 47748, 593413, 610415, 653618, 683622, 714220, 714240, 95223., 8040426, 8041402, 8041784, 8050436, 8052167, 8061543, 8071280, 8090442, 8110640, 8110821, 9032473, 9050543, 9060474, 9090312, N000861, 0040546, 0060737, 0091922, 20J3095.

All terms defined within the body of Keltech's report

Table H3: Summary of Surface Water
Analytical Results - HISTORICAL to 2025

Location		Tutt Pond.		Bubna Slough																									
Sample ID		Tutt Pond	Tutt Pond	Bubna Slough-20150616	BUBNA DISCHARGE-180420	BUBNA DISCHARGE-180503	BUBNA DISCHARGE-180615	BUBNA SLOUGH-181108	Bubna	Bubna	BUBNASLOUGH-200407	BUBNASLOUGH-200605	BUBNASLOUGH-200407	BUBNASLOUGH-200605	BUBNASLOUGH-200928	BUBNASLOUGH-201029	BUBNA SLOUGH-210412	BUBNA SLOUGH-210616	BUBNA SLOUGH-211020	BUBNA SLOUGH-220323	BUBNA SLOUGH-220621	BUBNA SLOUGH-220912	BUBNA SLOUGH-221019	BUBNA SLOUGH-230329	BUBNA SLOUGH-230518	BUBNA SLOUGH-230927	BUBNA SLOUGH-231102	Bubna Slough	Bubna Slough	Bubna Slough
Sample Date		2025-09-22	2025-11-05	2015 06 16	2018 04 20	2018 05 03	2018 06 15	2018 11 08	2019 03 29	2019 05 06	2020 04 07	2020 06 05	2020 04 07	2020 06 05	2020 09 28	2020 10 29	2021 04 12	2021 06 16	2021 10 20	2022 03 23	2022 06 21	2022 09 12	2022 10 19	2023 03 29	2023 05 18	2023 09 28	2023 11 02	2024-03-21	2024-05-08	2024-09-11
Parameter	**Units**	**Analytical Results**																											
General																													
Alkalinity, Bicarbonate as CaCO3	mg/L	420	460	693	548	495	355	639	-	-	-	514	489	572	655	692	645	605	685	420	626	715	597	244	515	550	502	367	716	519
Alkalinity, Carbonate (as CaCO3)	mg/L	208	175	165	< 1.0	65.7	161	21.6	5.8	-	-	132	12.3	54.7	< 1.0	< 1.0	21.5	83	108	21.6	60.4	28.6	112	<1.0	69.9	239	237	224	<1.0	246
Alkalinity, Hydroxide (as CaCO3)	mg/L	<1	<1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	-	-	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Alkalinity, Phenolphthalein as CaCO3)	mg/L	104	87.3	-	< 1.0	32.9	80.3	10.8	2.9	-	-	66.1	6.2	27.4	< 1.0	< 1.0	10.7	< 1.0	53.8	10.8	30.2	14.3	55.8	<1.0	35	119	119	112	<1.0	123
Alkalinity, Total (as CaCO3)	mg/L	628	634	857	548	561	516	661	218	-	-	646	502	627	655	692	667	688	792	442	687	744	708	244	585	788	740	591	716	764
Ammonia, Total (as N)	µg/L	63	376	26.2	30	56	23	38	41	-	-	90	< 50	78	285	637	80	153	297	<50	<50	233	384	123	132	59	68	0.051	<0.050	<0.050
Bicarbonate	mg/L			-	-	-	-	-	212	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Bromide	mg/L	0.11	<1.00	< 2.5	< 0.10	< 0.10	0.19	< 1.00	< 0.10	-	-	0.13	< 0.10	< 0.10	< 1.00	< 1.00	< 2.50	< 1.00	< 1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<0.10	<1.00	<2.50	0.26	0.32	0.26
Chloride	mg/L	246	175	1,000	555	476	542	630	173	-	-	573	506	540	635	518	508	498	581	301	552	668	665	203	633	763	717	526	653	866
COD - Chemical Oxygen Demand	mg/L	40	38	145	75	69	87	75	27	-	-	74	53	66	62	121	63	86	64	42	74	77	71	<20	73	81	72	81	100	206
Conductivity - Field	µS/cm	2,826	2,508	-	-	2,584	2,484	3,359	866	-	-	2,559	2,431	2,573	3,317	3,248	2,893	3,018	3,587	1,427	3,023	3,371	3,403	-	-	-	-	3117	3605	3973
Conductivity - Lab	µS/cm	2,670	2,550	4,340	2,810	2,920	2,950	3,330	1,060	-	-	3,050	2,620	2,690	3,200	3,230	2,520	2,710	3,530	1,860	2,900	3,270	3,340	-	-	-	-	2,640	3,070	4,040
DOC - Dissolved Organic Carbon	mg/L	14	12.5	-	-	-	-	-	-	-	-	-	20.9	24.7	21.3	23	26.8	18	24.8	9.27	22.6	25.9	24	11.2	25.7	37.7	38.7	23.2	34.7	28.8
Fluoride	µg/L	0.82	<1.00	< 1,000	320	360	410	< 1,000	150	-	-	340	320	320	< 1,000	< 1,000	440	< 1,000	< 1,000	< 1,000	< 1,000	< 1,000	< 1,000	< 1,000	370	< 1,000	370	410	480	550
Hardness (as CaCO3)	mg/L	792	791	1,280	858	963	940	1,110	300	-	-	961	819	724	897	888	901	944	1,040	538	765	938	1,090	550	868	1,080	1,110	895	1,060	1,160
Hardness, Dissolved (as CaCO3)	mg/L	852	853																									-	-	-
Nitrate (as N)	µg/L	<10	<100	< 250	< 10	< 1,000	< 10	< 100	< 10	-	-	< 10	< 10	< 10	< 100	< 100	< 10	< 100	< 100	< 100	< 100	< 100	< 100	< 100	< 10	< 100	< 10	<250	<250	23
Nitrate+Nitrite (as N)	µg/L	<10	<100	-	< 10.0	< 1,000	< 10.0	< 100	< 10.0	-	-	< 10.0	< 10.0	< 10.0	-	< 100	< 10.0	< 100	< 100	< 100	< 100	< 100	< 100	< 100	< 10	< 100	< 10	<250	<250	23.3
Nitrite (as N)	µg/L	<10	<100	-	< 10	< 10	< 10	< 100	< 10	-	-	< 10	< 10	< 10	< 100	< 100	< 10	< 100a	< 100a	< 100	< 100	< 100	< 100	< 100	< 10	< 100	< 10	<10	<10	<10
Nitrogen-N, Total	mg/L	1,400	1,560	-	1.33	1.41	1.97	1.32	0.76	-	-	1.57	1.02	1.36	1.66	2	1.19	1.68	1.85	0.518	1.71	1.54	1.81	0.613	1.66	1.57	1.62	1.44	1.82	2.11
Ortho-Phosphate	mg/L	0.419	0.335	< 0.0010	-	-	-	-	-	-	-	-	< 0.0050	< 0.0050	< 0.0500	< 0.0500	< 0.0050	< 0.0500	< 0.0500	-	-	-	-	-	-	-	-	-	-	-
pH (field)	pH			-	-	8.08	9.06	8.43	8.56	-	-	8.41	8.66	8.44	7.97	8.32	8.36	8.46	8.63	-	-	-	-	-	-	-	-	-	-	-
pH (Lab)	pH	8.99	8.82	-	8.29	8.56	8.91	8.36	8.39	-	-	8.71	8.33	8.44	8.28	8.29	8.35	8.52	8.54	8.42	8.48	8.52	8.54	8.22	8.52	8.77	8.78	8.83	8.78	8.94
Phosphate	mg/L			-	< 0.0050	< 0.0050	< 0.0050	< 0.0500	< 0.0050	-	-	< 0.0050	-	-	-	-	-	-	-	<0.0500	<0.0500	<0.0500	<0.0500	<0.0500	<0.0050	<0.0500	<0.0050	<0.0500	<0.0050	-	-
Phosphorus, Total (as P)	mg/L	0.497	0.452	-	0.0457	0.0172	0.0325	0.0336	0.0417	-	-	0.0372	0.0165	0.0216	0.0156	0.0222	0.0165	0.014	0.0169	0.023	0.0235	0.02	0.0185	0.0133	0.0214	0.0157	0.0158	0.0292	0.0249	0.0249
Sulphate	mg/L	609	396	623	214	170	201	268	58.8	-	-	207	158	166	213	204	169	184	219	97.7	185	217	220	59.1	214	251	223	206	207	256
TDS - Solids, Total Dissolved	mg/L	1,910	1,550	3,250	1,900	1,850	5,980	2,200	559	-	-	1,790	1,710	1,790	2,070	1,710	1,770	1,800	2,010	1,080	1,850	1,930	2,040	625	1,660	2,130	1,780	1,580	1,960	2,320
Temperature	C			-	-	15.6	15.7	3.1	10.9	-	-	19.2	8.7	19.8	14.9	4.3	8.6	19.9	9.1	-	-	-	-	-	-	-	-	-	-	-
TKN - Kjeldahl Nitrogen-N	mg/L	1.4	1.56	2.52	1.33	1.41	1.97	1.32	0.76	-	-	1.57	1.02	1.36	1.66	2	1.19	1.68	1.85	0.518	1.71	1.54	1.81	0.613	1.66	1.57	1.62	1.44	1.82	2.08
TOC - Carbon, Total Organic	mg/L	15.8	12.6	43.9	20.6	24.1	27.6	24.5	6.68	-	-	27.9	21.2	25.3	30.2	25	34.7	24.8	24.9	-	-	-	-	-	-	-	-	-	-	-
TSS - Solids, Total Suspended	mg/L	-	3.8	12.8	3.5	5.7	3.8	4.7	5	-	-	16	2.8	3.8	2.6	3.8	2	3	-	-	-	-	-	-	-	-	-	-	-	-
Total Metals																													
Aluminum	µg/L	60	65.5	< 15	13.1	7.9	22.4	82.5	176	176	145	145	6.7	3.1	3.5	3.3	2.4	< 2.0	3.3	7.8	3.9	3.2	5.3	4.1	2.4	3.3	5.1	11	7.3	3.1
Antimony	µg/L	0.346	0.304	0.54	0.25	0.31	0.3	0.28	< 0.20	< 0.20	0.27	0.27	0.171	0.218	0.192	0.147	0.16	0.234	0.148	0.085	0.125	0.125	0.115	0.084	0.117	0.187	0.155	0.146	0.157	0.203
Arsenic	µg/L	6.62	5.34	4.3	2.24	2.91	2.63	2.17	1.13	1.13	2.3	2.3	1.6	1.68	1.66	1.45	1.37	1.79	1.58	1.08	1.54	1.6	1.5	0.996	1.5	1.66	1.53	1.41	1.64	1.86
Barium	µg/L	70.5	68.4	< 20	23	15.8	12.1	19.7	14	14	20.7	20.7	21.3	11.1	21	20.2	24.4	17.2	14.2	16.4	7.06	11.9	9.47	18.4	8.58	9.52	8.66	13.5	6.37	7.65
Beryllium	µg/L	<0.01	<0.010	< 5.0a	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010
Bismuth	µg/L	<0.01	<0.010	< 200	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010
Boron	µg/L	46.8	44.6	< 100	21.1	24	15.9	36.2	13.6	13.6	24.1	24.1	30.2	17.2	39.8	32	29.6	33.2	32.6	17.1	26.3	40	34	18.3	27.6	36.5	29.1	23.1	26.7	38.3
Cadmium	µg/L	<0.008	0.0085	< 0.050	< 0.010	< 0.010	0.037	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	0.0093	< 0.0020	< 0.0020	< 0.0020	< 0.0020	0.0146	0.0024	0.0025	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	0.0023	0.0039	<0.0020
Calcium	µg/L	43300	44600	41,500	60,900	65,700	32,300	45,800	23,500	23,500	50,200	50,200	53,900	38,200	42,600	41,500	60,400	43,000	35,400	41,600	35,200	29,100	28,100	42,700	35,700	18,600	21,300	34,000	31,200	14,100
Chromium	µg/L	<0.5	<0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	0.14	0.11	0.13	< 0.10	0.28	0.14	0.13	0.18	0.13	0.18	0.15	<0.10	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
Cobalt	µg/L	0.336	0.368	< 0.50	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	0.18	0.18	0.042	0.037	0.0353	0.0365	0.0478	0.0516	0.045	0.043	0.0424	0.0329	0.0437	0.0342	0.0392	0.0447	0.0447	0.0575	0.0484	0.0361
Copper	µg/L	0.98	0.56	< 2.5a	0.61	0.44	0.56	< 0.40a	0.51	0.51	0.87	0.87	0.26	0.44	0.83	0.33	0.28	0.31	< 0.20	0.69	<0.20	<0.20	<0.20	0.26	0.46	<0.20	0.7	0.20	0.20	<0.20
Iron	µg/L	82.8	92.4	< 30	20	11	32	65	59	59	197	197	11.7	7.5	7.1	5.3	6	8.3	6.7	14.9	7.2	3.7	6.7	8.3	5.2	9.2	6.3	14.9	10.4	3.4
Lead	µg/L	0.087	0.081	< 1.0	< 0.20	< 0.20	0.33	< 0.20	< 0.20	< 0.20	0.22	0.22	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	0.051	0.079	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050
Lithium	µg/L	29.8	29.1	127	67.1	76.5	89.1	101	25.4	25.4	88.8	88.8	73.1	44.7	86.7	98.6	82.4	87.1	101	40.2	61.4	88.7	73.9	39.3	71.6	100	91.4	73.8	85.9	109
Magnesium	µg/L	166,000	165,000	285,000	171,000	194,000	209,000	242,000	58,600	58,600	203,000	203,000	166,000	153,000	192,000	190,000	182,000	203,000	231,000	105,000	164,000	210,000	247,000	108,000	189,000	251,000	256,000	197,000	237,000	272,000
Manganese	µg/L	58.4	42	< 10	6.71	10.1	7.14	13.6	11.9	11.9	12.7	12.7	7.23	6.79	20.6	3.8	6	6.85	2.28	6.76	7.96	10.7	4.74	14.9	10	7.33	3.5	9.98	9.76	7.17
Mercury	µg/L	<0.01	<0.010	< 0.20a	< 0.040a	-	< 0.010	-	< 0.040a	< 0.040a	< 0.040a	< 0.040a	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010
Molybdenum	µg/L	9.48	10.3	4.6	1.95	1.97	2.02	1.66	0.71	0.71	1.29	1.29	0.936	0.815	0.561	0.94	1.16	1.28	1.54	1.28	1.38	1.15	1.26	0.975	1.35	1.41	1.57	1.48	1.56	1.52
Nickel	µg/L	2.1	2.08	< 5.0	0.87	0.79	0.89	0.52	< 0.40	< 0.40	0.95	0.95	0.494	0.437	0.444	0.456	0.538	0.434	0.46	0.49	0.452	0.432	0.504	0.363	0.448	0.492	0.785	0.426	0.395	0.41
Phosphorous	µg/L	553	451	< 300	< 50	< 50	< 50	< 50	< 5041.7	< 50	< 50	< 5037.2	19	13	15	26	19	27	35	21	18	12	22	44	18	<20	30	24	27	<30
Potassium	µg/L	15,400	14,600	51,700	26,800	32,800	33,300	37,700	9,620	9,620	30,500	30,500	25,400	25,000	30,600	31,500	28,000	31,300	37,900	15,500	26,100	30,100	33,300	16,100	27,300	37,900	37,000	28,500	32,000	40,600
Selenium	µg/L	0.46	0.5	< 1.0	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	0.12	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	0.12	0.15	0.11	0.1	0.1	0.17	0.22	0.16	0.13	0.16	0.17	0.13
Silicon	µg/L	4,170	6,550	7,070	4,200	2,200	3,000	9,000	2,500	2,500	< 1,000	< 1,000	7,090	5,080	14,600	14,900	7,040	8,780	11,600	3,160	6,240	17,500	17,400	6,850	7,800	15,300	11,600	5,610	7,050	6,090
Silver	µg/L	0.011	0.014	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	<0.010	0.01	<0.010	0.013	<0.010	0.011	<0.010	<0.010	<0.010	0.014	<0.010
Sodium	µg/L	333,000	318,000	571,000	344,000	400,000	408,000	460,000	113,000	113,000	405,000	405,000	325,000	289,000	375,000	378,000	341,000	384,000	439,000	205,000	304,000	377,000	447,000	203,000	345,000	474,000	522,000	363,000	413,000	507,000
Strontium	µg/L	4,800	4,550	2,990	3,280	3,600	1,550	2,460	1,160	1,160	2,830	2,830	2,580	2,270	2,070	2,140	2,690	1,690	1,520	1,730	1,500	1,230	1,380	1,780	1,480	658	834	1,260	1,180	481
Sulphur	µg/L	211,000	195,000	191,000	77,700	92,800	95,400	105,000	-	24,400	85,200	-	69,800	61,500	83,400	79,500	68,800	76,000	82,500	40,100	62,300	71,800	79,300	38,700	70,900	94,200	91,800	72,600	81,900	97,300
Sulfur (As S)	µg/L	-	-																									-	-	-
Tellurium	µg/L	<0.05	<0.050	< 1.0	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	0.053	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050
Thallium	µg/L	<0.004	<0.0040	< 0.20	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.0040	< 0.0040	< 0.0040	< 0.0040	< 0.0040	< 0.0040	< 0.0040	<0.0040	<0.0040	<0.0040	<0.0040	<0.0040	<0.0040	<0.0040	<0.0040	<0.0040	<0.0040	<0.0040
Thorium	µg/L	0.01	0.011	< 0.50	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	<0.010	<0.010	<0.010	<0.010	<0.010	0.022	<0.010	0.051	<0.010	<0.010	<0.010
Tin	µg/L	<0.1	<0.100	< 30	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	0.053	<0.050	<0.050	<0.050
Titanium	µg/L	3.51	3.77	< 50	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	9.5	9.5	0.46	0.32	0.25	0.3	< 0.20	0.21	0.22	0.28	0.26	<0.20	0.31	0.23	<0.20	0.2	0.23	0.56	0.38	<0.20
Tungsten	µg/L	0.31	0.31	-	< 1.0	< 1.0	< 1.0	< 1.0	-	< 1.0	< 1.0	-	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20
Uranium	µg/L	23.8	22.3	15.4	7.55	7.37	6.48	6.1	2.04	2.04	5.59	5.59	4.01	3.26	2.25	3.7	5.2	4.84	5.63	6.15	4.93	3.53	4.66	4.54	5.49	4.9	5.33	6.20	6.81	6.22
Vanadium	µg/L	5.28	4.98	< 30	3.1	3.6	2.1	1.6	1.9	1.9	2.4	2.4	2.13	1	0.81	0.8	1.95	0.41	< 0.20	4.23	<1.00	<1.00	<1.00	2.46	1.14	<1.00	1.32	2.30	1.79	<1.00
Zinc	µg/L	<1	1.5	18.9	< 4.0	< 4.0	15.4	< 4.0	< 4.0	< 4.0	< 4.0	< 4.0	3	< 1.0	1.6	1.1	1.2	1.4	1.3	1.5	<1.0	<1.0	<1.0	1.5	<1.0	<1.0	<1.0	1.4	1.3	<1.0
Zirconium	µg/L	0.333	0.346	-	0.17	0.19	0.18	0.45	0.23	0.23	0.31	0.31	0.065	0.049	0.036	0.035	0.046	0.037	0.037	0.061	0.031	<0.020	0.035	0.052	0.025	0.128	0.03	0.039	0.109	0.038
Microbiological																														
Coliforms, Fecal (Q-Tray)	MPN/100ml	66	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2	4	> 2420
Coliforms, Total (Q-Tray)	MPN/100ml	1,410	387	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1,410	372	32,600

Associated CARO file(s) available on request
Associated Exova file(s): 107524, 115040, 417280, 438503, 47748, 593413, 610415, 653618, 683622, 714220, 714240, 95223., 8040426, 8041402, 8041784, 8050436, 8052167, 8061543, 8071280, 8090442, 8110640, 8110821, 9032473, 9050543, 9060474, 9090312, N000861, 0040546, 0060737, 0091922, 20J3095.

All terms defined within the body of Keltech's report

Table H3: Summary of Surface Water
Analytical Results - HISTORICAL to 2025

Location		Bubna Slough					Slough 2																						L Robert Lake
Sample ID		Bubna Slough	Bubna Slough	Bubna Slough	Bubna Slough	Bubna Slough	SLOUGH #2-200407	SLOUGH #2-200605	SLOUGH #2-200917	SLOUGH #2-201029	SLOUGH # 2-210616	SLOUGH #2-210412	SLOUGH #2-211020	SLOUGH #2-220323	SLOUGH # 2-220621	SLOUGH #2-220912	SLOUGH #2-221019	SLOUGH #2-230329	SLOUGH #2-230518	SLOUGH #2-230927	SLOUGH #2-231102	Slough #2	Slough #2	Slough #2	Slough #2	Slough #2	Slough #2	Slough #2	Slough #2	Little Robert Lake-20150616
Sample Date		2024-10-22	2025-03-12	2025-05-15	2025-09-22	2025-11-06	2020 04 07	2020 06 05	2020 09 17	2020 10 29	2021 06 16	2021 04 12	2021 10 20	2022 03 22/23	2022 06 21	2022 09 12	2022 10 19	2023 03 29	2023 05 18	2023 09 27	2023 11 02	2024-03-21	2024-05-08	2024-09-11	2024-10-22	2025-03-12	2025-05-15	2025-09-22	2025-11-06	2015 06 16
Parameter	**Units**	**Analytical Results**																											
General																													
Alkalinity, Bicarbonate (as CaCO3)	mg/L	613	78.1	506	508	624	586	487	677	782	601	628	825	557	738	776	754	463	583	768	786	656	1,010	757	869	370	798	897	972	531
Alkalinity, Carbonate (as CaCO3)	mg/L	184	<1.0	166	327	253	85.4	278	164	79.7	274	174	149	93.9	165	197	157	94.8	188	262	153	212	<1.0	325	265	125	190	313	296	252
Alkalinity, Hydroxide (as CaCO3)	mg/L	<1.0	<1.0	<1.0	<1	<1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1	<1.0	< 1.0
Alkalinity, Phenolphthalein (as CaCO3)	mg/L	92.1	<1.0	82.8	164	126	42.7	139	82.2	39.8	137	86.9	74.7	46.9	82.7	98.4	78.4	47.4	93.9	131	76.6	106	<1.0	163	132	62.7	95.2	156	148	-
Alkalinity, Total (as CaCO3)	mg/L	797	78.1	671	835	876	671	766	841	862	875	802	974	651	904	973	910	558	771	1,030	939	868	1,010	1,080	1,130	495	988	1,210	1,270	782
Ammonia, Total (as N)	µg/L	0.127	<50	<50	<50	<50	339	< 50	550	1,160	118	210	1,280	189	622	535	1,280	301	98	767	1580	0.308	0.227	0.372	0.401	<50	260	472	428	36.7
Bicarbonate	mg/L						-	-	-	-	-	-	-	-	-	-	-	-	-	-	-									-
Bromide	mg/L	<1.00	<1.00	0.39	<1	<1.00	0.95	< 10.0	< 0.10	1.68	1.4	1.4	1.67	<1.00	<1.00	<1.00	<1.00	1.3	2.33	2.17	<2.50	2.13	2.43	1.25	2.48	<5.00	2.89	1.37	1.62	< 1.0
Chloride	mg/L	742	63.7	573	790	802	492	512	623	617	558	484	568	363	643	778	759	481	705	856	772	732	836	999	896	411	771	1,220	1,060	86
COD - Chemical Oxygen Demand	mg/L	92	<20	83	86	83	96	142	133	110	163	99	104	75	110	113	110	81	175	135	184	126	130	215	340	42	130	163	164	104
Conductivity - Field	µS/cm	4376					-	-	-	-	4,926	4,522.00	5,874.00	3,548	5,057	5,889	5,950	-	-	-	-	6168	6896	5718	7831					-
Conductivity - Lab	µS/cm	4,140	438	3,510	4,190	4,230	4,260	4,230	5,320	5,420	4,420	4,160	6,080	3,690	5,170	5,730	5,920	-	-	-	-	5,430	5,790	7,750	7,870	3,800	7,180	8,540	8,630	3,340
DOC - Dissolved Organic Carbon	mg/L	29.7	1.76	26.1	29.1	27	36.8	49.5	46.4	46.4	40.7	39.4	45.9	25.5	35.9	45.3	47.8	36.6	39.4	60.1	45.4	48.0	55.2	53	55.1	10.6	46.1	56	64	-
Fluoride	µg/L	<1000	<1.00	0.39	<1	<1.00	630	660	830	< 1,000	< 1,000	< 1,000	< 1,000	< 1,000	< 1,000	< 1,000	< 1,000	< 1,000	780	850	750	1030	1260	<100	<1000	<5.00	0.89	<0.1	1.03	< 400
Hardness (as CaCO3)	mg/L	1,190	60.9	990	1,370	1,200	590	506	811	657	704	661	788	517	642	745	767	575	686	864	812	767	981	962	1,130	250	937	1,130	969	990
Hardness, Dissolved (as CaCO3)	mg/L	-	33.3	1,070	1,220	1,320																-	-	-	-	231	960	1,020	1,070	
Nitrate (as N)	µg/L	<100	<0.100	<0.100	<0.1	<0.100	12	< 10	< 10	< 100	< 100	< 100	< 100	< 100	< 100	< 100	< 100	< 100	< 500	< 100	< 250	<500	<250	<10	<100	<0.500	<0.010	<0.01	<0.100	< 100
Nitrate+Nitrite (as N)	µg/L	<100	<0.100	<0.100	<0.1	<0.100	11.9	< 10.0	-	< 100	< 100	< 100	< 100	< 100	< 100	< 100	< 100	< 100	< 500	< 100	< 250	<500	<250	<10	<100	<0.500	<0.0100	<0.01	<0.100	-
Nitrite (as N)	µg/L	<100	<0.100	<0.010	<0.1	<0.100	< 10	< 10	< 10	< 100	< 100a	< 100a	< 100a	< 100	< 100	< 100	< 100	< 100	20	60	55	<10	22	<10	<100	<0.500	<0.010	<0.01	<0.100	-
Nitrogen-N, Total	mg/L	1.84	292	1,520	1,760	1,710	2.53	2.85	3.21	3.61	2.82	2.61	4.36	1.76	2.99	3.19	3.9	2.38	4.65	3.69	7.02	2.83	3.29	6.63	23.20	1,240	3,320	4,230	4,620	-
Ortho-Phosphate	mg/L	-	0.0078	<0.0050	0.0078	<0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0500	< 0.0500	< 0.0500	< 0.0500	-	-	-	-	-	-	-	-	-	-	-	-	0.0784	0.036	0.025	0.0099	1.18
pH (field)	pH	-					-	-	-	-	8.95	8.87	8.74	-	-	-	-	-	-	-	-	-	-	-	-					-
pH (Lab)	pH	8.76	8.1	8.8	9.11	8.83	8.58	9	8.7	8.51	8.9	8.72	8.61	8.62	8.69	8.77	8.65	8.63	8.79	8.79	8.62	8.71	8.83	8.99	8.87	8.87	8.78	8.95	8.83	-
Phosphate	mg/L	-					-	-	-	-	-	-	-	<0.0500	<0.0500	<0.0500	<0.0500	<0.0500	<0.0050	<0.0050	0.0241	-	-	-	-					-
Phosphorus, Total (as P)	mg/L	0.0193	0.0177	0.012	0.0158	0.0209	0.069	0.066	0.0714	0.0398	0.0374	0.0543	0.0553	0.0566	0.0582	0.148	0.0799	0.062	0.244	0.0725	0.405	0.0584	0.0673	0.256	2.54	0.088	0.192	0.0911	0.149	-
Sulphate	mg/L	242	18.6	217	510	278	897	933	1,180	1,190	1,050	907	1,100	661	1160	1,380	1,410	807	1,270	1,530	1410	1,340	1,510	1,800	1,680	744	1,410	2,440	1,940	1,570
TDS - Solids, Total Dissolved	mg/L	2,500	210	2,000	2,690	2,750	2,950	3,070	3,880	3,580	3,370	3,120	3,910	2,380	3,680	3,880	4,000	2,410	3,630	4,480	3,920	3,860	4,550	5,420	5,910	2,320	4,760	6,210	6,560	2,750
Temperature	C	-					-	-	-	-	19.4	9	9.8	-	-	-	-	-	-	-	-	-	-	-	-					-
TKN - Kjeldahl Nitrogen-N	mg/L	1.84	0.292	1.52	1.76	1.71	2.52	2.85	3.21	3.61	2.82	2.61	4.36	1.76	2.99	3.19	3.9	2.38	4.63	3.63	6.96	2.83	3.26	6.63	23.2	1.24	3.32	4.23	4.62	2.79
TOC - Carbon, Total Organic	mg/L	-	2.17	27.1	29.1	27.8	37.3	52	48.3	48.4	41.6	45.2	47.6	-	-	-	-	-	-	-	-	-	-	-	-	12.1	46.6	57.8	64	34.6
TSS - Solids, Total Suspended	mg/L	-	-	5.2	-	5	4.8	6.4	4	2.4	4.8	6.2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	6.8	-	13.9	22.4
Total Metals																														
Aluminum	µg/L	3.5	3.9	4.4	4.3	11.9	16.8	23.3	12.5	8.3	27.3	6.3	12.6	53.7	17.9	28.2	27	65.5	29.1	63	29.2	87.1	43.7	95.8	876	27.9	39.1	51.5	50.8	173
Antimony	µg/L	0.167	<0.050	0.166	0.213	0.2	0.354	0.466	0.616	0.474	0.444	0.76	0.427	0.256	0.352	0.334	0.289	0.206	0.293	0.404	0.32	0.306	0.407	0.688	0.516	0.102	0.343	0.462	0.45	0.66
Arsenic	µg/L	1.62	0.161	1.57	1.66	1.44	4.08	5.23	7.92	5.19	4.8	5.57	5.21	3.37	4.27	5.5	5.05	2.62	4.2	5.66	4.69	3.67	4.63	6.86	7.1	1.2	4.73	5.31	5.03	8.8
Barium	µg/L	6.38	2.48	7.21	4.66	4.75	15	7.94	29.1	18.4	5.22	7.69	24	27.3	5.25	27	25.3	26	35.7	42.1	34.2	32.0	6.22	31.5	39.9	9.44	29.2	23.7	18	30
Beryllium	µg/L	<0.010	<0.010	<0.010	<0.01	<0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	<0.010	<0.020	<0.010	<0.050	<0.020	<0.050	<0.050	<0.050	<0.050	<0.050	<0.020	0.042	<0.010	<0.020	<0.02	<0.020	< 5.0a
Bismuth	µg/L	<0.010	<0.010	<0.010	<0.01	<0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	0.015	< 0.010	<0.010	<0.020	<0.010	<0.050	<0.020	<0.050	<0.050	<0.050	<0.050	<0.050	<0.020	0.023	<0.010	<0.020	0.068	<0.020	< 200
Boron	µg/L	30.7	3.5	27.2	35.7	28.3	29.6	12.3	19.8	19.3	17.2	22.6	16.8	10.9	18.5	18.7	18	16.2	20.8	23.9	20.2	13.4	21.7	15.6	15.8	4.7	17.3	16	15	< 100
Cadmium	µg/L	<0.0020	<0.0020	<0.0020	<0.002	0.0114	0.0047	0.0061	0.0081	< 0.0020	0.0051	0.0026	0.0035	0.0051	0.0045	0.0048	<0.0100	<0.0040	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0080	0.0462	0.0045	<0.0080	<0.008	<0.0100	< 0.050
Calcium	µg/L	16,400	44500	28700	11700	14300	52,000	35,800	38,500	37,100	53,300	42,800	35,200	44,100	41,300	35,000	30,500	41,000	40,800	26,700	26,500	33,000	35,200	22,900	31,900	12400	34800	18000	16900	73,200
Chromium	µg/L	<0.50	<0.50	<0.50	<0.5	<0.50	0.32	0.59	0.3	0.13	0.35	0.26	0.36	0.33	0.26	0.22	<0.50	<0.20	<2.50	<2.50	<2.50	<2.50	<2.50	<1.00	1.88	<0.50	<1.00	<1	<1.00	0.61
Cobalt	µg/L	0.041	0.0141	0.0418	0.029	0.0385	0.29	0.322	0.265	0.181	0.296	0.239	0.154	0.249	0.171	0.145	0.145	0.229	0.293	0.205	0.158	0.252	0.265	0.281	0.891	0.0927	0.24	0.156	0.191	0.64
Copper	µg/L	<0.20	<0.20	<0.20	0.68	<0.20	1.09	0.7	0.55	< 0.20	0.99	0.62	1.44	0.8	<0.40	0.27	<1.00	0.78	<1.00	<1.00	<1.00	<1.00	<1.00	0.43	3.26	0.4	0.57	1.78	0.5	< 2.5a
Iron	µg/L	3.8	5.9	6.2	3.8	14.5	51.4	64.3	37.5	33.2	96	28.8	40.4	92.9	34.3	68.6	56.7	107	65.6	106	70	156	80.9	108	1,510	43.3	61.7	67.8	84.6	203
Lead	µg/L	0.052	<0.050	<0.050	<0.05	<0.050	0.072	0.101	0.062	0.07	0.264	0.084	0.125	0.112	0.181	0.078	<0.250	0.145	0.269	<0.250	<0.250	<0.250	0.298	0.159	2	0.065	0.18	0.143	0.14	< 1.0
Lithium	µg/L	110	6	84.7	117	111	109	67.8	122	156	120	126	150	74.6	106	141	117	84.8	105	153	130	128	140	155	181	36.9	156	160	166	< 50
Magnesium	µg/L	278,000	12,100	223,000	326,000	283,000	112,000	101,000	174,000	137,000	128,000	145,000	170,000	98,800	131,000	160,000	168,000	115,000	142,000	194,000	181,000	166,000	217,000	220,000	254,000	53,300	206,000	264,000	225,000	196,000
Manganese	µg/L	5.16	5.13	7.57	3.67	2.8	129	41	37.1	39.2	97.4	42	34.8	114	67	28.6	27.9	37.1	31.6	26.6	32.6	50.7	31.3	12.3	93.2	28.1	27.2	9.56	13.2	442
Mercury	µg/L	<0.010	<0.010	<0.010	<0.01	<0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.01	<0.010	< 0.20a
Molybdenum	µg/L	1.47	0.202	1.44	1.59	1.6	3.46	3.77	6.94	5.18	4.4	4.73	7.33	3.62	5.28	5.98	6.58	4.46	7.57	8.42	10.8	11.4	15.9	14	14.9	3.22	14.7	14.3	16.1	5.1
Nickel	µg/L	0.446	0.07	0.402	0.385	1.34	1.19	1.49	1.76	1.18	1.51	1.27	1.12	1.1	1.12	1.13	1.3	0.979	1.59	1.36	1.09	1.36	1.47	1.51	2.98	0.38	1.32	1.21	1.37	< 5.0
Phosphorous	µg/L	19	19	17	25	<20	68	46	75	55	61	58	62	128	58	438	124	81	159	93	457	69	79	306	1,020	90	113	101	118	1,220
Potassium	µg/L	40,000	2,410	32,000	46,700	40,500	71,700	71,400	118,000	96,100	81,600	97,000	117,000	59,200	80,900	98,500	104,000	63,700	86,300	123,000	109,000	103,000	117,000	137,000	146,000	32,500	122,000	166,000	146,000	36,200
Selenium	µg/L	0.13	<0.10	0.14	<0.1	<0.10	0.2	0.16	0.2	0.2	0.12	0.17	0.22	0.14	<0.20	0.25	<0.50	0.21	0.91	<0.50	<0.50	<0.50	<0.50	0.57	0.52	<0.10	0.44	0.43	0.23	< 1.0
Silicon	µg/L	6,620	370	6,340	3,640	3,670	7,290	6,470	9,930	8,580	6,240	8,630	12,100	4,720	7,780	13,100	11,000	4,650	2,650	4,390	3,830	1,510	1,470	6,320	8,370	1,090	4,250	4,600	4,550	3,690
Silver	µg/L	<0.010	<0.010	<0.010	<0.01	<0.010	< 0.010	< 0.010	0.015	< 0.010	< 0.010	< 0.010	< 0.010	<0.010	<0.020	<0.010	<0.050	<0.020	<0.050	<0.050	<0.050	<0.050	<0.050	<0.020	0.024	<0.010	<0.020	0.038	<0.020	< 0.050
Sodium	µg/L	516,000	24,900	436,000	583,000	435,000	782,000	823,000	997,000	1,100,000	922,000	1,020,000	1,500,000	660,000	889,000	1,090,000	1,260,000	742,000	960,000	1,390,000	1,540,000	1,220,000	1,430,000	1,570,000	1,770,000	374,000	1,500,000	1,890,000	1,360,000	619,000
Strontium	µg/L	589	188	1,220	354	519	1,300	1,260	1,470	1,180	1,330	1,110	1,360	1,120	1,190	1,300	1,250	1,080	1,380	1,370	1,200	1,290	1,380	1,370	1,460	341	1,410	1,050	995	2,050
Sulphur	µg/L	105,000	-	97,200	112,000	97,100	347,000	335,000	595,000	481,000	373,000	429,000	545,000	276,000	384,000	479,000	487,000	331,000	432,000	576,000	536,000	549,000	576,000	681,000	800,000	-	728,000	766,000	723,000	471,000
Sulfur (As S)	µg/L	-	3,500	-	-	-																-	-	-	-	160,000	-	-	-	
Tellurium	µg/L	<0.050	<0.050	<0.050	<0.05	<0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	0.06	<0.050	<0.100	<0.050	<0.250	<0.100	<0.250	<0.250	<0.250	<0.250	<0.250	<0.100	<0.100	<0.050	<0.100	<0.1	<0.100	< 1.0
Thallium	µg/L	<0.0040	<0.0040	<0.0040	<0.004	<0.0040	< 0.0040	< 0.0040	< 0.0040	< 0.0040	< 0.0040	< 0.0040	< 0.0040	<0.0040	<0.0080	<0.0040	<0.0200	<0.0080	<0.0200	<0.0200	<0.0200	<0.0200	<0.0200	<0.0080	<0.0080	<0.0040	<0.0080	<0.008	<0.0080	< 0.20
Thorium	µg/L	0.011	<0.010	<0.010	<0.01	<0.010	< 0.010	< 0.010	< 0.010	< 0.010	0.013	< 0.010	< 0.010	0.013	<0.020	0.016	<0.050	0.067	<0.050	0.186	<0.050	0.108	0.069	0.052	0.353	<0.010	<0.020	<0.02	<0.020	< 0.50
Tin	µg/L	<0.050	<0.100	<0.100	<0.1	<0.100	< 0.050	< 0.050	< 0.050	< 0.050	0.088	< 0.050	< 0.050	<0.050	<0.100	<0.050	<0.250	<0.100	<0.250	<0.250	<0.250	<0.250	<0.250	<0.250	<0.100	<0.100	<0.100	<0.200	<0.2	<0.200	< 30
Titanium	µg/L	<0.20	<0.20	<0.20	0.21	0.55	1.77	2.02	1.29	1.5	2.08	0.94	1.17	3.06	0.97	1.63	1.86	3.81	2.29	3.45	1.87	4.83	3.47	4.54	46.6	1.47	2.52	3.08	3.84	< 50
Tungsten	µg/L	<0.20	<0.20	<0.20	<0.2	<0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	<0.20	<0.40	<0.20	<1.00	<0.40	<1.00	<1.00	<1.00	<1.00	<1.00	0.45	0.55	<0.20	0.49	0.56	0.61	-
Uranium	µg/L	5.67	0.993	6.87	6.92	7.29	15.9	16.1	22.2	22.6	19.3	19.7	30.2	18.3	24.9	25.5	30.5	20	33.5	37	39.3	43.5	54.8	54.6	54.4	11.3	55.1	52.4	58.1	14.5
Vanadium	µg/L	<1.00	<1.00	1.25	<1	1.1	1.38	1.5	2.27	0.71	1.53	0.83	< 0.20	1.52	<2.00	<1.00	<5.00	<2.00	<5.00	<5.00	<5.00	<5.00	<5.00	2.72	5.24	<1.00	2.63	<2	2.84	< 30
Zinc	µg/L	<1.0	1.1	<1.0	<1	<1.0	2.4	< 1.0	1.7	< 1.0	2.3	1.3	4.2	2	<2.0	2.5	<5.0	<2.0	<5.0	<5.0	<5.0	<5.0	<5.0	<2.0	12	1.8	<2.0	<2	<2.0	< 5.0
Zirconium	µg/L	0.036	<0.020	0.042	0.044	0.051	0.527	0.395	0.475	0.364	0.556	0.315	0.344	0.568	0.318	0.313	0.348	0.565	0.903	0.845	0.602	0.901	0.981	0.916	1.17	0.278	0.91	0.529	0.979	-
Microbiological																														
Coliforms, Fecal (Q-Tray)	MPN/100ml	7	<1	16	740	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	14	36	30	1	28	1,990	11	-
Coliforms, Total (Q-Tray)	MPN/100ml	658	15	770	13,000	49	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	551	862	8,840	30,800	76	1,200	46,100	291	-

Associated CARO file(s) available on request
Associated Exova file(s): 107524, 115040, 417280, 438503, 47748, 593413, 610415, 653618, 683622, 714220, 714240, 95223., 8040426, 8041402, 8041784, 8050436, 8052167, 8061543, 8071280, 8090442, 8110640, 8110821, 9032473, 9050543, 9060474, 9090312, N000861, 0040546, 0060737, 0091922, 20J3095.

All terms defined within the body of Keltech's report

Table H3: Summary of Surface Water
Analytical Results - HISTORICAL to 2025

Location		Little Robert Lake																												
Sample ID		LITTLE ROBERT'S LAKE-20160921	LITTLE ROBERT LK-180417	LITTLE ROBERT LK-180503	LITTLE ROBERT LK-180615	Little Robert Lk	Little Robert Lk	Little Robert Lk	LITTLERO BERTLAKE-200928	LITTLERO BERTLAKE-201029	LTTILERO BERTLAKE-200605	LITTLE ROBERT LAKE-210412	Little Robert Lake	LITTLE ROBERT LAKE-210922	LITTLE ROBERT LAKE-211021	LITTLE ROBERT LAKE-220323	LITTLE ROBERT LAKE-220621	LITTLE ROBERT LAKE-220912	LITTLE ROBERT LAKE-221019	LITTLE ROBERT LAKE-230329	LITTLE ROBERT LAKE-230518	LITTLE ROBERT LAKE-230928	LITTLE ROBERT LAKE-231102	Little Robert Lake	Little Robert Lake	Little Roberts Lake	Little Robert Lake	Little Robert Lake	Little Robert Lake	Little Robert Lake
Sample Date		2016 09 21	2018 04 17	2018 05 03	2018 06 15	2019 05 06	2019 06 05	2019 09 04	2020 09 28	2020 10 29	2020 06 05	2021 04 12	2021 06 17	2021 09 22	2021 10 21	2022 03 23	2022 06 21	2022 09 12	2022 10 19	2023 03 29	2023 05 18	2023 09 28	2023 11 02	2025-03-12	2025-05-16	2025-09-23	2025-11-06	2024-03-22	2024-05-10	2024-09-12
Parameter	**Units**	**Analytical Results**																												
General																														
Alkalinity, Bicarbonate as CaCO3	mg/L	-	495	465	543	563	384	478	520	621	414	701	349	629	699	521	493	448	554	464	498	655	678	609	597	573	666	598	625	476
Alkalinity, Carbonate (as CaCO3)	mg/L	-	130	46.5	47.1	128	253	267	155	75.8	234	47.4	312	142	70.9	135	208	271	149	148	132	192	142	26	127	204	124	123	135	197
Alkalinity, Hydroxide (as CaCO3)	mg/L	-	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Alkalinity, Phenolphthalein as CaCO3)	mg/L	-	65.2	23.3	23.6	63.8	127	133	77.7	37.9	117	23.7	156	71.1	35.5	67.5	104	135	74.6	73.8	66	95.9	70.8	13	63.7	102	62	61.6	67.0	98.5
Alkalinity, Total (as CaCO3)	mg/L	934	626	511	590	690	637	745	675	697	648	749	661	772	770	656	701	719	703	611	630	847	820	635	724	777	790	721	760	674
Ammonia, Total (as N)	µg/L	-	54	173	53	113	84	45	211	440	< 50	110	< 50	340	486	54	<50	146	197	65	96	331	1110	<0.050	0.089	0.076	<0.050	0.072	0.059	0.123
Bicarbonate	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Bromide	mg/L	< 1.0	0.16	< 0.10	0.24	0.19	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<5.00	<1.00	<2.50	<5.00	<1.00	<10.0	<1.00	<1.00	<5.00	<1.00
Chloride	mg/L	102	76.5	151	172	154	181	165	115	103	116	100	110	123	110	82.2	90.3	120	119	106	113	152	113	112	110	158	158	141	148	167
COD - Chemical Oxygen Demand	mg/L	-	59	37	42	38	36	49	93	52	50	51	67	66	58	68	61	98	80	70	94	80	78	68	79	81	111	138	113	68
Conductivity - Field	µS/cm	-	3,334	1,779	1,940	2,656	2,335	3,090	4,285	4,187	3,393	4,486	4,945	5,225	4,527	4,227	4,580	5,528	5,482	-	-	-	-	5,490	5,716	7,660	6,644	5999	4565	3294
Conductivity - Lab	µS/cm	4,400	3,780	2,000	2,140	3,060	2,690	3,100	4,350	4,150	3,520	4,200	4,220	5,370	5,020	4,370	4,460	5,400	5,480	-	-	-	-	5,450	5,740	7,110	6,860	5,210	5,650	6,380
DOC - Dissolved Organic Carbon	mg/L	-	-	-	-	-	-	23.7	24	19.5	23.5	24.4	16.6	24.1	22.1	15.6	17.8	23.8	23.1	37.2	19.4	26.2	26.5	19.4	22.9	26.5	25.4	26.4	29.2	26.7
Fluoride	µg/L	410	310	650	880	590	< 1,000	< 1,000	< 1,000	< 1,000	430	< 1,000	< 1,000	< 1,000	< 1,000	< 1,000	< 1,000	< 1,000	< 1,000	< 1,000	250	< 1,000	< 2,500	<5.00	<1.00	<10.0	0.44	<1000	610	<1000
Hardness (as CaCO3)	mg/L	1,200	1,240	763	855	1,170	987	1,110	1,330	1,300	1,240	1,560	1,620	1,630	1,520	1,350	1,260	1,660	1,830	1,670	1,580	309	2,070	1,730	1,930	2,450	2,030	1,900	2,160	2,150
Hardness, Dissolved (as CaCO3)	mg/L																							1,750	1,920		1,850	-	-	-
Nitrate (as N)	µg/L	160	< 10	442	405	132	< 100	< 100	< 100	309	< 10	< 100	< 100	< 100	< 100	< 100	< 100	< 100	< 100	< 100	< 500	< 100	< 250	<0.500	<0.100	<1.00	0.295	114	<500	<100
Nitrate+Nitrite (as N)	µg/L	-	< 10.0	464	405	146	< 100	< 100	-	309	< 10.0	< 100	< 100	< 100	< 100	< 100	< 100	< 100	< 100	< 100	< 500	< 100	< 250	<0.500	<0.100	<1.00	0.295	114	<500	<100
Nitrite (as N)	µg/L	-	< 10	22	< 10	13	< 100	< 100	< 100	< 100	< 10	< 100a	< 100a	< 100a	< 100a	< 100	< 100	< 100	< 100	< 100	< 10	< 100	< 250	<0.500	<0.100	<1.00	<0.100	<100	<10	<100
Nitrogen-N, Total	mg/L	-	1.83	1.67	1.71	1.29	1.32	1.82	2.85	2.65	1.78	1.58	1.9	1.96	2.45	2.08	1.85	2.4	2.8	2.41	2.52	2.48	3.37	2.28	2.18	2.61	4.34	3.61	3.37	2.91
Ortho-Phosphate	mg/L	-	-	-	-	-	-	0.387	0.564	0.618	0.604	0.953	0.6	0.44	0.442	-	-	-	-	-	-	-	-	1.13	1.98	1.19	1.12	-	-	-
pH (field)	pH	-	8.92	8.34	9.19	8.59	8.84	8.19	8.76	8.71	8.97	8.59	9.29	8.61	8.47	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
pH (Lab)	pH	8.45	8.73	8.56	8.51	8.67	9.02	8.98	8.72	8.5	8.86	8.42	9.08	8.61	8.47	8.65	8.82	8.94	8.63	8.64	8.61	8.62	8.55	8.38	8.61	8.8	8.52	8.50	8.61	8.81
Phosphate	mg/L	-	1.32	0.15	< 0.0500	0.413	0.209	-	-	-	-	-	-	-	-	0.445	0.59	0.085	0.201	0.422	<0.0050	0.208	0.88					-	1.74	-
Phosphorus, Total (as P)	mg/L	-	1.43	0.448	0.235	0.865	0.787	1.16	1.5	1.58	0.592	1.67	1.09	1.44	1.35	1.54	1.67	1.45	1.68	1.9	2.15	2.01	1.88	1.43	2.74	1.36	1.78	2.64	2.74	1.25
Sulphate	mg/L	1,860	1,490	400	403	1,030	749	972	1,720	1,540	1,630	1,840	2,210	2,500	2,320	1,810	2,200	2,930	2,850	2,450	2,550	3,350	2920	2,540	2,420	3,440	3,210	3,260	3,290	4,030
TDS - Solids, Total Dissolved	mg/L	3,680	3,140	1,450	1,470	2,350	2,010	2,160	3,490	3,210	3,040	3,740	4,320	4,310	4,110	3,190	3,860	4,520	4,600	3,730	4,490	5,660	4,950	4,310	4,900	6,040	6,010	4,880	5,510	5,420
Temperature	C	-	11	17.2	17.1	18.7	22.3	25	14.2	5	20.5	10.8	20.6	15	8.3	-	-	-	-	-	-	-	-					-	-	-
TKN - Kjeldahl Nitrogen-N	mg/L	-	1.83	1.2	1.3	1.15	1.32	1.82	2.85	2.34	1.78	1.58	1.9	1.96	2.45	2.08	1.85	2.4	2.8	2.41	2.52	2.48	3.37	2.28	2.18	2.61	4.05	3.50	3.37	2.91
TOC - Carbon, Total Organic	mg/L	30.9	46.6	14.2	16	15.6	12.7	25.5	27.2	23.3	25.7	28.3	22.7	24.7	24.4	-	-	-	-	-	-	-	-	21.3	23.2	27.5	29.2	-	-	-
TSS - Solids, Total Suspended	mg/L	5.3	21.5	4.3	12.7	4.7	3.8	4.4	153	6.4	8.8	29	30.4	-	-	-	-	-	-	-	-	-	-	-	24	51.8	69.5	-	-	-
Total Metals																														
Aluminum	µg/L	105	189	42.6	55.4	112	32.1	18.8	7,380	224	189	89.1	240	685	2.4	248	231	7,270	268	526	234	723	416	350	350	325	289	627	360	82.1
Antimony	µg/L	< 0.50	0.49	0.26	0.22	0.3	0.32	0.57	0.542	0.521	0.404	0.428	0.631	0.458	0.357	0.416	0.409	0.714	0.537	0.52	0.465	0.177	0.389	0.367	0.464	0.735	0.515	0.415	0.407	0.76
Arsenic	µg/L	9.6	6.31	2.67	2.74	3.61	4.17	7.15	7.05	6.26	4.94	5.12	6.4	6.1	5.03	4.32	4.8	8.98	6.57	5.92	5.87	5.56	6.16	4.27	5.09	8.5	5.5	5.31	5.06	8.42
Barium	µg/L	34	38.6	57	79.7	60.7	70.2	65	126	46.4	52.1	48.7	47.1	57	39.9	56.2	46.1	131	54.5	68.4	57.4	94.7	69.1	50.1	54.8	72.6	54.7	73.5	74.2	67
Beryllium	µg/L	< 5.0a	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	0.276	< 0.010	0.013	0.01	< 0.010	0.019	< 0.010	0.011	<0.010	0.285	0.021	<0.020	<0.050	0.045	0.019	0.013	0.012	<0.020	<0.020	0.028	<0.020	<0.010
Bismuth	µg/L	< 200	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	0.096	< 0.010	< 0.010	< 0.010	< 0.010	0.01	< 0.010	0.012	<0.020	0.099	0.021	<0.020	<0.050	<0.010	<0.010	<0.010	<0.010	<0.020	<0.020	<0.020	<0.020	<0.010
Boron	µg/L	< 100	38.4	45.5	37.7	35.6	38.3	80	40.3	35.9	26.9	32.8	20.5	32.3	22.5	27.7	27.7	27.2	29.8	30.1	35	6.7	28.7	24.5	34.5	27.4	26.6	29.9	37.1	18.7
Cadmium	µg/L	< 0.050	< 0.010	0.011	0.023	< 0.010	< 0.010	< 0.010	0.0648	0.0049	0.0088	0.0043	0.0068	0.009	0.0029	0.0075	<0.008	0.0808	0.0063	0.0081	<0.0100	0.0108	<0.0160	0.0079	<0.0080	<0.0120	0.0093	0.0136	0.0139	<0.0040
Calcium	µg/L	118,000	141,000	70,800	76,800	139,000	82,100	101,000	167,000	142,000	144,000	188,000	130,000	139,000	135,000	168,000	149,000	141,000	143,000	176,000	179,000	83,400	186,000	173000	222000	172000	157000	184,000	225,000	147,000
Chromium	µg/L	< 0.50	0.75	0.54	< 0.50	< 0.50	< 0.50	0.63	15.5	0.6	0.54	0.33	0.63	1.74	0.15	0.74	0.54	15.6	0.67	1.11	<2.50	1.3	0.8	0.66	0.76	<1.00	<1.00	1.21	<1.00	<0.50
Cobalt	µg/L	< 0.50	0.76	0.36	0.34	0.55	0.36	0.25	5.09	0.426	0.639	0.552	0.522	0.778	0.276	0.668	0.469	5.46	0.445	0.769	0.53	0.719	0.503	0.582	0.722	0.45	0.493	0.928	0.686	0.293
Copper	µg/L	< 2.5a	1.51	1.54	1.44	1.57	0.68	0.35	12.5	0.69	1.11	1.23	1.07	3.89	0.27	1.17	0.88	12.9	0.63	1.69	1.04	0.99	0.92	1.12	1.16	0.79	0.87	1.52	1.04	0.38
Iron	µg/L	155	273	59	81	162	52	31	8,430	249	274	138	293	906	15.6	374	242	10300	292	663	317	1120	508	356	425	361	321	828	502	111
Lead	µg/L	< 1.0	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	3.93	0.148	0.182	0.146	0.193	0.449	< 0.050	0.231	0.238	4.08	0.166	0.319	0.26	0.766	0.265	0.181	0.241	0.23	0.153	0.502	0.341	0.078
Lithium	µg/L	< 50	25.5	29.8	35.3	35.3	39	37.9	50.3	45.1	20.1	41.3	48.5	47.6	44.2	35.8	33.6	62.5	47.8	43.6	41.4	6.37	52	47.5	42.8	57.5	60.3	53.1	53.9	46.8
Magnesium	µg/L	225,000	216,000	142,000	161,000	199,000	190,000	208,000	221,000	229,000	213,000	265,000	314,000	312,000	288,000	226,000	216,000	316,000	357,000	298,000	276,000	24,500	389,000	316,000	333,000	490,000	397,000	349,000	388,000	433,000
Manganese	µg/L	756	1,120	106	75.2	68.1	81.7	93.8	376	131	63.5	190	119	177	244	2,080	305	306	336	2,700	793	51.6	1580	960	1,820	188	362	2,410	2,340	384
Mercury	µg/L	< 0.20a	< 0.010	-	< 0.010	< 0.040a	< 0.040a	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010
Molybdenum	µg/L	5.6	10.6	15	14.3	10	9.77	6.6	7.2	6.79	9.98	9.36	8.17	8.58	8.43	8.37	8.39	7.53	8.52	8.03	9.18	0.156	10.8	7.13	9.95	11.1	10.5	9.45	10.9	8.92
Nickel	µg/L	< 5.0	2.33	1.74	1.85	2.31	1.9	1.48	13.7	1.67	2.17	2.12	1.9	2.78	1.06	2.1	1.84	14.9	1.78	2.49	2.3	1.37	1.91	1.79	2.28	1.89	1.75	2.57	2.43	1.43
Phosphorous	µg/L	3,830	1,830	415	275	943	749	1,280	1,520	1,900	1,430	1,900	1,330	1,540	1,700	1,470	1,610	1,320	1,780	2100	1660	<60	2220	1,570	2,790	1,750	1,680	2,900	2,840	1,470
Potassium	µg/L	46,200	26,300	15,300	14,100	14,800	11,500	22,000	25,900	26,100	19,700	25,200	24,200	31,500	29,500	21,300	17,400	29,100	30,300	26,500	22,600	942	39,300	29,100	30,700	46,500	36,100	34,500	35,700	35,900
Selenium	µg/L	< 1.0	0.61	1.29	1	< 0.50	0.55	< 0.50	0.48	0.38	0.25	0.28	0.27	0.37	0.24	0.39	0.32	0.4	0.32	0.54	1.18	<0.10	0.45	0.36	0.44	0.34	0.38	0.78	0.48	0.44
Silicon	µg/L	11,700	6,600	1,200	2,700	< 1,000	1,300	3,700	16,800	2,750	1,060	610	1,610	2,970	1,390	6,260	930	15,600	2,630	8,510	4,360	4,500	7,550	3,170	1,400	6,970	9,530	11,300	13,200	2,240
Silver	µg/L	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	0.037	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	<0.010	<0.020	0.041	<0.020	<0.020	<0.050	<0.010	<0.010	<0.010	<0.010	<0.020	<0.020	<0.020	<0.020	<0.010
Sodium	µg/L	791,000	624,000	255,000	246,000	423,000	369,000	442,000	632,000	658,000	561,000	732,000	841,000	969,000	705,000	634,000	615,000	873,000	996,000	836,000	788,000	999	1,320,000	894,000	990,000	1,440,000	946,000	995,000	1,110,000	1,100,000
Strontium	µg/L	2,690	3,400	3,230	3,830	5,390	4,560	4,940	4,300	4,240	4,750	4,580	4,330	4,910	5,420	4,310	4,060	4,990	5,160	5040	4860	137	6500	5,400	6,020	7,570	7,160	6,190	6,840	6,790
Sulphur	µg/L	-	593,000	161,000	163,000	374,000	291,000	379,000	673,000	684,000	602,000	770,000	878,000	915,000	727,000	717,000	706,000	961,000	1,000,000	893,000	898,000	3,700	1,360,000	-	1,160,000	1,530,000	1,200,000	1,170,000	1,300,000	1,220,000
Sulfur (As S)	µg/L																							1,070,000	-	-	-	-	-	-
Tellurium	µg/L	-	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.050	< 0.050	< 0.050	0.058	< 0.050	< 0.050	< 0.050	<0.050	<0.100	<0.100	<0.100	<0.100	<0.250	<0.050	<0.050	<0.050	0.065	<0.100	<0.100	<0.100	<0.100	<0.050
Thallium	µg/L	< 0.20	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	0.0819	< 0.0040	< 0.0040	< 0.0040	< 0.0040	0.0073	< 0.0040	0.0044	<0.0080	0.0893	<0.0080	<0.0080	<0.0200	0.0221	<0.0040	0.0055	<0.0040	<0.0080	<0.0080	<0.0080	<0.0080	<0.0040
Thorium	µg/L	-	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	1.29	0.036	0.037	0.018	0.032	0.084	< 0.010	0.052	0.025	1.36	0.045	0.159	0.057	0.064	0.063	0.051	0.046	0.054	0.04	0.289	0.066	0.184
Tin	µg/L	< 30	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	0.275	< 0.050	< 0.050	< 0.050	0.054	0.087	< 0.050	<0.050	<0.100	0.205	<0.100	<0.100	<0.250	0.126	0.059	<0.100	<0.100	<0.200	<0.200	<0.100	<0.100	<0.050
Titanium	µg/L	< 50	12.3	< 5.0	< 5.0	6.6	< 5.0	< 5.0	424	13.5	12	5.41	15.2	43.5	0.74	16.9	10	421	14.2	29.7	13.9	12.1	22.1	18.5	19.8	17.4	13.9	34.8	20.3	4.98
Tungsten	µg/L	-	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	<0.20	<0.40	<0.40	<0.40	<0.40	<1.00	<0.20	<0.20	<0.20	<0.20	<0.40	<0.40	<0.40	<0.40	<0.20
Uranium	µg/L	19.9	40.7	29.9	31.5	52.7	37	24.2	35.8	34.3	42.1	53.1	32.1	32.4	39.8	55.2	37	28.7	37.8	49.9	46.9	0.301	43.5	44.3	47.4	32.6	47.1	53.8	60.9	34.6
Vanadium	µg/L	< 30	3.9	3.6	3.4	3.1	3.3	1	19.9	2.82	3.78	3.89	2.55	3.11	1.44	3.22	2.29	19.9	2.93	3.68	<5.00	1.02	2.76	3.07	4.18	3.78	3.58	3.61	2.97	1.9
Zinc	µg/L	< 5.0	< 4.0	6.5	15.2	< 4.0	< 4.0	< 4.0	23.2	1.6	1.3	1.6	3.5	4.6	1.4	2.8	<2.0	27.2	<2.0	2.1	<5.0	5.4	2.1	2.3	2	2.2	2.1	5.1	3.6	1.4
Zirconium	µg/L	-	0.46	0.25	0.2	0.25	0.1	0.1	4.95	0.4	0.401	0.481	0.269	0.781	0.316	0.622	0.284	3.95	0.475	0.647	0.399	0.261	0.641	0.858	0.675	0.515	0.583	0.867	0.532	0.288
Microbiological																														
Coliforms, Fecal (Q-Tray)	MPN/100ml	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	5	161	317	579	27	308	365
Coliforms, Total (Q-Tray)	MPN/100ml	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	115	2,420	98,000	10,800	160	1,550	> 242000

Associated CARO file(s) available on request
Associated Exova file(s): 107524, 115040, 417280, 438503, 47748, 593413, 610415, 653618, 683622, 714220, 714240, 95223., 8040426, 8041402, 8041784, 8050436, 8052167, 8061543, 8071280, 8090442, 8110640, 8110821, 9032473, 9050543, 9060474, 9090312, N000861, 0040546, 0060737, 0091922, 20J3095.

All terms defined within the body of Keltech's report

Table H3: Summary of Surface Water
Analytical Results - HISTORICAL to 2025

Location		LR Lake	Robert Lake																										
Sample ID		Little Robert Lake	Robert Lake-20150616	ROBERT'S LAKE 1-20160921	ROBERT LAKE - NORTH-20161117	ROBERT LAKE - SOUTH-20161117	ROBERT LK-180417	ROBERT LK-180503	ROBERT LK-180614	ROBERT LK-180712	Robert Lk	Robert Lk	Robert Lk	Robert Lk	ROBERTLAKE-200407	ROBERTLAKE-200605	ROBERTLAKE-200928	ROBERTLAKE-201028	ROBERT LAKE-210412	ROBERT LAKE-210616	ROBERT LAKE-210922	ROBERT LAKE-211021	ROBERT LAKE-220323	ROBERT LAKE-220621	ROBERT LAKE-220912	ROBERT LAKE-221019	ROBERT LAKE-230329	ROBERT LAKE-230518	ROBERT LAKE-230928	ROBERT LAKE-231102
Sample Date		2024-10-23	2015 06 16	2016 09 21	2016 11 17	2016 11 17	2018 04 17	2018 05 03	2018 06 14	2018 07 12	2019 03 29	2019 05 06	2019 06 05	2019 09 04	2020 04 07	2020 06 05	2020 09 28	2020 10 28	2021 04 12	2021 06 16	2021 09 22	2021 10 21	2022 03 23	2022 06 21	2022 09 12	2022 10 19	2023 03 29	2023 05 18	2023 09 28	2023 11 02
Parameter	**Units**	**Analytical Results**																											
General																													
Alkalinity, Bicarbonate as CaCO3	mg/L	677	1,230	-	821	783	714	713	706	766	-	859	898	1,210	873	1,090	1,050	1,100	1,050	1,150	1,300	1,290	840	1,070	1,320	1,170	737	985	1,340	1150
Alkalinity, Carbonate (as CaCO3)	mg/L	67.1	530	-	592	661	297	296	316	347	231	321	313	459	294	349	516	477	393	541	810	731	453	491	609	612	375	421	826	739
Alkalinity, Hydroxide (as CaCO3)	mg/L	<1.0	< 1.0	-	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Alkalinity, Phenolphthalein as CaCO3)	mg/L	33.5	-	-	-	-	148	148	158	173	115	160	156	229	147	175	258	239	196	270	405	365	227	245	305	306	187	211	413	370
Alkalinity, Total (as CaCO3)	mg/L	744	1,760	2,010	1,410	1,440	1,010	1,010	1,020	1,110	763	1,180	1,210	1,660	1,170	1,440	1,560	1,580	1,440	1,690	2,110	2,020	1,290	1,560	1,930	1,790	1,110	1,410	2,160	1890
Ammonia, Total (as N)	µg/L	0.528	82	-	510	83.9	47	119	98	66	105	139	733	372	68	438	1,160	129	204	118	143	173	205	90	144	222	95	103	317	591
Bicarbonate	mg/L		-	-	-	-	-	-	-	-	532	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Bromide	mg/L	<1.00	< 5.0	< 5.0	< 5.0	< 5.0	0.8	< 10.0	< 1.00	< 0.10	< 1.00	0.94	< 1.00	1.14	< 0.10	< 10.0	< 1.00	0.98	< 1.00	< 1.00	1.33	1.22	<1.00	<1.00	1.33	1.48	1.05	<5.00	1.91	<2.50
Chloride	mg/L	134	346	524	358	387	161	145	198	205	140	209	212	279	203	193	262	245	190	242	365	336	188	253	326	350	243	293	458	367
COD - Chemical Oxygen Demand	mg/L	70	233	-	252	258	127	109	113	115	110	165	143	154	117	245	179	153	213	234	271	255	198	168	199	247	150	172	266	249
Conductivity - Field	µS/cm	6420	-	-	-	-	3,334	7,684	6,915	7,162	636.7	6,464	6,741	10,048	6,679	735.8	10,282	9,840	8,577	9,489	12,687	11,012	8,300	9,829	12,400	12,671	-	-	-	-
Conductivity - Lab	µS/cm	6,420	12,500	21,800	15,600	16,300	9,100	8,740	8,000	8,110	5,660	7,900	8,000	10,300	7,620	7,520	10,400	9,880	7,810	8,560	12,800	12,600	8,620	9,830	11,900	12,300	-	-	-	-
DOC - Dissolved Organic Carbon	mg/L	24.6	-	-	-	-	-	-	-	-	-	-	-	53.4	38.2	53.3	60.3	58.4	38.4	47.4	65.6	61.6	38.4	47.6	61.6	65.5	48.8	49.3	73.4	75.9
Fluoride	µg/L	<1000	< 2,000a	< 2,000a	< 2,000a	< 2,000a	450	520	< 1,000	710	< 1,000	660	< 1,000	< 1,000	590	630	< 1,000	630	< 1,000	< 1,000	< 1,000	< 1,000	< 1,000	< 1,000	< 1,000	< 1,000	< 1,000	640	< 1,000	< 2,500
Hardness (as CaCO3)	mg/L	1,860	1,150	1,450	1,150	1,070	1,040	1,090	1,200	1,120	685	1,060	1,130	1,490	1,190	1,220	1,450	1,380	1,330	1,510	1,980	1,530	1,130	1,320	1,750	1,820	1,350	1,440	2,890	2,070
Hardness, Dissolved (as CaCO3)	mg/L	-																												
Nitrate (as N)	µg/L	<100	< 500	< 500	< 500	< 500	< 10	1,350	< 100	< 10	< 100	< 10	< 100	< 100	< 10	< 1,000	< 100	< 250	< 100	< 100	< 100	< 100	< 100	< 100	< 100	< 100	< 500	< 100	< 250
Nitrate+Nitrite (as N)	µg/L	<100	-	-	-	-	< 10.0	1,350	< 100	< 10.0	< 100	< 10.0	< 100	127	< 10.0	< 1,000	-	< 250	< 100	< 100	< 100	< 100	< 100	< 100	< 100	< 100	< 100	< 500	< 100	< 250
Nitrite (as N)	µg/L	<100	-	-	-	-	< 10	< 10	< 100	< 10	< 100	< 10	< 100	127	< 10	< 10	107	79	< 100a	< 100a	< 100a	< 100a	< 100	< 100	< 100	< 100	< 100	< 10	< 100	< 250
Nitrogen-N, Total	mg/L	2.72	-	-	-	-	3.59	4.71	3.56	3.98	3.72	5.44	5.64	5.52	3.64	7.34	6.66	6.8	6.14	7.32	8.96	12.7	5.38	5.87	6.28	8.44	5.51	4.38	8.18	7.55
Ortho-Phosphate	mg/L	-	4.85	-	2.94	2.6	-	-	-	-	-	-	-	1.61	1.26	2.7	1.88	0.869	1.75	1.12	1.68	1.37	-	-	-	-	-	-	-	-
pH (field)	pH	-	-	-	-	-	8.92	8.58	9.19	9.22	9.25	8.6	8.62	8.61	9.4	8.86	8.92	9.18	9.12	9.02	9.12	9.29	-	-	-	-	-	-	-	-
pH (Lab)	pH	8.43	-	9.67	-	-	8.98	8.98	8.97	9.02	9.02	8.92	8.85	8.91	8.87	8.81	8.97	8.94	8.73	8.96	9.12	9.08	9.00	8.95	9.05	9.06	8.98	8.95	9.08	9.08
Phosphate	mg/L	-	-	-	-	-	1.79	1.61	1.24	1.02	0.735	1.59	0.988	-	-	-	-	-	-	-	-	-	1.13	1.51	0.866	1.34	0.919	<0.250	1.62	0.762
Phosphorus, Total (as P)	mg/L	1.99	-	-	-	-	2.21	2.45	1.99	2.14	1.44	2.22	2.55	3.71	2.95	4.96	3.47	3.47	3.28	3.46	3.8	3.82	2.9	3.22	3.47	3.68	2.67	3.42	3.9	3.36
Sulphate	mg/L	3,450	8,420	12,800	8,640	9,250	3,840	3,850	3,490	3,280	2,280	3,310	3,160	4,350	3,350	3,560	4,160	4,160	3,200	4,110	6,060	5,790	3,540	4,510	5,050	6,280	4,330	5,010	8,200	7660
TDS - Solids, Total Dissolved	mg/L	5,550	13,700	21,300	13,300	13,700	7,730	7,330	6,690	6,820	3,900	6,200	6,520	8,440	6,240	7,100	8,580	7,960	7,290	8,250	9,700	9,700	6,680	8,390	10,700	11,200	7,460	9,320	14,800	12,800
Temperature	C	-	-	-	-	-	11	19.3	19.1	27.2	8	20.9	22	26.6	14	21.1	15.4	4	11	17.9	15.7	7.9	-	-	-	-	-	-	-	-
TKN - Kjeldahl Nitrogen-N	mg/L	2.72	5.85	-	7.85	8.09	3.59	3.36	3.56	3.98	3.72	5.44	5.64	5.4	3.64	7.34	6.56	6.72	6.14	7.32	8.96	12.7	5.38	5.87	6.28	8.44	5.51	4.38	8.18	7.55
TOC - Carbon, Total Organic	mg/L	-	82.3	110	81.7	82.1	74	39.7	39.9	49.9	29.2	48.4	45.3	59.8	39.3	57.5	64.1	68.3	46.7	57	77.7	76.1	-	-	-	-	-	-	-	-
TSS - Solids, Total Suspended	mg/L	-	31.1	19.7	188	67.3	18	17	12.8	12.6	17.7	34.7	27.4	42.3	21.7	147	32	44.7	60	44	-	-	-	-	-	-	-	-	-	-	-
Total Metals																														
Aluminum	µg/L	89.8	1,910	< 150	2,990	2,750	150	58.8	47	110	118	691	631	1,040	420	850	1,430	1,790	1,630	1,450	1,150	1,250	277	449	242	848	294	340	4930	1080
Antimony	µg/L	0.586	< 2.0	< 5.0	< 2.0	< 2.0	0.91	0.65	0.8	0.57	0.29	0.53	0.58	0.76	0.436	0.558	0.611	0.621	0.546	0.485	0.649	< 5.00	<0.500	0.5	<0.500	<0.500	0.265	<0.500	0.691	0.613
Arsenic	µg/L	7.21	21.8	13.2	10.8	11	9.89	10.2	11.1	9.51	5.21	7.39	8.52	13.8	8.04	8.9	11.9	12.1	10.1	9.71	15.4	12.7	7.3	8.61	11	12.1	6.71	8.22	10.7	11.3
Barium	µg/L	59	< 50	< 100	51	< 50	31	32.8	33.6	23.8	25.9	42.8	51.9	55.8	42.6	56.7	58.8	61.6	62.3	69.5	81.5	58.5	39.2	51.7	56	63	36.2	48.2	107	64.5
Beryllium	µg/L	<0.010	< 25a	< 50a	< 25a	< 25a	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	0.016	0.038	0.046	0.077	0.058	0.053	0.029	< 1.00a	<0.100	<0.050	<0.100	<0.100	<0.050	<0.100	0.275	<0.100
Bismuth	µg/L	0.022	< 1,000	< 2,000	< 1,000	< 1,000	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.010	0.014	0.019	0.021	0.025	0.027	0.017	< 1.00	<0.100	<0.050	<0.100	<0.100	<0.050	<0.100	0.077	<0.100
Boron	µg/L	23.1	< 500	< 1,000a	< 500	< 500	22.3	31.7	29.3	44.8	17.2	32	49.1	81.9	51.1	43.1	63.4	65.9	48.6	64.5	62.6	278	42.4	69.8	76.9	73.2	50.8	60.7	356	70.2
Cadmium	µg/L	<0.0040	< 0.10	< 0.25	< 0.10	< 0.10	0.025	0.033	0.033	0.029	0.021	0.061	0.03	0.027	0.0189	0.0434	0.0379	0.0484	0.0478	0.0425	0.0383	< 0.200	0.0319	<0.0350	<0.0300	0.0506	<0.0300	<0.0200	0.182	<0.160
Calcium	µg/L	172,000	60,100	23,000	40,700	33,100	55,600	63,000	79,500	71,300	36,000	59,300	68,200	92,800	63,900	96,800	93,200	66,400	62,200	93,500	44,500	42,500	44,400	59,500	59,400	43,200	39,000	44,900	9,47,000	31,000
Chromium	µg/L	<0.50	3.6	< 5.0a	4.3	5.3	1.19	< 0.50	< 0.50	0.52	< 0.50	1.49	1.37	2.51	0.98	2.19	2.7	3.08	3.28	2.74	2.47	< 10.0a	1.01	1.29	<1.00	1.85	0.66	<5.00	11.5	<5.00
Cobalt	µg/L	0.343	< 2.0	< 5.0a	< 2.0	2.2	0.82	0.74	0.39	0.31	0.5	0.88	0.8	1.15	1.02	1.64	1.23	1.48	1.85	1.51	1.29	1.13	0.854	0.673	0.428	0.914	0.684	0.652	12.7	0.944
Copper	µg/L	0.28	< 10a	< 25a	< 10a	< 10a	2.2	1.83	1.06	1.18	1.56	2.42	1.95	3	2.84	2.84	3.38	3.97	4.79	5.88	3.63	< 10.0	2.55	2.22	<2.00	2.85	2.15	3.18	31.3	3.06
Iron	µg/L	131	1,690	< 300	3,000	3,410	198	77	70	101	165	777	731	1,230	515	1,150	1,330	1,770	1,950	1,730	1,210	1,450	399	450	260	1060	363	368	9,350	1,160
Lead	µg/L	0.071	1.4	< 2.5	1.6	1.6	0.2	< 0.20	< 0.20	< 0.20	0.23	0.59	0.53	0.81	0.399	0.66	0.864	1.24	1.33	1.18	1.2	< 5.00	<0.500	0.56	<0.500	0.991	0.366	<0.500	99.3	0.811
Lithium	µg/L	48.7	< 50	< 100	< 50	< 50	8.81	12.3	21	19.8	10.7	17	20.9	25.5	19.4	15.1	24	27.4	22.6	25.2	22.6	26.9	15.6	19.7	24.1	24.2	17.1	19.1	136	26.6
Magnesium	µg/L	347,000	243,000	331,000	255,000	241,000	220,000	225,000	244,000	229,000	144,000	221,000	234,000	306,000	250,000	239,000	296,000	295,000	286,000	311,000	453,000	345,000	248000	285,000	388,000	417,000	303,000	323,000	128,000	484,000
Manganese	µg/L	951	107	< 50	169	123	345	242	238	95.7	206	172	236	153	192	373	168	145	261	291	127	105	213	119	64.4	103	222	122	510	84.6
Mercury	µg/L	<0.010	< 0.20a	< 0.20a	< 0.20a	< 0.20a	< 0.010	-	< 0.010	< 0.010	< 0.040a	< 0.040a	< 0.040a	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	<0.010	<0.010	0.022
Molybdenum	µg/L	8.45	72.7	112	85.9	90.3	61.1	55.5	45.2	47.5	36.8	47.5	39.2	45.2	53.2	56.6	52.9	56.6	66.3	58	76.2	60.1	57.5	59.8	64.7	73.3	64.3	68.6	3.98	113
Nickel	µg/L	1.46	11	< 25	< 10	< 10	4.42	4.05	2.85	2.92	2.7	4.42	4.41	5.87	4.56	5.8	6.02	6.68	7.22	6.38	7.53	4.95	4.44	4.89	4.17	6.12	4.19	4.66	22.4	5.77
Phosphorous	µg/L	2,070	5,000	< 3,0002,720	3,700	3,300	2,750	2,610	2,390	2,270	1,530	2,400	2,700	4,280	3,000	4,250	3,770	3,920	3,620	3,840	4,120	4,110	2,740	3,140	3,290	3,890	2730	3090	296	3530
Potassium	µg/L	35,800	90,000	120,000	89,000	90,000	58,600	57,100	57,500	51,700	31,100	46,600	47,700	68,500	48,700	51,100	63,200	62,600	54,100	63,100	90,200	66,200	44200	51,300	68,100	76,600	49,400	57,900	4,630	91,000
Selenium	µg/L	0.35	1.2	< 2.5a	< 1.0	< 1.0	0.59	0.58	< 0.50	< 0.50	< 0.50	0.51	0.71	0.85	0.56	0.49	0.79	1.08	0.61	0.5	1.25	< 10.0a	<1.00	0.69	<1.00	<1.00	0.92	2.48	<0.50	1.35
Silicon	µg/L	3,700	9,200	1,970	11,400	9,480	7,000	5,800	3,400	1,700	4,600	8,200	6,900	8,500	8,020	4,780	9,630	13,100	15,100	15,000	13,500	11,500	6,600	5,260	6,610	8,010	5910	3740	16700	7360
Silver	µg/L	<0.010	< 0.20	< 0.50	< 0.20	< 0.20	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	0.072	< 0.010	< 0.010	< 0.010	0.018	0.012	< 0.010	< 0.010	< 1.00	<0.100	<0.050	<0.100	<0.100	<0.050	<0.100	0.951	<0.100
Sodium	µg/L	995,000	4,290,000	5,980,000	4,430,000	4,500,000	2,710,000	2,460,000	2,020,000	1,840,000	1,240,000	1,960,000	2,020,000	2,630,000	1,740,000	1,800,000	2,410,000	2,280,000	2,070,000	2,300,000	3,460,000	2,740,000	1,900,000	2,100,000	2,780,000	3,320,000	2,220,000	2,430,000	68,600	4,590,000
Strontium	µg/L	6,510	4,130	5,070	3,710	3,630	3,190	3,540	4,080	4,050	2,170	3,530	3,750	5,420	3,380	4,530	4,650	4,100	3,700	4,060	4,990	4,530	3,200	3,870	4,810	5,230	3,340	4,210	11,100	5,650
Sulphur	µg/L	1,190,000	2,580,000	-	-	-	1,780,000	1,700,000	1,570,000	1,310,000	890,000	1,300,000	1,290,000	1,750,000	1,350,000	1,230,000	1,740,000	1,680,000	1,410,000	1,550,000	2,270,000	1,910,000	1,360,000	1,530,000	1,930,000	2,110,000	1,580,000	1,780,000	700,000	2,710,000
Sulfur (As S)	µg/L	-																												
Tellurium	µg/L	<0.050	< 4.0	-	-	-	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.050	0.052	0.054	< 0.050	< 0.050	< 0.050	< 0.050	< 5.00	<0.500	<0.250	<0.500	<0.500	<0.250	<0.500	<0.250	<0.500
Thallium	µg/L	<0.0040	< 0.20	< 0.50	< 0.20	< 0.20	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.0040	0.008	0.0113	0.0165	0.0147	0.0149	0.0101	< 0.400	<0.0400	<0.0200	<0.0400	<0.0400	<0.0200	<0.0400	0.121	<0.0400
Thorium	µg/L	0.015	< 2.0	-	-	-	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	0.15	0.08	0.124	0.212	0.228	0.19	0.184	0.136	< 1.00	<0.100	0.079	<0.100	0.121	0.196	0.118	1.29	0.167
Tin	µg/L	<0.050	< 150	< 300	< 150	< 150	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.050	0.075	0.066	0.071	0.09	0.053	< 0.050	< 5.00	<0.500	<0.250	<0.500	<0.500	<0.250	<0.500	3.77	<0.500
Titanium	µg/L	5.48	82	< 100	149	147	10.8	5	< 5.0	5.5	7.5	40.7	34.2	61.5	26.5	71.6	77.4	104	102	80.5	63.2	73.1	19	21.1	11.2	45.5	16.9	17.4	55.6	53.9
Tungsten	µg/L	<0.20	-	-	-	-	1.4	1	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	1.2	0.85	1	1.29	1.48	1.16	1.08	1.88	< 5.00	<2.00	1.14	<2.00	<2.00	1.07	<2.00	3.08	2.26
Uranium	µg/L	34.5	145	172	131	131	89.9	82.2	74.3	73.3	54.1	76.8	71.7	90.9	91.5	94.6	90.7	90	96.4	105	127	96.5	90.2	88.2	98.2	109	90.9	98.2	16	137
Vanadium	µg/L	1.79	< 150a	< 300a	< 150a	< 150a	6	6.2	3.1	2.4	3.1	5	5	8.1	10.2	10	7.73	11.3	13.6	7.59	7.83	< 20.0	9.23	<5.00	<10.0	<10.0	<5.00	<10.0	9.2	10.6
Zinc	µg/L	<1.0	< 25	< 50	< 25	< 25	< 4.0	4.8	4.3	< 4.0	< 4.0	7.1	7.1	6.7	3.2	5.3	7.7	9.2	8.6	7.7	7.5	< 100	<10.0	<5.0	<10.0	<10.0	<5.0	<10.0	101	<10.0
Zirconium	µg/L	0.358	-	-	-	-	2.31	1.86	1.19	0.85	1.3	2.33	1.64	2.93	3.68	4.69	3.46	3.72	3.25	3.1	3.23	2.51	2.35	2.45	1.54	2.41	2.37	7.18	1.26	3.76
Microbiological																														
Coliforms, Fecal (Q-Tray)	MPN/100ml	14	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Coliforms, Total (Q-Tray)	MPN/100ml	457	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Associated CARO file(s) available on request
Associated Exova file(s): 107524, 115040, 417280, 438503, 47748, 593413, 610415, 653618, 683622, 714220, 714240, 95223., 8040426, 8041402, 8041784, 8050436, 8052167, 8061543, 8071280, 8090442, 8110640, 8110821, 9032473, 9050543, 9060474, 9090312, N000861, 0040546, 0060737, 0091922, 20J3095.

All terms defined within the body of Keltech's report

Table H3: Summary of Surface Water
Analytical Results - HISTORICAL to 2025

Location		R Lk North								Diffuser			JH Outfall		Treated Leachate	Quail Ridge												
Sample ID		Robert Lake North	Robert Lake North	Robert Lake North	Robert Lake North	Robert Lake- North	Robert Lake- North	Robert Lake- North	Robert Lake- North	DIFFUSER-180417	DIFFUSER-180503	DIFFUSER-180615	JH OUTFALL-180417	JH OUTFALL-180503	Treated Leachate Feb 02/00-20000202	Quail Ridge Leachate-20001115	Quail Ridge Leachate-20010223	Quail Ridge Leachate-20010423	Quail Ridge Leachate-20050124	Quail Ridge Leachate-20051018	Quail Ridge-20071218	Quail Ridge-20080331	Quail Ridge-20081104	Quail Ridge-20091119	Quail Ridge-20130312	Quail Ridge-20130911	Quail Ridge-20131211	Quail Ridge-20140408	Quail Ridge-20140610	Quail Ridge-20150122
Sample Date		2025-03-12	2025-05-16	2025-09-23	2025-11-06	2024-03-22	2024-05-10	2024-09-12	2024-10-23	2018 04 17	2018 05 03	2018 06 15	2018 04 17	2018 05 03	2000 02 02	2000 11 15	2001 02 23	2001 04 23	2005 01 24	2005 10 18	2007 12 18	2008 03 31	2008 11 04	2009 11 19	2013 03 12	2013 09 11	2013 12 11	2014 04 08	2014 06 10	2015 01 22
Parameter	**Units**	**Analytical Results**																											
General																													
Alkalinity, Bicarbonate as CaCO3	mg/L	816	1,170	1,100	1,180	935	1,100	1,270	1,290	720	726	691	441	411	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1,930
Alkalinity, Carbonate (as CaCO3)	mg/L	475	552	1,080	1,070	605	531	803	909	294	299	363	78.8	65.4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	< 1.0
Alkalinity, Hydroxide (as CaCO3)	mg/L	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	< 1.0
Alkalinity, Phenolphthalein as CaCO3)	mg/L	238	276	540	536	302	266	402	455	147	149	181	39.4	32.7	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Alkalinity, Total (as CaCO3)	mg/L	1,290	1,720	2,180	2,250	1,540	1,630	2,070	2,200	1,010	1,020	1050	520	476	-	-	-	-	-	-	-	3,580	< 5	-	-	-	3,000	4,790	1,930
Ammonia, Total (as N)	µg/L	60	83	<500	107	0.131	0.203	0.165	0.085	56	135	48	23	469	-	-	-	-	-	-	-	106,000	100,000	112,000	101,000	111,000	69,600	76,800	45,700
Bicarbonate	mg/L									-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Bromide	mg/L	<10.0	<1.00	<100	<20.0	1.46	<5.00	1.91	<10.0	0.8	< 10.0	0.91	0.2	< 0.10	-	-	-	-	-	-	-	-	-	2.9	2.8	2.8	3.4	4.5	< 2.5
Chloride	mg/L	30.6	216	560	384	363	367	553	408	168	145	182	150	148	-	-	-	-	-	-	-	-	-	503	433	398	434	542	356
COD - Chemical Oxygen Demand	mg/L	219	273	329	479	209	275	442	404	132	112	99	30	31	-	-	-	-	-	-	-	430	490	434	366	361	459	505	191
Conductivity - Field	µS/cm	5,983	15,198	18,561	9,626	7311	13260	16111	18502	8,592	7,700	6818	2,069	1586	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Conductivity - Lab	µS/cm	11,800	14,800	18,200	18,500	11,200	13,900	17,100	18,400	9,030	8,740	7940	2,100	1830	-	-	-	-	-	-	-	7,040	-	8,160	7,380	6,900	-	-	-
DOC - Dissolved Organic Carbon	mg/L	52.5	67.3	80.9	85.4	60.5	69.4	84.4	84.9	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Fluoride	µg/L	<10.0	<1.00	<100	<20.0	<1000	730	<1000	<10000	460	520	970	650	670	-	-	-	-	-	-	-	-	-	1,600	< 1,000	2,000	< 1,000	886	< 1,000
Hardness (as CaCO3)	mg/L	1,660	2,030	2,690	2,370	1,760	1,930	2,670	2,520	1,090	1,110	1,230	861	710	-	-	-	-	-	-	-	-	1,650	1,410	1,260	1,290	1,060	1,430	1,530
Hardness, Dissolved (as CaCO3)	mg/L	1,440	2,010		2,560	-	-	-	-																				
Nitrate (as N)	µg/L	<1.00	<0.100	<10.0	<2.00	<100	<500	<100	<1000	< 10	< 1,000	< 10	486	1090	-	-	-	-	-	-	-	63,500	49,900	14,400	12,500	27,200	< 250	8,160	122,000
Nitrate+Nitrite (as N)	µg/L	<1.00	<0.100	<10.0	<2.00	<100	<500	<100	<1000	< 10.0	< 1,000	< 10.0	486	1110	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Nitrite (as N)	µg/L	<1.00	<0.100	<10.0	<2.00	<100	<10	<100	<1000	< 10	< 10	< 10	< 10	21	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Nitrogen-N, Total	mg/L	6,320	10,100	19,600	17,400	4.82	8.47	14.8	11.1	2.69	3.39	3.86	1.53	2.56	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ortho-Phosphate	mg/L	1.55	1.52	0.573	0.758	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1.8	1.9	2.32	2.16	2.01	2.37	3.87	0.887
pH (field)	pH					-	-	-	-	9.26	8.67	9.29	8.89	8.31	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
pH (Lab)	pH	9.12	9.04	9.32	9.25	9.05	9.06	9.13	9.18	8.98	8.98	8.99	8.68	8.63	-	-	-	-	-	-	-	7.18	7.12	7.48.09	7.63	7.67	-	-	7.54
Phosphate	mg/L					-	2.12	-	-	1.86	1.38	0.71	< 0.0050	0.009	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Phosphorus, Total (as P)	mg/L	2.48	3.78	2.82	2.66	3.20	3.72	4.69	3.89	5.73	2.51	1.97	0.0576	0.0928	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Sulphate	mg/L	522	4,100	12,300	8,100	6,720	7,250	8,400	7,950	3,890	3,890	3350	485	241	-	-	-	-	-	-	-	-	-	577	503	430	917	969	316
TDS - Solids, Total Dissolved	mg/L	9,020	12,300	13,300	17,600	11,100	11,000	11,800	18,000	7,570	7,710	10,400	1,580	1,150	0.043	-	-	-	-	-	-	-	-	5,580	5,060	4,400	5,220	7,080	3,510
Temperature	C					-	-	-	-	12	19.7	19.5	10.3	16.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TKN - Kjeldahl Nitrogen-N	mg/L	6.32	10.1	19.6	17.4	4.82	8.47	14.8	11.1	2.69	3.39	3.86	1.04	1.45	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TOC - Carbon, Total Organic	mg/L	61.4	73.8	87.1	98.6	-	-	-	-	61	42.7	41.6	12.4	10.1	-	-	-	-	-	-	-	-	-	123	112	118	-	-	-
TSS - Solids, Total Suspended	mg/L	-	180	497	392	-	-	-	-	19.3	15	10.8	28	< 3.3	-	-	-	-	-	-	-	-	-	4.4	6.1	51.5	-	-	-
Total Metals																													
Aluminum	µg/L	1,090	2,050	5,040	3,240	696	1480	13,800	1370	176	51.5	70.1	312	29.1	-	244	740	780	74	110	84	< 100	69	-	52	75	2,600	-	-	-
Antimony	µg/L	0.373	0.549	0.824	0.832	<0.500	0.672	0.403	0.588	0.59	0.67	0.75	< 0.20	0.2	-	< 10a	-	-	1.9	3	2	< 1	2	-	7.36	5.33	4.24	-	-	-
Arsenic	µg/L	6.65	10.9	13.7	14.4	8.38	10.3	13.3	13	10.1	10.5	11.1	1.92	2.05	-	< 20	-	-	15.6	27	13	5	9.7	-	13.6	10.1	9.7	-	-	-
Barium	µg/L	44	70.4	117	93.4	51.8	66.1	197	77.9	31.2	33.2	33.3	59.3	70	-	245	-	-	272	340	330	220	310	-	285	265	283	-	-	-
Beryllium	µg/L	<0.050	0.075	0.174	0.106	<0.100	<0.100	0.514	0.055	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	-	< 1a	-	-	0.4	< 1a	< 0.5a	< 0.2a	< 0.5a	-	< 10a	< 10a	< 10a	-	-	-
Bismuth	µg/L	<0.050	<0.050	0.11	0.083	<0.100	<0.100	0.182	0.063	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	-	< 10	-	-	< 0.5	< 5	< 2	-	< 2	-	-	-	-	-	-	-
Boron	µg/L	43.5	75.2	77.7	80	51.2	71.8	80.7	75	20.6	30	28.2	41.8	42.1	-	2,350	-	-	1,880	2,680	1,720	1,140	1,790	-	1,710	1,730	1,680	-	-	-
Cadmium	µg/L	<0.0500	<0.0800	0.129	0.105	<0.0400	<0.0900	0.301	<0.110	0.017	0.033	0.032	< 0.010	0.014	-	< 1a	-	-	< 0.01	< 0.1a	< 0.05a	< 0.4a	0.3	-	< 0.25	< 0.25	< 0.25	-	-	-
Calcium	µg/L	26300	51100	45700	29500	38,800	46,500	55,200	34,600	57,400	64,700	82,100	76,100	63,500	-	102,000	148,000	125,000	110,000	109,000	137,000	106,000	251,000	-	151,000	142,000	149,000	-	-	-
Chromium	µg/L	<2.50	3.68	7.69	5.5	<5.00	<5.00	21.4	<2.50	0.97	< 0.50	< 0.50	1.13	0.76	-	19.6	-	-	15.9	25	17	8.5	18	-	15.7	14.1	16.8	-	-	-
Cobalt	µg/L	1.21	1.82	3.01	2.43	0.943	1.87	9.18	1.23	1.05	0.74	0.41	0.65	0.31	-	16.2	-	-	9.8	14	8.8	5.62	8.2	-	8.82	7.76	8.61	-	-	-
Copper	µg/L	3.49	4.76	8.51	7.39	3.41	8.38	24.1	3.36	2.44	1.64	0.99	2.13	2.04	-	56	-	-	196	1,650	340	160	150	-	214	388	168	-	-	-
Iron	µg/L	1,210	2,340	5,010	3,770	724	1,530	14,600	1,500	248	69	109	452	47	-	476	1,750	1,090	700	800	2,000	1,200	1,000	-	703	1,530	3,620	-	-	-
Lead	µg/L	0.962	1.48	3.45	2.45	0.773	1.23	11	1.51	0.27	< 0.20	< 0.20	0.3	< 0.20	-	< 4a	-	-	2.5	23	9.5	4	1	-	4.8	7.3	6.3	-	-	-
Lithium	µg/L	22	30.5	43.7	32.7	23.2	22.7	45.1	30.1	8.99	12.5	20.3	27.2	32	-	39	-	-	38	40	53	40	50	-	< 50	< 50	< 50	-	-	-
Magnesium	µg/L	387,000	462,000	626,000	557,000	404,000	441,000	616,000	592,000	230,000	230,000	249,000	163,000	134,000	-	287,000	325,000	253,000	302,000	310,000	282,000	225,000	248,000	-	252,000	219,000	222,000	-	-	-
Manganese	µg/L	168	271	252	208	137	163	781	148	355	250	243	84.2	27.3	-	468	1,120	914	579	614	938	676	898	-	650	588	548	-	-	-
Mercury	µg/L	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	< 0.010	-	< 0.010	< 0.010	-	-	-	-	-	-	< 0.1a	-	-	-	-	< 0.20a	< 0.20a	< 2.5a	-	-	-
Molybdenum	µg/L	72.5	93.1	94.8	107	106	153	107	147	60.8	56.4	44.9	14.9	15.8	-	< 2	-	-	3	< 10	< 5	0.8	< 5	-	2.1	1.5	5.8	-	-	-
Nickel	µg/L	4.86	7.56	9.75	9.14	5.87	9.52	20.6	7.48	4.72	4.08	2.99	2.72	1.67	-	26	-	-	21.4	25	17	20	16	-	17.7	19.5	18.3	-	-	-
Phosphorous	µg/L	2,390	3,640	3,110	2,750	3,390	3,560	5,010	4,290	2,900	2,710	2,410	96	84	-	4,220	-	-	-	-	-	1,600	-	-	-	-	-	-	-	-
Potassium	µg/L	60,000	84,700	124,000	114,000	75,900	76,000	112,000	116,000	60,800	58,700	59,400	13,700	15,200	-	327,000	262,000	204,000	245,000	280,000	170,000	124,000	156,000	-	-	-	-	-	-	-
Selenium	µg/L	1.03	1.56	1.67	2.87	1.3	1.6	1.76	3.09	0.57	0.57	< 0.50	1.22	1.55	-	< 8a	-	-	1.8	< 2	1	< 3.0a	< 1	-	< 5.0a	< 5.0a	< 5.0a	-	-	-
Silicon	µg/L	4,720	9,120	19,500	14,400	5,010	8,880	35,900	8,500	7,400	5,900	3,600	< 1,000	2,300	-	18,500	19,000	17,600	16,200	17,200	17,500	7,060	17,500	-	-	-	-	-	-	-
Silver	µg/L	<0.050	<0.050	<0.050	0.057	<0.100	<0.100	0.07	<0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	-	< 2a	-	-	0.1	< 1a	< 0.5a	< 1a	0.17	-	0.061	0.064	0.13	-	-	-
Sodium	µg/L	2,970,000	3,880,000	5,210,000	3,840,000	3,180,000	3,500,000	4,430,000	4,850,000	2,440,000	2,540,000	2,000,000	272,000	212,000	-	1,980,000	1,710,000	1,240,000	1,660,000	1,880,000	1,140,000	806,000	1,020,000	-	1,420,000	1,390,000	1,160,000	-	-	-
Strontium	µg/L	3,890	5,590	6,740	6,500	5,000	5,090	7,120	7,300	3,170	3,610	4,130	3,630	3,320	-	2,550	-	-	3,430	3,960	3,920	2,900	4,850	-	-	-	-	-	-	-
Sulphur	µg/L	-	3,150,000	3,710,000	3,470,000	2,430,000	2,630,000	3,230,000	3,840,000	1,840,000	1,740,000	1,600,000	201,000	113,000	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Sulfur (As S)	µg/L	1,880,000	-	-	-	-	-	-	-																				
Tellurium	µg/L	<0.250	<0.250	<0.250	<0.250	<0.500	<0.500	<0.250	<0.250	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	-	-	-	-	-	-	-	< 0.5	-	-	-	-	-	-	-
Thallium	µg/L	<0.0200	<0.0200	0.0455	0.0487	<0.0400	<0.0400	0.151	<0.0200	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	-	< 8a	-	-	< 0.05	< 0.5	< 0.2	< 0.05	< 0.2	-	< 0.50	< 0.50	< 0.50	-	-	-
Thorium	µg/L	0.164	0.248	0.622	0.384	0.361	0.241	1.93	0.248	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	-	-	-	-	-	-	-	< 0.1	-	-	-	-	-	-	-
Tin	µg/L	<0.500	<0.500	<0.500	<0.500	<0.500	<0.500	0.252	0.263	< 0.20	< 0.20	0.26	< 0.20	< 0.20	-	< 6	-	-	5	10	8	< 4	< 5	-	-	-	-	-	-	-
Titanium	µg/L	60.4	119	259	176	36.3	78.8	670	72.9	12.7	< 5.0	5.3	17.7	< 5.0	-	86.6	-	-	71.1	102	62.7	30	63.6	-	71	78	181	-	-	-
Tungsten	µg/L	1.31	1.87	1.85	2.02	<2.00	<2.00	1.98	2.76	1.2	< 1.0	< 1.0	< 1.0	< 1.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Uranium	µg/L	110	125	169	177	137	221	164	191	90.2	83.9	73	38.4	28.3	-	-	-	-	4.1	< 5	6.7	6.2	5.6	-	4.1	3.29	3.87	-	-	-
Vanadium	µg/L	5.32	5.77	11.4	9.48	<10.0	16.4	23.9	6.09	6.2	6.4	3.2	4.1	4.5	-	15	-	-	11.6	16	13	7.6	14	-	< 60	< 60	< 60	-	-	-
Zinc	µg/L	6.2	11.1	27.4	18.8	<10.0	<10.0	68.6	8.5	4.5	6.5	5.3	5.4	6.1	-	22.4	-	-	16	50	54	20	30	-	68	142	67	-	-	-
Zirconium	µg/L	3.56	5.49	3.55	3.11	4.31	6.98	11.4	5.06	2.3	1.9	1.15	0.45	0.24	-	-	-	-	21	30	20	10	20	-	-	-	-	-	-	-
Microbiological																													
Coliforms, Fecal (Q-Tray)	MPN/100ml	26	727	2,560	408	3	35	> 2420	133	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Coliforms, Total (Q-Tray)	MPN/100ml	976	> 242000	> 242000	242,000	2,410	64,900	> 242000	19,400	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Associated CARO file(s) available on request
Associated Exova file(s): 107524, 115040, 417280, 438503, 47748, 593413, 610415, 653618, 683622, 714220, 714240, 95223., 8040426, 8041402, 8041784, 8050436, 8052167, 8061543, 8071280, 8090442, 8110640, 8110821, 9032473, 9050543, 9060474, 9090312, N000861, 0040546, 0060737, 0091922, 20J3095.

All terms defined within the body of Keltech's report

Table H3: Summary of Surface Water Analytical Results - HISTORICAL to 2025

Location		Quail Ridge						Culvert		SS Headwall		
Sample ID		Quail Ridge-20150615	Quail Ridge-20150915	Quail Ridge-20151203	QUAIL RIDGE-20160315	QUAIL RIDGE-20160915	QUAIL RIDGE-20161117	Culvert 1002026	Culvert 1002026	S Storm Headwall 186437	S.Storm Headwall 186437	S Storm HW186437
Sample Date		2015 06 15	2015 09 15	2015 12 03	2016 03 15	2016 09 15	2016 11 17	2025-03-13	2025-12-17	2024-01-26	2025-03-13	2025-12-17
Parameter	**Units**	**Analytical Results**										
General												
Alkalinity, Bicarbonate (as CaCO3)	mg/L	-	4,290	4,150	3,570	-	-	105	148	118	92.6	120
Alkalinity, Carbonate (as CaCO3)	mg/L	-	< 1.0	< 1.0	< 1.0	-	-	<1.0	<1.0	<1.0	<1.0	<1.0
Alkalinity, Hydroxide (as CaCO3)	mg/L	-	< 1.0	< 1.0	< 1.0	-	-	<1.0	<1.0	<1.0	<1.0	<1.0
Alkalinity, Phenolphthalein (as CaCO3)	mg/L	-	-	-	-	-	-	<1.0	<1.0	<1.0	<1.0	<1.0
Alkalinity, Total (as CaCO3)	mg/L	3,450	4,290	4,150	3,570	4,090	4,210	105	148	118	92.6	120
Ammonia, Total (as N)	µg/L	89,300	118,000	118,000	79,100	104,000	119,000	143	73	<0.050	251	<50
Bicarbonate	mg/L	-	-	-	-	-	-	-	-		-	-
Bromide	mg/L	2.7	< 5.0	3.2	3.3	3.5	4	0.24	<0.10	0.11	0.25	<0.10
Chloride	mg/L	388	479	451	471	508	602	179	79.6	377	212	50.8
COD - Chemical Oxygen Demand	mg/L	321	407	377	446	447	556	114	109	60	118	69
Conductivity - Field	µS/cm	-	-	-	-	-	-	1,086	616.9	-	1,010	467.7
Conductivity - Lab	µS/cm	-	-	-	-	-	-	1,090	615	1,590	1,040	453
DOC - Dissolved Organic Carbon	mg/L	-	-	-	-	-	-	16.1	16.1	18.0	10.6	10.8
Fluoride	µg/L	1,700	< 2,000a	1,000	< 1,000	1,900	< 1,000	<0.10	0.18	190	<0.10	0.13
Hardness (as CaCO3)	mg/L	1,380	1,580	1,580	1,350	1,650	1,540	186	191	-	159	136
Hardness, Dissolved (as CaCO3)	mg/L							162	134	-	144	103
Nitrate (as N)	µg/L	35,500	49,600	64,200	12,300	9,710	38,500	201	215	677	161	553
Nitrate+Nitrite (as N)	µg/L	-	-	-	-	-	-	201	215	677	1.61	553
Nitrite (as N)	µg/L	-	-	-	-	-	-	<10	<10	<10	<10	<0.010
Nitrogen-N, Total	mg/L	-	-	-	-	-	-	4.97	5.83	1.93	4.27	2.24
Ortho-Phosphate	mg/L	2.08	2.83	2.76	2.44	3.01	0.281	2.17	2.44	-	1.8	0.667
pH (field)	pH	-	-	-	-	-	-			-		
pH (Lab)	pH	7.76	7.47	7.46	7.49	-	-	7.83	7.68	7.49	7.68	7.48
Phosphate	mg/L	-	-	-	-	-	-			0.520		
Phosphorus, Total (as P)	mg/L	-	-	-	-	-	-	3.39	4.88	0.582	1.81	1.56
Sulphate	mg/L	576	912	804	793	1,070	1,100	15.7	25.9	106	19	33.6
TDS - Solids, Total Dissolved	mg/L	4,680	6,260	6,160	5,140	6,580		-	541	932	593	412
Temperature	C	-	-	-	-	-	-			-		
TKN - Kjeldahl Nitrogen-N	mg/L	-	-	-	-	-	-	2.96	3.68	1.26	2.66	1.68
TOC - Carbon, Total Organic	mg/L	-	-	-	-	-	-	16.4	16.9	-	12.6	14.2
TSS - Solids, Total Suspended	mg/L	-	-	-	-	-	-	-	33.6	-	-	188
Total Metals												
Aluminum	µg/L	-	-	-	-	-	-	10,100	28,800	184	5,470	15,700
Antimony	µg/L	-	-	-	-	-	-	0.863	0.742	0.321	0.73	0.654
Arsenic	µg/L	-	-	-	-	-	-	8.56	14.4	2.09	4.85	6.59
Barium	µg/L	-	-	-	-	-	-	99.8	243	117	84.3	164
Beryllium	µg/L	-	-	-	-	-	-	0.617	1.46	0.010	0.316	0.698
Bismuth	µg/L	-	-	-	-	-	-	0.213	0.397	<0.010	0.124	0.226
Boron	µg/L	-	-	-	-	-	-	38	55.6	18.6	28.2	27.5
Cadmium	µg/L	-	-	-	-	-	-	0.161	0.284	0.0302	0.109	0.17
Calcium	µg/L	-	-	-	-	-	-	50300	44500	92,800	45700	34200
Chromium	µg/L	-	-	-	-	-	-	21.2	45.6	0.75	13.6	32.6
Cobalt	µg/L	-	-	-	-	-	-	5.95	13.6	0.262	3.36	7.75
Copper	µg/L	-	-	-	-	-	-	25.7	48.6	6.36	16.2	27.6
Iron	µg/L	-	-	-	-	-	-	13,300	35,300	204	7,320	19,600
Lead	µg/L	-	-	-	-	-	-	7.77	17.6	0.156	4.43	10.1
Lithium	µg/L	-	-	-	-	-	-	13.1	24.9	4.63	8.92	15.5
Magnesium	µg/L	-	-	-	-	-	-	14,700	19,400	22,100	10,900	12,300
Manganese	µg/L	-	-	-	-	-	-	327	833	4.87	169	439
Mercury	µg/L	-	-	-	-	-	-	<0.010	<0.010	<0.010	<0.010	<0.010
Molybdenum	µg/L	-	-	-	-	-	-	8.29	11.1	18.4	6.39	8.52
Nickel	µg/L	-	-	-	-	-	-	17.9	42.2	1.99	9.97	23.7
Phosphorous	µg/L	-	-	-	-	-	-	3,230	4,620	610	1,810	1,680
Potassium	µg/L	-	-	-	-	-	-	20,000	23,200	14,500	15,300	13,000
Selenium	µg/L	-	-	-	-	-	-	0.31	0.49	1.40	0.23	0.38
Silicon	µg/L	-	-	-	-	-	-	24,000	56,100	6,700	15,100	35,000
Silver	µg/L	-	-	-	-	-	-	0.115	0.208	0.015	0.068	0.124
Sodium	µg/L	-	-	-	-	-	-	131,000	69,900	218,000	128,000	50,100
Strontium	µg/L	-	-	-	-	-	-	396	369	873	390	294
Sulphur	µg/L	-	-	-	-	-	-	7,800	9,900	39,900	7,600	11,500
Sulfur (As S)	µg/L							-	-	-	-	-
Tellurium	µg/L	-	-	-	-	-	-	<0.050	0.053	<0.050	<0.050	<0.050
Thallium	µg/L	-	-	-	-	-	-	0.153	0.354	0.0056	0.0793	0.175
Thorium	µg/L	-	-	-	-	-	-	0.977	2.95	0.039	0.541	1.52
Tin	µg/L	-	-	-	-	-	-	0.366	0.469	<0.050	0.277	0.561
Titanium	µg/L	-	-	-	-	-	-	319	833	8.07	197	551
Tungsten	µg/L	-	-	-	-	-	-	0.58	0.33	<0.20	0.57	0.45
Uranium	µg/L	-	-	-	-	-	-	1.5	2.06	4.17	1.2	1.72
Vanadium	µg/L	-	-	-	-	-	-	24.5	54	2.27	14.8	34.2
Zinc	µg/L	-	-	-	-	-	-	115	200	19.7	72.1	116
Zirconium	µg/L	-	-	-	-	-	-	3.97	11.8	0.470	2.59	4.95
Microbiological												
Coliforms, Fecal (Q-Tray)	MPN/100ml	-	-	-	-	-	-	173	248	2,600	306	1,040
Coliforms, Total (Q-Tray)	MPN/100ml	-	-	-	-	-	-	13,300	54,800	18,600	14,000	18,700

Associated CARO file(s) available on request
Associated Exova file(s): 107524, 115040, 417280, 438503, 47748, 593413, 610415, 653618, 683622, 714220, 714240, 95223., 8040426, 8041402, 8041784, 8050436, 8052167, 8061543, 8071280, 8090442, 8110640, 8110821, 9032473, 9050543, 9060474, 9090312, N000861, 0040546, 0060737, 0091922, 20J3095.

All terms defined within the body of Keltech's report

Table H4: Summary of Leachate Water Analytical Results- HISTORICAL to 2025

Sample Location		Lea PH MH	N PH MH															
Sample ID		LEACHATE-PUMPHOUSE MANHOLE-20130312	N Pumphouse MH-20080205	N Pumphouse MH-20080219	N Pumphouse MH-20080304	N Pumphouse MH-20080325	N Pumphouse MH-20080408	N Pumphouse MH-20080424	N Pumphouse MH-20080507	N Pumphouse MH-20080521	N Pumphouse MH-20080617	N Pumphouse MH-20080626	N Pumphouse MH-20080708	N Pumphouse MH-20131211	N Pumphouse MH-20140408	N Pumphouse MH-20140610	N Pumphouse MH-20150122	N Pumphouse MH-20150615
Sample Date (yyyy mm dd)		2013 03 12	2008 02 05	2008 02 19	2008 03 04	2008 03 25	2008 04 08	2008 04 24	2008 05 07	2008 05 21	2008 06 17	2008 06 26	2008 07 08	2013 12 11	2014 04 08	2014 06 10	2015 01 22	2015 06 15
Parameter	**Units**	**Analytical Results**																
Hydrocarbons																		
VH (C6-C10)	µg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	< 100	< 100	-	< 100
VPH (C6-C10)	µg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	< 100	< 100	-	< 100
EPH (C10-C19)	µg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	1,110	1,180	650	< 250
LEPH (C10-C19)	µg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	1,110	1,170	650	< 250
EPH (C19-C32)	µg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	640	850	720	< 250
HEPH (C19-C32)	µg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	640	850	720	< 250
Benzene	µg/L	3.13	16	11	14	13	11	7	9	8	11	12	8	3.74	2.05	4.75	-	2.86
Ethylbenzene	µg/L	19.3	63	46	64	60	56	47	56	44	49	49	38	11.9	22.1	45.9	-	9.41
Toluene	µg/L	1.03	2	2	3	3	2	2	2	2	2	3	2	0.79	3.8	4.01	-	0.76
Xylenes	µg/L	9.35	9	9	11	13	12	10	12	7	11	8	9	9.62	19.8	40.5	-	5.25
Styrene	µg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
General																		
Alkalinity, Bicarbonate (as CaCO3)	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2,100	-
Alkalinity, Carbonate (as CaCO3)	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	< 1.0	-
Alkalinity, Hydroxide (as CaCO3)	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	< 1.0	-
Alkalinity, Phenolphthalein (as CaCO3)	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ammonia, Total (as N)	µg/L	118,000	-	-	-	-	-	-	-	-	-	-	-	108,000	64,800	65,300	40,600	95,000
Biochemical Oxygen Demand	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Bromide	mg/L	3.3	-	-	-	-	-	-	-	-	-	-	-	2.6	4.2	4.7	< 2.5	2.6
Chemical Oxygen Demand	mg/L	454	-	-	-	-	-	-	-	-	-	-	-	381	626	660	205	357
Chloride	mg/L	490	-	-	-	-	-	-	-	-	-	-	-	380	506	553	368	377
Dissolved Organic Carbon	mg/L		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Electrical Conductivity (Lab)	µS/cm																	
Fluoride	µg/L	5,200	-	-	-	-	-	-	-	-	-	-	-	2,200	< 1,000	778	< 1,000	1,600
Hardness as CaCO3 (filtered)	mg/L																	
Kjeldahl Nitrogen Total	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Nitrate (as N)	µg/L	< 250	-	-	-	-	-	-	-	-	-	-	-	< 250	< 250	350	< 250	< 250
Nitrite (as N)	µg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ortho-Phosphate	mg/L	2.5	-	-	-	-	-	-	-	-	-	-	-	2.2	3.07	4.55	0.8	2.3
pH (Lab)																		
Phosphate	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Solids, Total Dissolved	mg/L																	
Phosphorus (filtered)	ug/L																	
Sulfate	mg/L	503	-	-	-	-	-	-	-	-	-	-	-	376	1,130	860	299	545
Sulfide	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Total Alkalinity	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	3,440	4,930	2,100	3,470
Total Organic Carbon	mg/L	120	-	-	-	-	-	-	-	-	-	-	-	106	-	-	-	-
Total Phosphorous as P	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Dissolved Metals																		
Antimony	µg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	3.8	11.8	< 0.50	3.3
Aluminium	µg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	94	82	20	36
Arsenic	µg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	16.5	33.9	1.7	9.6
Barium	µg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	100	148	201	238
Beryllium	µg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	< 10	< 15	< 5.0	< 10
Bismuth	µg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Boron	µg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	1,590	1,640	890	1,390
Cadmium	µg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	< 0.50	< 0.50	< 0.25	< 0.050
Calcium	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	66.2	64.4	115	104
Chromium	µg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	16.1	22.3	5.2	11.1
Cobalt	µg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	6.6	6.1	3.27	7.03
Copper	µg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	< 5.0	< 5.0	< 2.5	< 1.0
Iron	µg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	261	144	1,060	116
Lead	µg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	< 1.0	< 1.0	< 1.0	< 1.0
Lithium	µg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	< 50	59	< 50	< 50
Magnesium	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	185	257	214	250
Manganese	µg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	283	299	841	423
Mercury	µg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	< 0.20	< 0.20	< 0.20	< 0.20
Molybdenum	µg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	3	4.6	< 1.0	1.4
Nickel	µg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	25.8	26	8.5	14.1
Phosphrous	µg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Potassium	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Selenium	µg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	< 10	< 10	< 5.0	< 1.0
Silicon	µg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Silver	µg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	< 0.10	< 0.10	< 0.050	< 0.050
Sodium	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	1,770	2,260	686	1,140
Strontium	µg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Sulphur	µg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	179,000
Tellurium	µg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	< 1.0
Thallium	µg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	< 1.0	< 1.0	< 0.50	< 0.050
Thorium	µg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	< 0.50
Tin	µg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Titanium	µg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	59	73	< 50	< 50
Tungsten	µg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Uranium	µg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	22.5	16.2	3.61	5.43
Vanadium	µg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	< 60	< 90	< 30	< 60
Zinc	µg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	< 10	< 15	< 5.0	< 10
Zirconium	µg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	17.8
Polycyclic Aromatic Hydrocarbons																		
Acenaphthene	µg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	0.33	0.263	0.2	0.328
Acenaphthylene	µg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	< 0.050	< 0.050	< 0.050	< 0.050
Acridine	µg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	< 0.050	< 0.060	< 0.050	< 0.050
Anthracene	µg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	< 0.050	< 0.050	< 0.050	< 0.050
Benz(a)anthracene	µg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	< 0.050	< 0.050	< 0.050	< 0.050
Benzo(a)pyrene	µg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	< 0.010	< 0.010	< 0.010	< 0.010
Benzo(b)fluoranthene	µg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	< 0.050	< 0.050	< 0.050	< 0.050
Benzo(b+j)fluoranthene	µg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Benzo(g,h,i)perylene	µg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	< 0.050	< 0.050	< 0.050	< 0.050
Benzo(k)fluoranthene	µg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	< 0.050	< 0.050	< 0.050	< 0.050
Chloronaphthalene, 2-	µg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Chrysene	µg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	< 0.050	< 0.050	< 0.050	< 0.050
Dibenz(a,h)anthracene	µg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	< 0.050	< 0.050	< 0.050	< 0.050
Fluoranthene	µg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	< 0.050	< 0.050	< 0.050	< 0.050
Fluorene	µg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	0.229	0.159	0.142	0.229
Indeno(1,2,3-cd)pyrene	µg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	< 0.050	< 0.050	< 0.050	< 0.050
Methylnaphthalene, 1-	µg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Methylnaphthalene, 2-	µg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Naphthalene	µg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	3.19	3.09	0.36	1.45
Phenanthrene	µg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	0.245	0.184	0.074	0.09
Pyrene	µg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	< 0.050	< 0.050	< 0.050	< 0.050
Quinoline	µg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	< 0.050	< 0.050	< 0.050	< 0.050
Volatile Organic Compounds																		
Bromodichloromethane [BDCM]	µg/L	< 1.0	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1.0	< 1.0	-	-	< 1.0
Bromoform	µg/L	< 1.0	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1.0	< 1.0	-	-	< 1.0
Carbon Tetrachloride	µg/L	< 0.50	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 0.50	< 0.50	-	-	< 0.50
Chlorobenzene	µg/L	3.8	3	2	2	3	3	3	3	3	2	3	2	4.2	< 1.0	-	-	2.7
Chloroethane	µg/L	9.7	20	10	30	20	10	< 10	20	20	20	20	10	6.3	1.3	-	-	6
Chloroform	µg/L	< 1.0	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1.0	< 1.0	-	-	< 1.0
Chloromethane	µg/L	< 5.0	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 5.0	< 5.0	-	-	< 5.0
Dibromochloromethane [DBCM]	µg/L	< 1.0	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1.0	< 1.0	-	-	< 1.0
Dibromoethane, 1,2-	µg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Dibromomethane	µg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Dichlorobenzene, 1,2-	µg/L	< 0.70	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 0.70	< 0.70	-	-	< 0.70
Dichlorobenzene, 1,3-	µg/L	< 1.0	1	< 1	< 1	< 1	< 1	1	< 1	< 1	< 1	< 1	< 1	< 1.0	< 1.0	-	-	< 1.0
Dichlorobenzene, 1,4-	µg/L	1.1	< 1	1	1	1	1	1	1	< 1	1	1	1	1.5	< 1.0	-	-	1.1
Dichloroethane, 1,1-	µg/L	17.6	13	12	13	12	11	11	15	15	19	21	11	16.2	1.5	-	-	12.4
Dichloroethane, 1,2-	µg/L	< 1.0	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1.0	< 1.0	-	-	< 1.0
Dichloroethylene, 1,1-	µg/L	< 1.0	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1.0	< 1.0	-	-	< 1.0
Dichloroethylene, 1,2-cis-	µg/L	< 1.0	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	1	< 1.0	< 1.0	-	-	< 1.0
Dichloroethylene, 1,2-trans-	µg/L	< 1.0	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1.0	< 1.0	-	-	< 1.0
Dichloromethane	µg/L	< 5.0	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5.0	< 5.0	-	-	< 5.0
Dichloropropane, 1,2-	µg/L	< 1.0	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1.0	< 1.0	-	-	< 1.0
Dichloropropene, 1,3- (cis+trans)	µg/L	< 1.4	-	-	-	-	-	-	-	-	-	-	-	< 1.4	< 1.4	-	-	< 1.4
Dichloropropene, 1,3-cis-	µg/L	< 1.0	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1.0	< 1.0	-	-	< 1.0
Dichloropropene, 1,3-trans-	µg/L	< 1.0	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1.0	< 1.0	-	-	< 1.0
Dichloropropene, 1,3	µg/L																	
Methyl Tert-butyl Ether [MTBE]	µg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Tetrachloroethane, 1,1,1,2-	µg/L	< 1.0	-	-	-	-	-	-	-	-	-	-	-	< 1.0	< 1.0	-	-	< 1.0
Tetrachloroethene	µg/L	< 1.0	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1.0	< 1.0	-	-	< 1.0
Trichloroethane, 1,1,1-	µg/L	< 1.0	8	5	5	6	5	5	6	6	3	9	3	1.6	< 1.0	-	-	1.6
Trichloroethane, 1,1,2-	µg/L	< 1.0	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1.0	< 1.0	-	-	< 1.0
Trichloroethylene	µg/L	< 1.0	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1.0	< 1.0	-	-	< 1.0
Trichlorofluoromethane	µg/L	< 1.0	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1.0	< 1.0	-	-	< 1.0
Vinyl Chloride	µg/L	< 1.0	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 1.0	< 1.0	-	-	< 1.0
Resin and Fatty Acids																		
Acetic Acid	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Butyric Acid	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Caporic Acid	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Heptanoic Acid	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Hexanoic Acid	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Isobutyric Acid	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Isocaproic Acid	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Isovaleric Acid	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Propionic Acid	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Valeric Acid	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
VFAs																		
8:2 Fluorotelomer sulfonic acid (8:2 FTS	µg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Perfluorobutane sulfonic acid (PFBS)	µg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Perfluorobutanoic acid (PFBA)	µg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Perfluoroheptanoic acid (PFHpA)	µg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Perfluorohexane sulfonic acid (PFHxS)	µg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Perfluorohexanoic acid (PFHxA)	µg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Perfluorononanoic acid (PFNA)	µg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Perfluorooctane sulfonic acid (PFOS)	µg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Perfluorooctanoic acid (PFOA)	µg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Perfluoropentanoic acid (PFPeA)	µg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Potassium Perfluorobutane Sulfonate	µg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Associated CARO file(s) available on request
Associated Exova file(s): 506479, 507801, 509233, 600276, 602695, 605393, 608922, 611891, 614770, 617175, 619914, 625680, 627511, 629501.
All terms defined within the body of Keltech's report.
< concentration less than indicated detection limit or RPD less than indicated value.
- analysis not conducted.
n/a - no applicable standard/guideline.
RPD - relative percent difference

Table H4: Summary of Leachate Water Analytical Results- HISTORICAL to 2025

Sample Location		N PH MH																
Sample ID		N Pumphouse MH-20150915	N Pumphouse MH-20151203	N PUMPHOUSE MH-20160315	N PUMPHOUSE MH-20160623	N PUMPHOUSE MH-20160915	N PUMPHOUSE MH-20161117	N PUMPHOUSE MH-20170914	N PUMPHOUSE MH-20171204	N Pumphouse MH	N Pumphouse MH	N Pumphouse MH-20180524	N Pumphouse MH	N Pumphouse MH-20181108	N Pumphouse MH	N Pumphouse MH-20190315	N Pumphouse MH	N Pumphouse MH-20190603
Sample Date (yyyy mm dd)		2015 09 15	2015 12 03	2016 03 15	2016 06 23	2016 09 15	2016 11 17	2017 09 14	2017 12 04	2018 03 15	2018 05 24	2018 05 24	2018 11 08	2018 11 08	2019 03 15	2019 03 15	2019 06 03	2019 06 03
Parameter	**Units**																	
Hydrocarbons																		
VH (C6-C10)	µg/L	< 100	< 100	< 100	-	-	< 100	-	-	< 100	147	147	181	181	< 100	< 100	< 100	< 100
VPH (C6-C10)	µg/L	< 100	< 100	< 100	-	-	< 100	-	-	< 100	< 100	< 100	< 100	< 100	< 100	< 100	< 100	< 100
EPH (C10-C19)	µg/L	260	310	260	< 250	< 250	400	< 250	250	< 250	766	766	346	346	681	681	724	724
LEPH (C10-C19)	µg/L	250	310	260	< 250	< 250	400	< 250	250	< 250	763	763	342	342	675	675	719	719
EPH (C19-C32)	µg/L	< 250	< 250	< 250	< 250	< 250	< 250	< 250	< 250	< 250	660	660	< 250	< 250	429	429	474	474
HEPH (C19-C32)	µg/L	< 250	< 250	< 250	< 250	< 250	< 250	< 250	< 250	< 250	660	660	< 250	< 250	429	429	474	474
Benzene	µg/L	3.08	2.98	2.96	-	-	3.43	3.34	5.43	< 0.5	4.9	4.9	8.7	8.7	2.9	2.9	3	3
Ethylbenzene	µg/L	11	13.4	15.8	-	-	22.8	18.8	41.4	< 1.0	79.4	79.4	53.4	53.4	5.9	5.9	47	47
Toluene	µg/L	0.88	0.72	1.04	-	-	1.29	0.7	1.23	< 1.0	3.8	3.8	2.3	2.3	1.7	1.7	< 1.0	< 1.0
Xylenes	µg/L	5.45	7.9	9.68	-	-	14.3	13.4	31.1	< 2.0	59.6	59.6	86.4	86.4	7.3	7.3	26.8	26.8
Styrene	µg/L	-	-	-	-	-	-	-	-	< 1.0	< 1.0	-	< 1.0	-	< 1.0	-	< 1.0	-
General																		
Alkalinity, Bicarbonate (as CaCO3)	mg/L	3,640	3,640	3,190	-	-	-	-	-	575	2,740	2,740	6,350	6,350	2,790	2,790	3,310	3,310
Alkalinity, Carbonate (as CaCO3)	mg/L	< 1.0	< 1.0	< 1.0	-	-	-	-	-	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	102	102	< 1.0	< 1.0
Alkalinity, Hydroxide (as CaCO3)	mg/L	< 1.0	< 1.0	< 1.0	-	-	-	-	-	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Alkalinity, Phenolphthalein (as CaCO3)	mg/L	-	-	-	-	-	-	-	-	< 1.0	< 1.0	-	< 1.0	-	50.8	-	< 1.0	-
Ammonia, Total (as N)	µg/L	99,700	111,000	76,800	11,400	99,000	140,000	87,000	65,600	171	52,900	52,900	50,200	50,200	14,600	14,600	39,500	39,500
Biochemical Oxygen Demand	mg/L	-	-	-	-	-	-	-	-	< 5.5	63.7	-	301	-	111	-	58.3	-
Bromide	mg/L	3.3	2.9	2.8	< 1.0	3.7	5.3	3.4	3.9	< 1.00	< 1.00	< 1.00	< 2.50	< 2.50	2.37	2.37	< 1.00	< 1.00
Chemical Oxygen Demand	mg/L	421	415	518	46	482	681	508	529	< 20	382	382	925	925	436	436	430	430
Chloride	mg/L	416	441	420	217	502	671	503	554	131	437	437	936	936	501	501	410	410
Dissolved Organic Carbon	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Electrical Conductivity (Lab)	µS/cm																	
Fluoride	µg/L	< 1,000	< 1,000	< 1,000	1,280	< 1,000	< 1,000	1,100	< 1,000	< 1,000	< 1,000	< 1,000	< 2,500	< 2,500	< 1,000	< 1,000	1,100	1,100
Hardness as CaCO3 (filtered)	mg/L																	
Kjeldahl Nitrogen Total	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Nitrate (as N)	µg/L	< 250	350	< 250	5,710	< 250	< 250	< 250	< 250	7,230	< 100	< 100	< 250	< 250	3,530	3,530	< 100	< 100
Nitrite (as N)	µg/L	-	-	-	-	-	-	-	-	< 100	< 100	-	< 250	-	390	-	< 100	-
Ortho-Phosphate	mg/L	2.46	2.63	2.29	0.222	3.01	0.392	3.33	4.5	-	-	3.02	-	6.51	3.27	3.27	-	2.9
pH (Lab)																		
Phosphate	mg/L	-	-	-	-	-	-	-	-	0.086	3.02	-	6.51	-	-	-	2.9	-
Solids, Total Dissolved	mg/L																	
Phosphorus (filtered)	ug/L																	
Sulfate	mg/L	548	698	573	347	893	996	954	1,160	236	1,010	1,010	2,660	2,660	1,340	1,340	1,120	1,120
Sulfide	mg/L	-	-	-	-	-	-	-	-	< 0.020	31.7	-	102	-	26.7	-	46.1	-
Total Alkalinity	mg/L	3,640	3,640	3,190	934	3,920	4,680	3,760	5,390	575	2,740	2,740	6,350	6,350	2,890	2,890	3,310	3,310
Total Organic Carbon	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Total Phosphorous as P	mg/L	-	-	-	-	-	-	-	-	0.143	4	-	8.06	-	4.3	-	3.99	-
Dissolved Metals																		
Antimony	µg/L	7.69	8	7.85	0.73	12.3	9.3	8.5	4.66	< 0.20	9.61	9.61	25.1	25.1	8.9	8.9	6.92	6.92
Aluminium	µg/L	42	46	59	< 10	49	58	70	156	< 5.0	78.3	78.3	180	180	81.6	81.6	72.4	72.4
Arsenic	µg/L	14.1	16	21.8	2.3	24.8	23.5	17.2	15.8	1.15	25.8	25.8	89.9	89.9	20.8	20.8	19.8	19.8
Barium	µg/L	247	256	151	97	303	234	233	172	78.9	205	205	142	142	85.7	85.7	159	159
Beryllium	µg/L	< 10	< 10	< 10	< 5.0	< 10	< 10	< 15	< 0.50	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Bismuth	µg/L	< 400	< 400	< 400	< 200	< 400	< 400	< 600	< 0.25	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Boron	µg/L	1,490	1,520	1,650	230	1,680	2,060	1,520	1,930	28	1,350	1,350	1,740	1,740	978	978	1,240	1,240
Cadmium	µg/L	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.025	0.015	0.011	0.011	0.012	0.012	0.013	0.013	< 0.010	< 0.010
Calcium	mg/L	95	96.2	84.6	58.7	113	89.6	96.8	66.2	69.3	83	83	54.6	54.6	57.9	57.9	83.1	83.1
Chromium	µg/L	13.4	15	16.1	3.14	17	22.5	12.6	26.5	2.63	15.7	15.7	45.7	45.7	14.3	14.3	15.3	15.3
Cobalt	µg/L	6.92	7.7	6.57	0.84	8.5	11.5	5.2	5	0.12	3.88	3.88	5.46	5.46	2.14	2.14	4.59	4.59
Copper	µg/L	< 1.0	< 2.0	< 1.0	< 1.0	< 2.0	< 2.0	< 2.0	2	1.09	< 0.40	< 0.40	< 0.40	< 0.40	0.68	0.68	0.43	0.43
Iron	µg/L	106	76	89	130	122	84	< 90	53	11	97	97	68	68	48	48	52	52
Lead	µg/L	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 0.25	< 0.20	< 0.20	< 0.20	0.22	0.22	< 0.20	< 0.20	< 0.20	< 0.20
Lithium	µg/L	< 50	< 50	< 50	< 50	52	< 50	52	65.8	36.9	54.6	54.6	49.2	49.2	55.4	55.4	48.8	48.8
Magnesium	mg/L	265	286	236	149	291	262	270	305	136	205	205	257	257	204	204	232	232
Manganese	µg/L	377	395	494	90	493	355	411	317	27.9	305	305	196	196	157	157	316	316
Mercury	µg/L	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.25	< 0.010	< 0.010	< 0.010	< 0.200	< 0.200	< 0.100	< 0.100	< 0.010	< 0.010
Molybdenum	µg/L	2.2	1.3	2.5	13.4	2	2	1.8	2.33	18.9	6.22	6.22	5.33	5.33	7.16	7.16	3.32	3.32
Nickel	µg/L	16.1	17.6	21.8	< 5.0	19.7	25.5	18	27.5	1.02	21.8	21.8	33.6	33.6	13.2	13.2	16.6	16.6
Phosphrous	µg/L	2,640	3,180	3,180	< 300	3,190	4,140	3,410	8,100	158	4,380	4,380	9,480	9,480	4,530	4,530	4,100	4,100
Potassium	mg/L	166	169	182	31.6	177	243	177	253	16.7	151	151	307	307	134	134	158	158
Selenium	µg/L	1.7	< 1.0	11.4	5	< 1.0	3.964	11.6	14.4	7.41	2.58	2.58	1.35	1.35	2.42	2.42	0.96	0.96
Silicon	µg/L	15,700	15,400	12,700	10,100	16,700	16,200	14,500	13,100	10,700	14,200	14,200	14,700	14,700	10,300	10,300	13,500	13,500
Silver	µg/L	< 0.050	< 0.10	< 0.050	< 0.050	< 0.10	< 0.10	< 0.10	0.078	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050
Sodium	mg/L	1,370	1,520	1,580	308	1,760	2,020	1,700	3,250	184	1,330	1,330	4,180	4,180	1,960	1,960	1,720	1,720
Strontium	µg/L	3,610	3,440	2,660	2,670	3,960	3,100	3,400	2,800	3,160	3,480	3,480	2,510	2,510	2,320	2,320	3,410	3,410
Sulphur	µg/L	720,000	657,000	793,000	93,800	322,000	520,000	604,000	1,180,000	100,000	431,000	-	1,420,000	-	581,000	-	473,000	-
Tellurium	µg/L	< 1.0	< 2.0	< 1.0	< 0.20	-	-	< 2.0	< 1.0	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50
Thallium	µg/L	< 0.20	< 0.10	< 0.050	< 0.010	< 0.10	< 0.10	< 0.10	< 0.050	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020
Thorium	µg/L	< 0.50	< 1.0	< 0.50	< 0.10	-	-	< 1.0	< 0.50	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Tin	µg/L	< 60	< 60	< 60	< 30	< 60	< 60	< 90	14.7	< 0.20	15.4	15.4	59.9	59.9	18.8	18.8	11.4	11.4
Titanium	µg/L	55	55	< 50	< 50	58	67	59	60.1	< 5.0	40.4	40.4	116	116	30.4	30.4	45.2	45.2
Tungsten	µg/L	-	-	-	-	-	-	-	-	< 1.0	2.3	-	4.8	-	1.8	-	2.4	-
Uranium	µg/L	5.09	4.55	8.59	33.3	5.43	4.77	9.1	14.2	39.5	25	25	37.2	37.2	33.3	33.3	16.8	16.8
Vanadium	µg/L	< 60	< 60	< 60	< 30	< 60	< 60	< 90	19.1	3.3	13	13	27.6	27.6	8.5	8.5	11.6	11.6
Zinc	µg/L	< 10	< 10	< 10	< 5.0	< 10	< 10	< 15	< 5.0	< 4.0	< 4.0	< 4.0	< 4.0	< 4.0	< 4.0	< 4.0	< 4.0	< 4.0
Zirconium	µg/L	19.2	22.3	17.5	2.64	-	-	19.6	32.7	0.18	21.5	21.5	51.1	51.1	15.1	15.1	18.7	18.7
Polycyclic Aromatic Hydrocarbons																		
Acenaphthene	µg/L	0.508	0.415	0.346	< 0.050	0.222	0.4	0.325	0.312	< 0.050	0.233	0.233	0.293	0.293	0.386	0.386	0.518	0.518
Acenaphthylene	µg/L	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.010	< 0.200	< 0.200	< 0.200	< 0.200	< 0.200	< 0.200	< 0.200	< 0.200	< 0.200
Acridine	µg/L	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.070	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050
Anthracene	µg/L	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.030	< 0.010	0.019	0.019	< 0.010	< 0.010	0.019	0.019	0.023	0.023
Benz(a)anthracene	µg/L	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.010	< 0.010	< 0.010	< 0.010	0.017	0.017	< 0.010	< 0.010	< 0.010	< 0.010
Benzo(a)pyrene	µg/L	< 0.010	< 0.010	< 0.010	< 0.010	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010
Benzo(b)fluoranthene	µg/L	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	-	-	-	-	-	-	-	-	-	-	-
Benzo(b+j)fluoranthene	µg/L	-	-	-	-	-	-	-	-	< 0.050	< 0.050	-	< 0.050	-	< 0.050	-	< 0.050	-
Benzo(g,h,i)perylene	µg/L	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.010	< 0.050	< 0.050	-	< 0.050	-	< 0.050	-	< 0.050	-
Benzo(k)fluoranthene	µg/L	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.010	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050
Chloronaphthalene, 2-	µg/L	-	-	-	-	-	-	-	-	< 0.100	< 0.100	-	< 0.100	-	< 0.100	-	< 0.100	-
Chrysene	µg/L	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.010	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050
Dibenz(a,h)anthracene	µg/L	< 0.050	< 0.050	< 0.050	< 0.050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010
Fluoranthene	µg/L	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	0.05	< 0.030	< 0.030	< 0.030	0.172	0.172	0.09	0.09	0.118	0.118
Fluorene	µg/L	0.362	0.298	0.201	< 0.050	0.176	0.238	0.259	0.234	< 0.050	0.164	0.164	0.212	0.212	0.221	0.221	0.336	0.336
Indeno(1,2,3-cd)pyrene	µg/L	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.010	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050
Methylnaphthalene, 1-	µg/L	-	-	-	-	-	-	-	-	< 0.100	0.62	-	0.545	-	1.06	-	0.644	-
Methylnaphthalene, 2-	µg/L	-	-	-	-	-	-	-	-	< 0.100	0.721	-	0.407	-	1.1	-	0.568	-
Naphthalene	µg/L	2.11	2.76	2.94	0.19	1.57	3.55	1.53	2.06	< 0.200	2.08	2.08	3.52	3.52	5.93	5.93	3.41	3.41
Phenanthrene	µg/L	0.154	0.125	0.124	< 0.050	0.081	0.16	0.154	0.213	< 0.100	0.19	0.19	0.341	0.341	0.242	0.242	0.419	0.419
Pyrene	µg/L	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	0.043	< 0.020	0.033	0.033	0.091	0.091	0.064	0.064	0.025	0.025
Quinoline	µg/L	< 0.070	< 0.050	< 0.070	< 0.050	< 0.050	< 0.050	< 0.070	< 0.070	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050
Volatile Organic Compounds																		
Bromodichloromethane [BDCM]	µg/L	< 1.0	< 1.0	< 1.0	-	-	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Bromoform	µg/L	< 1.0	< 1.0	< 1.0	-	-	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Carbon Tetrachloride	µg/L	< 0.50	< 0.50	< 0.50	-	-	< 0.50	< 0.50	< 0.50	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
Chlorobenzene	µg/L	2.4	2.3	1.7	-	-	2.3	1.8	< 2.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.1	< 1.1
Chloroethane	µg/L	6	4.3	5.2	-	-	3.7	9	< 3.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	2	2
Chloroform	µg/L	< 1.0	< 1.0	< 1.0	-	-	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Chloromethane	µg/L	< 5.0	< 5.0	< 5.0	-	-	< 5.0	< 5.0	< 5.0	-	-	-	-	-	-	-	-	-
Dibromochloromethane [DBCM]	µg/L	< 1.0	< 1.0	< 1.0	-	-	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Dibromoethane, 1,2-	µg/L	-	-	-	-	-	-	-	-	< 0.3	< 0.3	-	< 0.3	-	< 0.3	-	< 0.3	-
Dibromomethane	µg/L	-	-	-	-	-	-	-	-	< 1.0	< 1.0	-	< 1.0	-	< 1.0	-	< 1.0	-
Dichlorobenzene, 1,2-	µg/L	< 0.70	< 0.70	< 0.70	-	-	< 0.70	< 0.50	< 0.50	< 0.5	< 0.5	< 0.5	0.6	0.6	< 0.5	< 0.5	< 0.5	< 0.5
Dichlorobenzene, 1,3-	µg/L	< 1.0	< 1.0	< 1.0	-	-	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	2.1	2.1
Dichlorobenzene, 1,4-	µg/L	1.2	1.1	< 1.0	-	-	1.1	1.3	1.6	< 1.0	< 2.3	< 2.3	3	3	< 1.0	< 1.0	2.1	2.1
Dichloroethane, 1,1-	µg/L	9.4	6.4	12.6	-	-	13.3	10.1	3.2	< 1.0	1.8	1.8	10.8	10.8	2.6	2.6	3.6	3.6
Dichloroethane, 1,2-	µg/L	< 1.0	< 1.0	< 1.0	-	-	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Dichloroethylene, 1,1-	µg/L	< 1.0	< 1.0	< 1.0	-	-	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Dichloroethylene, 1,2-cis-	µg/L	< 1.0	< 1.0	< 1.0	-	-	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Dichloroethylene, 1,2-trans-	µg/L	< 1.0	< 1.0	< 1.0	-	-	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Dichloromethane	µg/L	< 5.0	< 5.0	< 5.0	-	-	< 5.0	< 5.0	< 5.0	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
Dichloropropane, 1,2-	µg/L	< 1.0	< 1.0	< 1.0	-	-	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Dichloropropene, 1,3- (cis+trans)	µg/L	< 1.4	< 1.4	< 1.4	-	-	< 1.4	< 1.0	< 1.0	< 1.0	< 1.0	-	< 1.0	-	< 1.0	-	< 1.0	-
Dichloropropene, 1,3-cis-	µg/L	< 1.0	< 1.0	< 1.0	-	-	< 1.0	< 0.50	< 0.50	-	-	-	-	-	-	-	-	-
Dichloropropene, 1,3-trans-	µg/L	< 1.0	< 1.0	< 1.0	-	-	< 1.0	< 0.50	< 0.50	-	-	-	-	-	-	-	-	-
Dichloropropene, 1,3	µg/L																	
Methyl Tert-butyl Ether [MTBE]	µg/L	-	-	-	-	-	-	-	-	< 1.0	< 1.0	-	< 1.0	-	< 1.0	-	< 1.0	-
Tetrachloroethane, 1,1,1,2-	µg/L	< 1.0	< 1.0	< 1.0	-	-	< 1.0	< 1.0	< 1.0	-	-	-	-	-	-	-	-	-
Tetrachloroethene	µg/L	< 1.0	< 1.0	< 1.0	-	-	< 1.0	< 0.20	< 0.20	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
Trichloroethane, 1,1,1-	µg/L	1.1	< 1.0	< 1.0	-	-	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Trichloroethane, 1,1,2-	µg/L	< 1.0	< 1.0	< 1.0	-	-	< 1.0	< 0.50	< 0.50	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Trichloroethylene	µg/L	< 1.0	< 1.0	< 1.0	-	-	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Trichlorofluoromethane	µg/L	< 1.0	< 1.0	< 1.0	-	-	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Vinyl Chloride	µg/L	< 1.0	< 1.0	< 1.0	-	-	< 1.0	< 0.40	< 0.40	< 1.0	< 1.0	< 1.0	1	1	< 1.0	< 1.0	< 1.0	< 1.0
Resin and Fatty Acids																		
Acetic Acid	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	< 3.0	-	< 3.0	-
Butyric Acid	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	< 2.0	-	< 2.0	-
Caporic Acid	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	< 2.0	-	2.4	-
Heptanoic Acid	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	< 2.0	-	< 2.0	-
Hexanoic Acid	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Isobutyric Acid	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	< 2.0	-	< 2.0	-
Isocaproic Acid	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	< 2.0	-	< 2.0	-
Isovaleric Acid	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	< 2.0	-	< 2.0	-
Propionic Acid	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	< 2.0	-	< 2.0	-
Valeric Acid	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	< 2.0	-	< 2.0	-
VFAs																		
8:2 Fluorotelomer sulfonic acid (8:2 FTS	µg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Perfluorobutane sulfonic acid (PFBS)	µg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Perfluorobutanoic acid (PFBA)	µg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Perfluoroheptanoic acid (PFHpA)	µg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Perfluorohexane sulfonic acid (PFHxS)	µg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Perfluorohexanoic acid (PFHxA)	µg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Perfluorononanoic acid (PFNA)	µg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Perfluorooctane sulfonic acid (PFOS)	µg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Perfluorooctanoic acid (PFOA)	µg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Perfluoropentanoic acid (PFPeA)	µg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Potassium Perfluorobutane Sulfonate	µg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Associated CARO file(s) available on request
Associated Exova file(s): 506479, 507801, 509233, 600276,
All terms defined within the body of Keltech's report.
< concentration less than indicated detection limit or RPD
- analysis not conducted.
n/a - no applicable standard/guideline.
RPD - relative percent difference

Table H4: Summary of Leachate Water Analytical Results- HISTORICAL to 2025

Sample Location		N PH MH																
Sample ID		N Pumphouse MH	N Pumphouse MH-20190903	N Pumphouse MH	N Pumphouse MH	N Pumphouse MH	N Pumphouse MH	N Pumphouse MH	N Pumphouse MH	N Pumphouse MH	N Pumphouse MH	N Pumphouse MH	N Pumphouse MH	N Pumphouse MH	N Pumphouse MH	N Pumphouse MH	N Pumphouse MH	N Pumphouse MH
Sample Date (yyyy mm dd)		2019 09 03	2019 09 03	2019 10 31	2019 10 31	2020 03 05	2020 06 03	2020 09 30	2020 11 16	2021 03 18	2021 06 17	2021 09 16	2021 10 22	2022 02 14	2022 06 23	2022 09 14	2022 10 20	2023 03 21
Parameter	**Units**																	
Hydrocarbons																		
VH (C6-C10)	µg/L	224	224	< 100	< 100	104	< 100	< 100	< 100	173	168	199	< 100	120	108	328	<210	<100
VPH (C6-C10)	µg/L	< 100	< 100	< 100	< 100	< 100	< 100	< 100	< 100	< 100	< 100	< 100	< 100	<100	<100	165	<210	<100
EPH (C10-C19)	µg/L	953	953	330	330	< 250	< 250	442	< 250	355	792	< 2,500	321	<2500	821	734	472	772
LEPH (C10-C19)	µg/L	945	945	325	-	< 250	< 250	437	< 250	352	789	< 2,500	319	<2500	810	728	470	862
EPH (C19-C32)	µg/L	858	858	< 250	< 250	< 250	426	292	< 250	1,180	2,400	< 2,500	< 250	<2500	1210	521	251	760
HEPH (C19-C32)	µg/L	858	858	< 250	-	< 250	426	292	< 250	1,180	2,400	< 2,500	< 250	<2500	1210	521	251	861
Benzene	µg/L	8.8	8.8	6	6	4.1	4	4.6	3.7	4.6	6.9	8.4	1.6	4	4.3	9	2.1	3.2
Ethylbenzene	µg/L	79.3	79.3	54.4	54.4	84.6	52.2	42.7	43.1	53.5	48.1	64.1	11.7	45.9	44.6	87.3	28.6	37.7
Toluene	µg/L	2.7	2.7	1.8	1.8	3.6	< 2.0	2.2	1.4	2.6	1.8	1.8	< 1.0	2	1.9	2.7	<1.0	1.2
Xylenes	µg/L	99.6	99.6	41.5	41.5	6.7	30.4	25.5	32.1	36.1	37.8	52.5	7.8	27.6	35	63.7	24	24.7
Styrene	µg/L	< 1.0	-	< 1.0	-	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	<1.0	<1.0	1.2	<1.0	<1.0
General																		
Alkalinity, Bicarbonate (as CaCO3)	mg/L	6,780	6,780	3,440	3,440	2,900	3,310	4,280	3,340	4,080	4,540	5,660	2,530	5240	3470	5080	2220	3510
Alkalinity, Carbonate (as CaCO3)	mg/L	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	8.7	< 1.0	< 1.0	292	< 1.0	<1.0	<1.0	660	70.4	<1.0
Alkalinity, Hydroxide (as CaCO3)	mg/L	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Alkalinity, Phenolphthalein (as CaCO3)	mg/L	< 1.0	-	< 1.0	-	< 1.0	< 1.0	< 1.0	4.3	< 1.0	< 1.0	146	< 1.0	<1.0	<1.0	330	35.2	<1.0
Ammonia, Total (as N)	µg/L	33,800	33,800	52,300	52,300	55,100	35,000	101,000	29,800	37,300	56,500	70,600	32,000	40,800	44,200	52,900	23,300	77,000
Biochemical Oxygen Demand	mg/L	275	-	60.2	-	79.4	113	269	334	88	64	200	34	325	> 400	182	67.7	241
Bromide	mg/L	< 1.00	< 1.00	2.6	2.6	1.88	2.59	< 10.0	2.56	< 10.0	1.16	< 10.0	< 10.0	<1.00	1.1	3.67	1.75	<1.0
Chemical Oxygen Demand	mg/L	947	947	310	310	385	549	789	460	472	562	653	188	700	1680	667	240	562
Chloride	mg/L	89.9	89.9	401	401	337	530	605	369	548	518	704	362	779	540	792	439	549
Dissolved Organic Carbon	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Electrical Conductivity (Lab)	µS/cm																	
Fluoride	µg/L	110	110	< 1,000	< 1,000	810	< 1,000	< 1,000	< 1,000	< 1,000	< 1,000	< 1,000	< 1,000	< 1,000	< 1,000	< 1,000	< 1,000	< 1,000
Hardness as CaCO3 (filtered)	mg/L																	
Kjeldahl Nitrogen Total	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Nitrate (as N)	µg/L	< 10	< 10	< 100	< 100	< 10	< 100	< 100	1,240	1,950	< 100	< 100	< 100	< 100	< 100	< 100	< 100	< 100
Nitrite (as N)	µg/L	< 10	-	< 100	-	< 10	< 100	< 100	< 100	5,110	< 100	< 100	< 100	< 100	< 100	< 100	< 100	< 100
Ortho-Phosphate	mg/L	0.865	0.865	1	1	2.01	3.42	2.96	2.67	2.04	0.647	4	0.923	-	-	-	-	-
pH (Lab)																		
Phosphate	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	3.57	0.387	0.463	0.189	26.8
Solids, Total Dissolved	mg/L																	
Phosphorus (filtered)	ug/L																	
Sulfate	mg/L	240	240	1,160	1,160	859	1,350	1,200	813	1,430	1,360	1,620	834	1850	1330	1660	754	1520
Sulfide	mg/L	129	-	75.3	-	46.3	38.4	73.3	82.3	70.5	51.7	89.2	11.6	79.1	49.5	77.4	32.5	51.4
Total Alkalinity	mg/L	6,780	6,780	3,440	3,440	2,900	3,310	4,280	3,350	4,080	4,540	5,950	2,530	5240	3470	5740	2290	3510
Total Organic Carbon	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	110	112	152	76.1	88.4
Total Phosphorous as P	mg/L	10.1	-	2.9	-	2.8	5.01	5.27	3.73	4.39	4.53	5.39	2.12	5.6	5.18	5.44	2.27	3.91
Dissolved Metals																		
Antimony	µg/L	11.2	11.2	9.63	9.63	7.65	10.8	11.1	17.3	14	12.8	15.8	16	26.8	10.1	26.7	16.6	15.3
Aluminium	µg/L	168	168	40.7	40.7	32.7	105	60.7	116	70.1	160	68.1	61.3	341	72.2	95.3	53.7	53.7
Arsenic	µg/L	34.5	34.5	35.4	35.4	21.3	46.1	31.2	41.6	53.6	33.8	43.8	43.4	65.4	24.8	59.9	36.1	33.9
Barium	µg/L	156	156	232	232	228	98.6	204	79.5	111	127	134	176	97.1	156	130	128	150.00
Beryllium	µg/L	< 0.10	< 0.10	0.024	0.024	0.017	< 0.010	0.024	< 1.00	0.024	< 1.00	0.022	0.024	<1.00	<0.050	<0.100	<0.050	<0.050
Bismuth	µg/L	< 0.10	< 0.10	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 1.00	< 0.010	< 1.00	< 0.010	< 0.010	<1.00	<0.050	<0.100	<0.050	<0.050
Boron	µg/L	2,260	2,260	1,160	1,160	1,290	135	1,510	1,140	1,300	1,990	1,230	1,290	1820	1650	1850	947	1450.00
Cadmium	µg/L	0.014	0.014	0.0053	0.0053	0.0036	0.0088	0.0038	< 0.200	0.0056	< 0.200	0.0075	0.0068	<0.200	<0.0100	<0.0200	<0.0100	0.02
Calcium	mg/L	50.6	50.6	95.4	95.4	104	7.35	103	43.6	77.4	125	92.6	103	68.4	81.2	73.8	71.5	103
Chromium	µg/L	47.6	47.6	18	18	13.8	18.6	21.4	18.7	16.7	17.6	19	17.1	18.1	14.1	29.2	14.5	14.00
Cobalt	µg/L	5.77	5.77	6.6	6.6	7.21	3.56	6.72	2.56	2.82	4.39	3.35	5.49	3.19	4.64	4.74	2.32	4.00
Copper	µg/L	0.48	0.41	0.22	0.22	0.13	0.97	0.6	< 10.0	0.49	< 10.0	0.27	0.39	<10.0	<0.50	<1.00	<0.50	<0.50
Iron	µg/L	62	62	76.2	76.2	182	56.3	30.8	< 200	69.1	< 200	118	51.8	<200	28	32.8	28.8	27.7
Lead	µg/L	< 0.20	< 0.20	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 5.00	< 0.050	< 5.00	< 0.050	< 0.050	<5.00	<0.250	<0.500	<0.250	<0.250
Lithium	µg/L	64.5	64.5	53.7	53.7	45.4	4.24	57.6	35.5	54.3	69.5	52.9	76.5	71.3	63.2	60.2	55.6	61.00
Magnesium	mg/L	215	215	272	272	293	157	234	135	197	209	183	302	213	259	220	188	255
Manganese	µg/L	154	154	369	369	580	250	490	101	211	253	313	273	120	311	130	106	242
Mercury	µg/L	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.060	< 0.010	< 0.040	< 0.020	< 0.020	< 0.040	< 0.040	< 0.010	< 0.010
Molybdenum	µg/L	5.46	5.46	4.49	4.49	1.82	3.68	3.24	5.48	8.35	2.68	10.4	6.88	5.72	2.96	6.48	11.4	4.00
Nickel	µg/L	33.1	33.1	18.7	18.7	19.3	16.1	20.2	15.9	15.4	21.2	14.1	16.8	17.1	16.3	21.7	10.7	16.00
Phosphrous	µg/L	9,920	9,920	4,120	4,120	3,210	5,910	4,110	4,070	4,720	4,390	3,290	4,740	5000	4040	5570	2570	4210.00
Potassium	mg/L	251	251	146	146	138	168	161	132	138	222	120	129	167	167	211	105	151
Selenium	µg/L	20.7	20.7	0.83	0.83	0.66	1.29	1.63	< 10.0	2.12	< 10.0	2.12	2.61	34.4	1.91	<1.00	2.4	1.00
Silicon	µg/L	15,300	15,300	18,500	18,500	16,500	12,600	16,500	5,810	13,600	5,880	12,400	16,700	11700	12600	11100	11200	13400.00
Silver	µg/L	< 0.050	< 0.050	< 0.010	< 0.010	0.018	< 0.010	< 0.010	< 1.00	< 0.010	< 1.00	< 0.010	< 0.010	<1.00	<0.050	<0.100	<0.050	<0.050
Sodium	mg/L	4,200	4,200	1,690	1,690	1,410	1,750	1,810	1,950	1,860	2,170	1,680	1,620	2700	1770	2810	1490	1940
Strontium	µg/L	2,440	2,440	4,220	4,220	4,120	2,250	3,540	1,600	3,120	2,570	2,960	4,350	2060	3220	2550	3280	3110.00
Sulphur	µg/L	2,810,000	-	497,000	-	331,000	489,000	407,000	519,000	444,000	631,000	344,000	462,000	622000	490000	611000	357000	567000.00
Tellurium	µg/L	< 0.50	< 0.50	0.096	0.096	0.06	< 0.050	0.067	< 5.00	0.065	7.03	0.09	0.145	<5.00	<0.250	<0.500	<0.250	<0.250
Thallium	µg/L	< 0.020	< 0.020	< 0.0040	< 0.0040	< 0.0040	< 0.0040	< 0.0040	< 0.400	< 0.0040	< 0.400	< 0.0040	< 0.0040	4.61	<0.0200	<0.0400	<0.0200	<0.0200
Thorium	µg/L	< 0.10	< 0.10	0.024	0.024	0.02	< 0.010	0.019	< 1.00	0.02	< 1.00	0.015	0.017	<1.00	<0.050	<0.100	<0.050	<0.080
Tin	µg/L	53.3	53.3	11.3	11.3	5.44	25	6.33	41.6	27.5	38.7	26.3	20.1	44.2	7.79	42.4	27.4	23.00
Titanium	µg/L	118	118	52	52	46.6	44.1	48	49.6	37.8	64	50.7	38.9	53.5	31.1	62.6	27.9	35.00
Tungsten	µg/L	4.9	-	2.19	-	1.78	0.39	2.24	< 20.0	1.68	< 20.0	2.03	1.96	<20.0	2.42	4.31	1.93	2.00
Uranium	µg/L	26.2	26.2	12.7	12.7	8.87	2.15	14.2	13.3	25.2	16.8	24.5	19.7	28.3	16.9	15.5	32.2	21.90
Vanadium	µg/L	24.1	24.1	12	12	9.97	14.9	9.96	< 20.0	9.46	< 20.0	10.2	10	<20.0	9.55	12.2	7.13	8.00
Zinc	µg/L	< 4.0	< 4.0	1.6	1.6	< 1.0	2	1.3	< 100	< 1.0	< 100	< 1.0	1.6	<100	<5.0	<10.0	<5.0	<5.0
Zirconium	µg/L	50.6	50.6	26.2	26.2	21.1	17.8	22.5	11.2	15	15.6	17.9	23.3	18.9	18.3	28.2	16.1	17.80
Polycyclic Aromatic Hydrocarbons																		
Acenaphthene	µg/L	0.41	0.41	0.444	0.444	0.251	0.273	0.457	0.175	0.187	< 0.268	< 0.532	0.109	<0.514	1.59	0.275	0.062	2.03
Acenaphthylene	µg/L	< 0.200	< 0.200	< 0.0100	< 0.0100	< 0.200	< 0.200	< 0.200	< 0.200	0.225	< 1.07	< 2.13	< 0.200	<2.06	<0.200	<0.200	<0.200	<0.200
Acridine	µg/L	< 0.050	< 0.050	0.054	0.054	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.268	< 0.532	< 0.050	<0.514	0.283	<0.050	<0.050	0.056
Anthracene	µg/L	0.045	0.045	< 0.0400	< 0.0400	0.013	0.018	0.035	0.016	0.172	< 0.054	< 0.106	< 0.010	<0.103	<0.414	<0.010	<0.010	0.302
Benz(a)anthracene	µg/L	0.017	0.017	< 0.0100	< 0.0100	< 0.010	< 0.010	< 0.010	0.019	< 0.010	< 0.054	< 0.106	< 0.010	<0.103	0.163	<0.010	<0.010	0.033
Benzo(a)pyrene	µg/L	< 0.010	< 0.010	< 0.00500	< 0.00500	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.054	< 0.106	< 0.010	<0.103	0.017	<0.010	<0.010	<0.010
Benzo(b)fluoranthene	µg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Benzo(b+j)fluoranthene	µg/L	< 0.050	-	< 0.0100	-	< 0.050	< 0.050	< 0.050	0.061	< 0.050	< 0.268	< 0.532	< 0.050	<0.514	<0.050	<0.050	<0.050	<0.050
Benzo(g,h,i)perylene	µg/L	< 0.050	-	< 0.0100	-	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.268	< 0.532	< 0.050	<0.514	<0.050	<0.050	<0.050	<0.050
Benzo(k)fluoranthene	µg/L	< 0.050	< 0.050	< 0.0100	< 0.0100	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.268	< 0.532	< 0.050	<0.514	<0.050	<0.050	<0.050	<0.050
Chloronaphthalene, 2-	µg/L	< 0.100	-	-	-	< 0.100	< 0.100	< 0.100	< 0.100	< 0.100	< 0.536	< 1.06	< 0.100	<1.03	<0.100	<0.100	<0.100	<0.100
Chrysene	µg/L	< 0.050	< 0.050	< 0.0100	< 0.0100	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.268	< 0.532	< 0.050	<0.514	0.177	<0.050	<0.050	<0.050
Dibenz(a,h)anthracene	µg/L	< 0.010	< 0.010	< 0.00500	< 0.00500	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.054	< 0.106	< 0.010	<0.103	<0.010	<0.010	<0.010	<0.010
Fluoranthene	µg/L	0.15	0.15	0.062	0.062	0.041	0.142	0.085	0.088	0.087	< 0.161	< 0.319	0.032	<0.309	0.422	<0.030	<0.030	0.649
Fluorene	µg/L	0.271	0.271	0.333	0.333	0.177	0.186	0.273	0.12	0.144	< 0.268	< 0.532	0.074	<0.514	1.2	0.19	0.062	1.45
Indeno(1,2,3-cd)pyrene	µg/L	< 0.050	< 0.050	< 0.0100	< 0.0100	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.268	< 0.532	< 0.050	<0.514	<0.050	<0.050	<0.050	<0.050
Methylnaphthalene, 1-	µg/L	0.947	-	0.56	-	0.21	0.471	0.596	0.408	0.489	< 0.670	< 1.06	0.199	<1.03	1.5	0.847	0.264	2
Methylnaphthalene, 2-	µg/L	0.886	-	0.391	-	0.163	0.266	0.282	0.246	0.227	< 0.536	< 1.06	< 0.100	<1.03	0.524	0.255	<0.100	0.58
Naphthalene	µg/L	6.98	6.98	3.8	3.8	1.62	3.6	4.57	2.57	2.54	2.79	4.49	1.48	6.04	5.27	5.57	1.65	5.7
Phenanthrene	µg/L	0.395	0.395	0.294	0.294	0.171	0.252	0.299	0.186	0.133	< 0.536	< 1.06	< 0.100	<1.03	3.07	0.19	<0.100	2.64
Pyrene	µg/L	0.115	0.115	0.044	0.044	< 0.020	0.042	0.05	0.052	0.532	< 0.107	< 0.213	< 0.020	<0.206	<0.020	<0.020	<0.020	<0.020
Quinoline	µg/L	< 0.050	< 0.050	< 0.0500	< 0.0500	< 0.050	< 0.050	< 0.050	< 0.050	< 0.115	< 0.268	< 0.532	< 0.050	<0.514	<0.050	<0.050	<0.050	<0.050
Volatile Organic Compounds																		
Bromodichloromethane [BDCM]	µg/L	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Bromoform	µg/L	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Carbon Tetrachloride	µg/L	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Chlorobenzene	µg/L	< 1.0	< 1.0	< 1.0	< 1.0	< 2.1	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	<1.0	<1.0	<1.0	<1.0	1.1
Chloroethane	µg/L	< 2.0	< 2.0	< 2.2	< 2.2	< 2.0	< 2.0	< 3.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	<2.0	<2.0	<2.0	<2.0	4.5
Chloroform	µg/L	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Chloromethane	µg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Dibromochloromethane [DBCM]	µg/L	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Dibromoethane, 1,2-	µg/L	< 0.3	-	< 0.3	-	< 0.3	< 0.3	< 0.3	< 0.3	< 0.3	< 0.3	< 0.3	< 0.3	<0.3	<0.3	<0.3	<0.3	<0.3
Dibromomethane	µg/L	< 1.0	-	< 1.0	-	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Dichlorobenzene, 1,2-	µg/L	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	0.5	< 0.5	<0.5	<0.5	0.5	<0.5	<0.5
Dichlorobenzene, 1,3-	µg/L	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Dichlorobenzene, 1,4-	µg/L	3	3	1.6	1.6	< 1.0	2	1.8	1.7	2.6	2.5	2.8	< 1.0	1.2	2.2	6.5	1.2	2.2
Dichloroethane, 1,1-	µg/L	9	9	5.8	5.8	4.3	2.9	4.5	2.9	3.4	4.7	5.3	2	2.5	2.2	4.3	<1.0	3.2
Dichloroethane, 1,2-	µg/L	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Dichloroethylene, 1,1-	µg/L	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Dichloroethylene, 1,2-cis-	µg/L	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	<1.0	<1.0	1.1	<1.0	<1.0
Dichloroethylene, 1,2-trans-	µg/L	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Dichloromethane	µg/L	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0	<3.0	<3.0	<3.0	<3.0	<3.0
Dichloropropane, 1,2-	µg/L	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Dichloropropene, 1,3- (cis+trans)	µg/L	< 1.0	-	< 1.0	-	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Dichloropropene, 1,3-cis-	µg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Dichloropropene, 1,3-trans-	µg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Dichloropropene, 1,3	µg/L																	
Methyl Tert-butyl Ether [MTBE]	µg/L	< 1.0	-	< 1.0	-	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Tetrachloroethane, 1,1,1,2-	µg/L	-	-	-	-	-	-	-	-	-	-	-	-	<1.0	<1.0	<1.0	<1.0	<1.0
Tetrachloroethene	µg/L	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	<0.5	<0.5	<0.5	<0.5	<1.0
Trichloroethane, 1,1,1-	µg/L	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Trichloroethane, 1,1,2-	µg/L	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Trichloroethylene	µg/L	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Trichlorofluoromethane	µg/L	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Vinyl Chloride	µg/L	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	1	< 1.2	< 1.0	1.2	<1.0	2.4	<1.0	<1.0
Resin and Fatty Acids																		
Acetic Acid	mg/L	3	-	< 3.0	-	23.4	< 3.0	25.7	5.9	-	-	-	-	-	-	-	-	<3.0
Butyric Acid	mg/L	< 2.0	-	< 2.0	-	7.2	< 2.0	13.7	< 2.0	-	-	-	-	-	-	-	-	<2.0
Caporic Acid	mg/L	< 2.0	-	< 2.0	-	3.5	< 2.0	5.6	< 2.0	-	-	-	-	-	-	-	-	-
Heptanoic Acid	mg/L	< 2.0	-	< 2.0	-	< 2.0	< 2.0	< 2.0	< 2.0	-	-	-	-	-	-	-	-	<2.0
Hexanoic Acid	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<2.0
Isobutyric Acid	mg/L	< 2.0	-	< 2.0	-	< 2.0	< 2.0	7	< 2.0	-	-	-	-	-	-	-	-	<2.0
Isocaproic Acid	mg/L	< 2.0	-	< 2.0	-	< 2.0	< 2.0	2.7	< 2.0	-	-	-	-	-	-	-	-	<2.0
Isovaleric Acid	mg/L	< 2.0	-	< 2.0	-	< 2.0	< 2.0	< 2.0	< 2.0	-	-	-	-	-	-	-	-	<2.0
Propionic Acid	mg/L	< 2.0	-	< 2.0	-	3.8	< 2.0	3.3	< 2.0	-	-	-	-	-	-	-	-	<2.0
Valeric Acid	mg/L	< 2.0	-	< 2.0	-	2	< 2.0	5	< 2.0	-	-	-	-	-	-	-	-	<2.0
VFAs																		
8:2 Fluorotelomer sulfonic acid (8:2 FTS	µg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.02
Perfluorobutane sulfonic acid (PFBS)	µg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.07
Perfluorobutanoic acid (PFBA)	µg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.2
Perfluoroheptanoic acid (PFHpA)	µg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.1

Table H4: Summary of Leachate Water Analytical Results- HISTORICAL to 2025

Sample Location		N PH MH										LF L	LF L	LF L	P1 L MH			
Sample ID		N Pumphouse MH	N Pumphouse MH	N Pumphouse MH	N Pumphouse MH	N Pumphouse MH	N Pumphouse MH	N Pumphouse MH	N Pumphouse MH	N Pumphouse MH	N Pumphouse MH	Landfill Leachate-20061109	Landfill Leachate-20061116	Landfill Leachate-20061122	P1 LEACHATE MH-20130911	P1 LEACHATE MH-20140408	P1 LEACHATE MH-20140610	P1 LEACHATE MH-20150122
Sample Date (yyyy mm dd)		2023 05 17	2023 09 27	2023 10 31	2024-05-09	2024-09-06	2024-10-18	2025-03-28	2025-06-04	2025-09-15	2025-10-28	2006 11 09	2006 11 16	2006 11 22	2013 09 11	2014 04 08	2014 06 10	2015 01 22
Parameter	**Units**																	
Hydrocarbons																		
VH (C6-C10)	µg/L	<100	146	140	<100	113	<100	<100	188	<1,000	717	-	-	-	-	< 100	< 100	-
VPH (C6-C10)	µg/L	<100	<100	<100	<100	<100	<100	<100	177	<1,000	150	-	-	-	-	< 100	< 100	-
EPH (C10-C19)	µg/L	1900	474	385	293	1,120	829	429	538	<250	566	-	-	-	-	920	920	400
LEPH (C10-C19)	µg/L	10800	335	<250	292	1,120	824	426	537	<250	560	-	-	-	-	920	920	400
EPH (C19-C32)	µg/L	1900	470	382	<250	304	5,000	<250	634	280	1,940	-	-	-	-	450	590	430
HEPH (C19-C32)	µg/L	10800	335	<250	<250	304	5,000	<250	634	279	1,940	-	-	-	-	450	590	430
Benzene	µg/L	2.8	4.4	4.1	1.7	3.2	2.7	2.7	1.1	<5.0	2.7	4	4	4	3.08	1.76	1.69	-
Ethylbenzene	µg/L	22	37.8	43.8	5.3	7.2	7.7	8.5	4.5	33.7	17.3	42	46	40	9.49	9.32	3.15	-
Toluene	µg/L	<1.0	1.2	1.4	<1.0	<1.0	<1.0	<1.0	1.9	<10.0	533	1	1	1	1	1.6	0.66	-
Xylenes	µg/L	16.7	29	38.5	3.3	3.4	5.5	3.2	3.8	30.4	13.4	9	9	9	8.7	8.4	4.33	-
Styrene	µg/L	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<10.0	<1.0	-	-	-	-	-	-	-
General																		
Alkalinity, Bicarbonate (as CaCO3)	mg/L	2380	5560	5150	2,820	3,390	2,480	3,080	1,490	4,860	3,730	-	-	-	-	-	-	1,510
Alkalinity, Carbonate (as CaCO3)	mg/L	<1.0	88.8	226	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	-	-	-	-	-	-	< 1.0
Alkalinity, Hydroxide (as CaCO3)	mg/L	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	-	-	-	-	-	-	< 1.0
Alkalinity, Phenolphthalein (as CaCO3)	mg/L	<1.0	44.4	113	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	-	-	-	-	-	-	-
Ammonia, Total (as N)	µg/L	41,200	81,200	56,500	58.3	98.8	81.7	96.8	34.3	83	97.6	-	-	-	102,000	82,000	73,700	23,900
Biochemical Oxygen Demand	mg/L	58.1	108	215	<33.8	62.8	17.7	23.8	18.2	216	324	-	-	-	-	-	-	-
Bromide	mg/L	<1.0	<1.0	<10	<0.10	2.40	2.28	2.69	<1.00	3.45	2.8	-	-	-	2.8	3.4	3.1	< 1.0
Chemical Oxygen Demand	mg/L	270	712	527	231	415	316	361	202	661	952	-	-	-	413	433	353	117
Chloride	mg/L	473	731	695	419	441	390	368	338	602	609	-	-	-	445	391	319	304
Dissolved Organic Carbon	mg/L	-	-	-	193	173	101	95	58.3	151	137							
Electrical Conductivity (Lab)	µS/cm				8,230	8,170	7,300											
Fluoride	µg/L	< 1,000	< 1,000	< 1,000	<0.10	2.59	<1.00	<1.00	<1.00	<1.00	<1.00	-	-	-	1,000	1,400	1,530	1,000
Hardness as CaCO3 (filtered)	mg/L				1,590	1,530	1,230											
Kjeldahl Nitrogen Total	mg/L	-	-	-				-	-	-	-	-	-	-	-	-	-	-
Nitrate (as N)	µg/L	< 100	< 100	702	46200	<100	48100	17.5	0.144	<0.100	<0.100	-	-	-	< 250	< 250	< 250	< 100
Nitrite (as N)	µg/L	< 100	< 250	13300	<10	<100	2080	<0.100	<0.100	<0.100	<0.100	-	-	-	-	-	-	-
Ortho-Phosphate	mg/L	-	-	-				2.16	0.746	4.42	3.74	-	-	-	2.34	3.27	3.94	0.43
pH (Lab)					7.90	7.89	8.02											
Phosphate	mg/L	7.26	<82.5	<0.050	1.86	-	-	-	-	-	-	-	-	-	-	-	-	-
Solids, Total Dissolved	mg/L				5,600	5,550	4,690	-	-	-	-							
Phosphorus (filtered)	ug/L				-	2,520	1,940											
Sulfate	mg/L	1240	1790	1610	1,260	965	969	1,050	510	1,270	1,440	-	-	-	448	878	784	374
Sulfide	mg/L	3.55	38.5	8.32	4.62	39.6	11.3	11.2	1.03	99	58.7	-	-	-	-	-	-	-
Total Alkalinity	mg/L	2380	5650	5380	2,820	3,390	2,480	3,080	1,490	4,860	3,730	-	-	-	-	4,020	4,850	1,510
Total Organic Carbon	mg/L	58.4	109	209				-	-	-	170	-	-	-	114	-	-	-
Total Phosphorous as P	mg/L	2.43	5.62	4.39	1.93	2.76	2.33	2.82	1.26	4.65	6.05	-	-	-	-	-	-	-
Dissolved Metals																		
Antimony	µg/L	4.15	20.5	39.7	30.3	27.8	22.2	5.71	3.75	29.8	39.7	-	-	-	-	2.43	1.35	< 0.50
Aluminium	µg/L	22	59.2	102	6.42	5.80	5.94	27.8	16.6	71.8	48.4	-	-	-	-	41	22	13
Arsenic	µg/L	9.19	45	87.2	19.6	18.3	18.4	14.7	13	73.3	80.2	-	-	-	-	10.1	6.7	1.4
Barium	µg/L	145.00	162.00	153.00	357	201	138	205	139	176	147	-	-	-	-	316	401	130
Beryllium	µg/L	<0.020	<0.050	<0.050	<0.050	<0.020	<0.020	0.022	<0.010	<0.100	0.021	-	-	-	-	< 10	< 10	< 5.0
Bismuth	µg/L	<0.020	<0.050	<0.050	<0.050	<0.020	<0.020	<0.020	<0.010	<0.100	<0.020	-	-	-	-	-	-	-
Boron	µg/L	952.00	1480.00	1630.00	1,630	2,000	1,290	1,680	601	1,850	1,850	-	-	-	-	1,460	1,400	540
Cadmium	µg/L	0.01	0.01	<0.010	0.0101	<0.0080	0.0209	0.0062	0.0135	<0.0200	0.178	-	-	-	-	< 0.25	< 0.25	< 0.10
Calcium	mg/L	107	99.7	119	183	100	142	150	83.4	89.1	146	-	-	-	-	89.4	107	99.9
Chromium	µg/L	6.00	21.00	31.00	13.1	13.0	12.0	12.2	5.27	22.5	23.3	-	-	-	-	12.3	10.3	2.9
Cobalt	µg/L	3.00	6.00	6.00	8.09	7.85	6.02	6.9	2.62	6.25	6.45	-	-	-	-	6.52	6.66	1.54
Copper	µg/L	<0.2	<0.5	<0.5	0.78	<0.20	<0.20	<0.20	0.37	<1.00	<0.20	-	-	-	-	< 2.5	< 2.5	< 1.0
Iron	µg/L	27.7	51.6	11.8	145	40.5	108	123	144	73.5	61.8	-	-	-	-	695	65	1,830
Lead	µg/L	<0.250	<0.250	<0.250	<0.250	<0.100	<0.100	<0.100	<0.050	<0.500	<0.100	-	-	-	-	< 1.0	< 1.0	< 1.0
Lithium	µg/L	54.00	53.00	56.00	48.2	73.2	41.2	53.7	44	89.9	69.3	-	-	-	-	< 50	< 50	< 50
Magnesium	mg/L	196	250	245	276	310	212	369	125	270	415	-	-	-	-	301	389	186
Manganese	µg/L	454	205	137	265	313	165	279,000	229,000	290,000	272,000	-	-	-	-	442	475	636
Mercury	µg/L	< 0.010	< 0.010	< 0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	-	-	-	-	< 0.20	< 0.20	< 0.20
Molybdenum	µg/L	1.00	8.00	9.00	5.25	4.74	9.48	3.46	12.80	4.48	4.72	-	-	-	-	2.7	2.1	< 1.0
Nickel	µg/L	12.00	19.00	23.00	17.6	17.1	11.3	13.9	10.3	19.3	24.5	-	-	-	-	15.6	10.3	6.9
Phosphrous	µg/L	1880.00	4070.00	5530.00	2,460	3,410	2,540	2,890	1,390	4,640	5,120	-	-	-	-	-	-	-
Potassium	mg/L	82.8	162	185	158	165	137	143,000	76,500	230,000	201,000	-	-	-	-	-	-	-
Selenium	µg/L	1.00	2.00	1.00	1.37	1.12	0.87	0.9	2.53	<1.00	1.03	-	-	-	-	< 5.0	< 5.0	< 2.0
Silicon	µg/L	12100.00	13900.00	13400.00	16,000	17,100	15,200	15,600	12,200	14,800	15,400	-	-	-	-	-	-	-
Silver	µg/L	<0.020	<0.050	<0.050	<0.050	<0.020	<0.020	<0.020	<0.010	<0.100	<0.020	-	-	-	-	0.072	0.086	< 0.050
Sodium	mg/L	850	2030	2670	1,700	1,450	1,280	1,500	590	2,590	2,300	-	-	-	-	1,580	1,730	541
Strontium	µg/L	3150.00	3340.00	3070.00	4,170	3,740	3,480	3,470	3,500	3,250	3,430	-	-	-	-	-	-	-
Sulphur	µg/L	250000.00	493000.00	561000.00	454,000	375,000	315,000	367,000	175,000	646,000	635,000	-	-	-	-	-	-	-
Tellurium	µg/L	<0.100	<0.250	<0.250	<0.250	<0.100	<0.100	<0.100	<0.050	<0.500	0.202	-	-	-	-	-	-	-
Thallium	µg/L	<0.0080	<0.0200	<0.0200	<0.0200	<0.0080	<0.0080	<0.0080	<0.0040	<0.0400	<0.0080	-	-	-	-	< 0.50	< 0.50	< 0.20
Thorium	µg/L	0.04	0.08	<0.050	0.207	0.083	<0.020	<0.020	<0.010	<0.100	<0.020	-	-	-	-	-	-	-
Tin	µg/L	6.00	42.00	73.00	10.9	6.30	11.7	7.83	5.98	41.3	110	-	-	-	-	-	-	-
Titanium	µg/L	12.00	57.00	68.00	36.2	34.9	31.9	40.7	9.46	51	44.2	-	-	-	-	61	57	< 50
Tungsten	µg/L	1.00	3.00	4.00	2.39	2.31	2.70	2.11	0.94	4.19	3.95	-	-	-	-	-	-	-
Uranium	µg/L	12.00	15.40	16.80	13.0	15.2	15.1	12.7	21.8	10.7	9.82	-	-	-	-	11.5	3.9	5.96
Vanadium	µg/L	4.00	12.00	13.00	11.7	9.62	8.08	12	5.24	11.5	11.4	-	-	-	-	< 60	< 60	< 30
Zinc	µg/L	<2.0	<5.0	<5.0	<5.0	<2.0	<2.0	<2.0	1.7	<10.0	5	-	-	-	-	< 10	< 10	< 5.0
Zirconium	µg/L	7.58	26.10	34.90	22.9	20.6	16.9	19.1	9.29	25.4	27	-	-	-	-	-	-	-
Polycyclic Aromatic Hydrocarbons																		
Acenaphthene	µg/L	0.311	0.25	0.152	0.187	0.463	0.451	0.316	0.171	0.598	1.23	-	-	-	-	0.367	0.444	0.078
Acenaphthylene	µg/L	<0.200	<0.200	<0.200	<0.200	<0.200	<0.200	<0.200	<0.200	<0.200	<0.200	-	-	-	-	< 0.050	< 0.050	< 0.050
Acridine	µg/L	<0.294	<0.050	<0.050	<0.050	0.065	0.247	<0.050	<0.050	<0.050	0.081	-	-	-	-	< 0.20	< 0.080	< 0.050
Anthracene	µg/L	<0.010	<0.010	<0.010	<0.010	<0.010	0.057	<0.010	<0.010	0.075	0.101	-	-	-	-	< 0.050	< 0.050	< 0.050
Benz(a)anthracene	µg/L	<0.010	<0.010	<0.010	<0.010	<0.010	<0.032	<0.010	<0.010	<0.018	<0.010	-	-	-	-	< 0.050	< 0.050	< 0.050
Benzo(a)pyrene	µg/L	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	-	-	-	-	< 0.010	< 0.010	< 0.010
Benzo(b)fluoranthene	µg/L	-	-	-				-	-	-	-	-	-	-	-	< 0.050	< 0.050	< 0.050
Benzo(b+j)fluoranthene	µg/L	0.269	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	-	-	-	-	-	-	-
Benzo(g,h,i)perylene	µg/L	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	-	-	-	-	< 0.050	< 0.050	< 0.050
Benzo(k)fluoranthene	µg/L	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	-	-	-	-	< 0.050	< 0.050	< 0.050
Chloronaphthalene, 2-	µg/L	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	-	-	-	-	-	-	-
Chrysene	µg/L	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	-	-	-	-	< 0.050	< 0.050	< 0.050
Dibenz(a,h)anthracene	µg/L	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	-	-	-	-	< 0.050	< 0.050	< 0.050
Fluoranthene	µg/L	<0.030	<0.030	<0.030	0.031	0.079	0.185	0.03	<0.030	0.094	0.087	-	-	-	-	< 0.050	< 0.050	< 0.050
Fluorene	µg/L	<0.214	0.18	<0.050	0.116	0.283	0.343	0.219	0.094	0.39	0.485	-	-	-	-	0.335	0.431	0.08
Indeno(1,2,3-cd)pyrene	µg/L	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	-	-	-	-	< 0.050	< 0.050	< 0.050
Methylnaphthalene, 1-	µg/L	0.62	0.633	0.53	0.253	0.572	0.708	0.534	0.192	1.12	0.933	-	-	-	-	-	-	-
Methylnaphthalene, 2-	µg/L	0.289	0.131	0.519	<0.100	0.136	0.246	0.13	<0.100	0.232	0.247	-	-	-	-	-	-	-
Naphthalene	µg/L	1.31	3.6	3.46	1.16	2.67	2.92	2.53	1.03	5.04	4.1	-	-	-	-	1.42	0.728	0.105
Phenanthrene	µg/L	0.38	0.111	0.145	<0.100	0.239	0.653	0.101	<0.100	0.321	0.675	-	-	-	-	0.08	< 0.060	< 0.050
Pyrene	µg/L	<0.020	<0.020	<0.020	0.021	0.042	0.216	<0.020	<0.020	0.089	<0.020	-	-	-	-	< 0.050	< 0.050	< 0.050
Quinoline	µg/L	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	-	-	-	-	< 0.050	< 0.050	< 0.050
Volatile Organic Compounds																		
Bromodichloromethane [BDCM]	µg/L	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<10.0	<1.0	< 1	< 1	< 1	< 1.0	< 1.0	-	-
Bromoform	µg/L	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<10.0	<1.0	< 1	< 1	< 1	< 1.0	< 1.0	-	-
Carbon Tetrachloride	µg/L	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<5.0	<0.5	< 1	< 1	< 1	< 0.50	< 0.50	-	-
Chlorobenzene	µg/L	<1.0	<1.0	<1.0	<1.0	1.0	<1.0	1.3	<1.0	<10.0	<1.0	3	3	3	3.8	3.6	-	-
Chloroethane	µg/L	3.2	4.8	<2.0	<2.0	6.8	2.3	2.4	<2.0	<20.0	<2.0	< 10	< 10	< 10	8.1	< 1.0	-	-
Chloroform	µg/L	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<10.0	<1.0	< 1	< 1	< 1	< 1.0	< 1.0	-	-
Chloromethane	µg/L	-	-	-				-	-	-	-	< 10	< 10	< 10	< 5.0	< 5.0	-	-
Dibromochloromethane [DBCM]	µg/L	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<10.0	<1.0	< 1	< 1	< 1	< 1.0	< 1.0	-	-
Dibromoethane, 1,2-	µg/L	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<3.0	<0.3	-	-	-	-	-	-	-
Dibromomethane	µg/L	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<10.0	<1.0	-	-	-	-	-	-	-
Dichlorobenzene, 1,2-	µg/L	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<5.0	<0.5	< 1	< 1	< 1	< 0.70	< 0.70	-	-
Dichlorobenzene, 1,3-	µg/L	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<10.0	<1.0	< 1	< 1	< 1	< 1.0	< 1.0	-	-
Dichlorobenzene, 1,4-	µg/L	1.4	1.5	1.6	<1.0	<1.0	<1.0	<1.0	<1.0	<10.0	<1.3	< 1	< 1	< 1	1.2	1.1	-	-
Dichloroethane, 1,1-	µg/L	2.7	2.1	2.6	1.7	2.2	1.2	1.6	<1.0	<10.0	1.3	1	1	1	20.3	1.8	-	-
Dichloroethane, 1,2-	µg/L	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<10.0	<1.0	< 1	< 1	< 1	< 1.0	< 1.0	-	-
Dichloroethylene, 1,1-	µg/L	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<10.0	<1.0	< 1	< 1	< 1	< 1.0	< 1.0	-	-
Dichloroethylene, 1,2-cis-	µg/L	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<10.0	<1.0	< 1	< 1	< 1	< 1.0	< 1.0	-	-
Dichloroethylene, 1,2-trans-	µg/L	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<10.0	<1.0	< 1	< 1	< 1	< 1.0	< 1.0	-	-
Dichloromethane	µg/L	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<30.0	<3.0	< 5	< 5	< 5	< 5.0	< 5.0	-	-
Dichloropropane, 1,2-	µg/L	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<10.0	<1.0	< 1	< 1	< 1	< 1.0	< 1.0	-	-
Dichloropropene, 1,3- (cis+trans)	µg/L	<1.0	<1.0	<1.0				<1.0	<1.0	<10.0	<1.0	-	-	-	< 1.4	< 1.4	-	-
Dichloropropene, 1,3-cis-	µg/L	-	-	-				-	-	-	-	< 1	< 1	< 1	< 1.0	< 1.0	-	-
Dichloropropene, 1,3-trans-	µg/L	-	-	-				-	-	-	-	< 1	< 1	< 1	< 1.0	< 1.0	-	-
Dichloropropene, 1,3	µg/L				<1.0	<1.0	<1.0											
Methyl Tert-butyl Ether [MTBE]	µg/L	< 1.0	< 1.0	< 1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<10.0	<1.0	-	-	-	-	-	-	-
Tetrachloroethane, 1,1,1,2-	µg/L	<1.0	<1.0	<1.0	<0.5	<0.5	<0.5	<0.5	<0.5	<5.0	<0.5	-	-	-	< 1.0	< 1.0	-	-
Tetrachloroethene	µg/L	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<10.0	<1.0	< 1	< 1	< 1	< 1.0	< 1.0	-	-
Trichloroethane, 1,1,1-	µg/L	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<10.0	<1.0	< 1	< 1	< 1	< 1.0	< 1.0	-	-
Trichloroethane, 1,1,2-	µg/L	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<10.0	<1.0	< 1	< 1	< 1	< 1.0	< 1.0	-	-
Trichloroethylene	µg/L	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<10.0	<1.0	< 1	< 1	< 1	< 1.0	< 1.0	-	-
Trichlorofluoromethane	µg/L	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<10.0	<1.0	< 1	< 1	< 1	< 1.0	< 1.0	-	-
Vinyl Chloride	µg/L	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<10.0	<1.0	< 2	< 2	< 2	< 1.0	< 1.0	-	-
Resin and Fatty Acids																		
Acetic Acid	mg/L	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	-	-	-	-	-	-	-
Butyric Acid	mg/L	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	3.2	-	-	-	-	-	-	-
Caporic Acid	mg/L	-	-	-	-	-	-	<2.0	<2.0	<2.0	<2.0	-	-	-	-	-	-	-
Heptanoic Acid	mg/L	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	-	-	-	-	-	-	-
Hexanoic Acid	mg/L	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	-	-	-	-	-	-	-	-	-	-	-
Isobutyric Acid	mg/L	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	3	-	-	-	-	-	-	-
Isocaproic Acid	mg/L	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	-	-	-	-	-	-	-
Isovaleric Acid	mg/L	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	3.1	-	-	-	-	-	-	-
Propionic Acid	mg/L	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	2.2	6.7	-	-	-	-	-	-	-
Valeric Acid	mg/L	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	-	-	-	-	-	-	-
VFAs																		
8:2 Fluorotelomer sulfonic acid (8:2 FTS	µg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Perfluorobutane sulfonic acid (PFBS)	µg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Perfluorobutanoic acid (PFBA)	µg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Perfluoroheptanoic acid (PFHpA)	µg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Perfluorohexane sulfonic acid (PFHxS)	µg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Perfluorohexanoic acid (PFHxA)	µg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Perfluorononanoic acid (PFNA)	µg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Perfluorooctane sulfonic acid (PFOS)	µg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Perfluorooctanoic acid (PFOA)	µg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Perfluoropentanoic acid (PFPeA)	µg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Potassium Perfluorobutane Sulfonate	µg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Associated CARO file(s) available on request
Associated Exova file(s): 506479, 507801, 509233, 600276,
All terms defined within the body of Keltech's report.
< concentration less than indicated detection limit or RPD
- analysis not conducted.
n/a - no applicable standard/guideline.
RPD - relative percent difference

Table H4: Summary of Leachate Water Analytical Results- HISTORICAL to 2025

Sample Location		P1 L MH																P1 L MH2
Sample ID		P1 LEACHATE MH-20150615	P1 LEACHATE MH-20150915	P1 LEACHATE MH-20151203	P1 LEACHATE MH-20160315	P1 LEACHATE MH-20160623	P1 LEACHATE MH-20160915	P1 LEACHATE MH-20161117	P1 LEACHATE MH-20170914	P1 LEACHATE MH-20171204	P1 Leachate MH	P1 Leachate MH	P1 Leachate MH-20180524	P1 Leachate MH	P1 Leachate MH-20180816	P1 Leachate MH	P1 Leachate MH	P1 Leachate MH 2
Sample Date (yyyy mm dd)		2015 06 15	2015 09 15	2015 12 03	2016 03 15	2016 06 23	2016 09 15	2016 11 17	2017 09 14	2017 12 04	2018 03 15	2018 05 24	2018 05 24	2018 08 16	2018 08 16	2018 11 08	2019 03 15	2019 03 15
Parameter	**Units**																	
Hydrocarbons																		
VH (C6-C10)	µg/L	< 100	< 100	< 100	< 100	-	-	< 100	-	-	< 100	< 100	< 100	< 100	< 100	< 100	< 100	< 100
VPH (C6-C10)	µg/L	< 100	< 100	< 100	< 100	-	-	< 100	-	-	< 100	< 100	< 100	< 100	< 100	< 100	< 100	< 100
EPH (C10-C19)	µg/L	< 250	280	< 250	< 250	< 250	< 250	270	< 250	< 250	714	616	616	< 250	< 250	< 250	< 250	< 250
LEPH (C10-C19)	µg/L	< 250	280	< 250	< 250	< 250	< 250	270	< 250	< 250	712	615	615	< 250	< 250	< 250	< 250	< 250
EPH (C19-C32)	µg/L	< 250	< 250	< 250	< 250	< 250	< 250	< 250	< 250	< 250	609	480	480	< 250	< 250	< 250	< 250	< 250
HEPH (C19-C32)	µg/L	< 250	< 250	< 250	< 250	< 250	< 250	< 250	< 250	< 250	609	480	480	< 250	< 250	< 250	< 250	< 250
Benzene	µg/L	1.29	1.88	1.28	2.4	-	-	1.3	1.7	2.4	1.6	1	1	1.3	1.3	0.7	0.5	0.5
Ethylbenzene	µg/L	1.7	3.84	3.73	11.9	-	-	1.65	7.33	12.5	10.5	< 1.0	< 1.0	5.9	5.9	< 1.0	< 1.0	< 1.0
Toluene	µg/L	12.8	< 0.50	< 0.50	0.69	-	-	0.9	< 0.45	0.57	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Xylenes	µg/L	1.55	2.95	3.1	7.26	-	-	2.89	5.19	8.59	6	< 2.0	< 2.0	4.5	4.5	< 2.0	< 2.0	< 2.0
Styrene	µg/L	-	-	-	-	-	-	-	-	-	< 1.0	< 1.0	-	< 1.0	-	< 1.0	< 1.0	-
General																		
Alkalinity, Bicarbonate (as CaCO3)	mg/L	-	4,410	3,910	3,030	-	-	-	-	-	2,370	3,390	3,390	3,710	3,710	3,360	2,500	2,500
Alkalinity, Carbonate (as CaCO3)	mg/L	-	< 1.0	< 1.0	< 1.0	-	-	-	-	-	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Alkalinity, Hydroxide (as CaCO3)	mg/L	-	< 1.0	< 1.0	< 1.0	-	-	-	-	-	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Alkalinity, Phenolphthalein (as CaCO3)	mg/L	-	-	-	-	-	-	-	-	-	< 1.0	< 1.0	-	< 1.0	-	< 1.0	< 1.0	-
Ammonia, Total (as N)	µg/L	78,300	91,500	78,200	58,300	17,300	18,400	71,100	74,300	88,900	59,400	67,700	67,700	61,600	61,600	60,700	43,000	43,000
Biochemical Oxygen Demand	mg/L	-	-	-	-	-	-	-	-	-	49.8	40.8	-	42.5	-	36.1	38.7	-
Bromide	mg/L	2.8	3.9	< 2.5	2.6	< 1.0	1	3.3	3.1	3.1	< 0.10	< 10.0	< 10.0	< 10.0	< 10.0	< 10.0	1.39	1.39
Chemical Oxygen Demand	mg/L	336	405	288	411	71	100	319	374	444	294	212	212	243	243	223	184	184
Chloride	mg/L	355	389	306	435	219	246	392	408	428	294	270	270	329	329	244	238	238
Dissolved Organic Carbon	mg/L																	
Electrical Conductivity (Lab)	µS/cm																	
Fluoride	µg/L	1,600	1,200	1,200	< 1,000	1,100	1,230	1,400	< 4,000	1,100	< 2,500	1,140	1,140	1,600	1,600	1,770	1,590	1,590
Hardness as CaCO3 (filtered)	mg/L																	
Kjeldahl Nitrogen Total	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Nitrate (as N)	µg/L	< 250	< 250	< 250	< 250	4,060	170	< 250	< 250	< 250	< 250	< 1,000	< 1,000	< 100	< 100	< 100	< 100	< 100
Nitrite (as N)	µg/L	-	-	-	-	-	-	-	-	-	< 250	< 1,000	-	< 100	-	< 100	< 100	-
Ortho-Phosphate	mg/L	3.32	3.26	3.32	0.503	0.27	0.502	0.319	3.09	3.76	-	-	1.48	-	2.22	-	1.1	1.1
pH (Lab)																		
Phosphate	mg/L	-	-	-	-	-	-	-	-	-	2.05	1.48	-	2.22	-	0.975	-	-
Solids, Total Dissolved	mg/L																	
Phosphorus (filtered)	ug/L																	
Sulfate	mg/L	959	1,170	890	753	443	404	982	933	1,090	808	662	662	868	868	795	661	661
Sulfide	mg/L	-	-	-	-	-	-	-	-	-	28.9	29.5	-	36.5	-	26.2	18.9	-
Total Alkalinity	mg/L	4,270	4,410	3,910	3,030	1,070	1,300	3,990	3,700	4,130	2,370	3,390	3,390	3,710	3,710	3,360	2,500	2,500
Total Organic Carbon	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		-
Total Phosphorous as P	mg/L	-	-	-	-	-	-	-	-	-	2.53	2.44	-	3.38	-	2.36	2.15	-
Dissolved Metals																		
Antimony	µg/L	1.4	< 0.50	1.52	2.64	0.76	< 0.50	1.9	5.2	2.53	4.88	2.25	2.25	2.57	2.57	2.08	0.53	0.53
Aluminium	µg/L	29	659	32	55	< 10	< 10	16	47	49.7	40.3	31.9	31.9	24.7	24.7	22.9	14.6	14.6
Arsenic	µg/L	7	1.1	6.8	12.6	2.1	2.4	4.2	12.2	8.25	15.2	7.41	7.41	11.4	11.4	7.73	2.72	2.72
Barium	µg/L	261	304	330	145	92	108	254	251	258	128	382	382	344	344	288	268	268
Beryllium	µg/L	< 15	< 15	< 10	< 10	< 5.0	< 5.0	< 10	< 15	< 0.50	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Bismuth	µg/L	-	< 600	< 400	< 400	< 200	< 200	< 400	< 600	< 0.25	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Boron	µg/L	1,360	1,370	1,040	1,170	360	460	1,390	1,330	1,610	1,270	1,090	1,090	1,090	1,090	1,110	1,280	1,280
Cadmium	µg/L	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.025	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010
Calcium	mg/L	100	102	97.9	124	83.2	85	94.3	106	95	109	122	122	106	106	107	104	104
Chromium	µg/L	11.3	1.33	9.24	11.1	1.73	2.02	9.5	12.5	14.9	10.3	9.73	9.73	11	11	8.15	5.07	5.07
Cobalt	µg/L	6.2	1.31	4.68	4.62	1.5	1.98	6.6	5.6	5.7	4.06	5.62	5.62	5.61	5.61	5.13	4.95	4.95
Copper	µg/L	< 2.0	6	< 1.0	< 1.0	3.5	1.4	< 2.0	< 2.0	< 1.0	1.19	< 0.40	< 0.40	< 0.40	< 0.40	< 0.40	< 0.40	< 0.40
Iron	µg/L	< 90	100	156	224	92	276	80	93	53	74	90	90	105	105	69	87	87
Lead	µg/L	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 0.25	< 0.20	< 0.20	< 0.20	0.2	0.2	< 0.20	< 0.20	< 0.20
Lithium	µg/L	< 50	< 50	< 50	< 50	< 50	< 50	< 50	< 50	41.8	37	37.3	37.3	39.8	39.8	33.9	42	42
Magnesium	mg/L	304	369	364	203	156	172	336	310	344	200	378	378	326	326	342	363	363
Manganese	µg/L	440	419	505	860	215	650	473	560	455	562	705	705	717	717	593	661	661
Mercury	µg/L	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.25	< 0.010	< 0.010	< 0.010	< 0.020	< 0.020	< 0.010	< 0.010	< 0.010
Molybdenum	µg/L	1.6	11.1	1.5	1.8	15.3	3.6	2.1	1.4	1.27	1.76	1.81	1.81	1.67	1.67	2	1.23	1.23
Nickel	µg/L	12.7	< 5.0	11.7	14.8	9	12.8	11.3	13	14.3	11.1	11.5	11.5	11.7	11.7	9.42	9.33	9.33
Phosphrous	µg/L	-	3,770	3,610	2,050	< 300	590	3,570	3,170	4,580	2,850	2,810	2,810	3,530	3,530	2,670	2,410	2,410
Potassium	mg/L	-	160	113	125	43.9	51.4	125	147	175	157	117	117	105	105	104	91.1	91.1
Selenium	µg/L	< 1.0	< 1.0	4.4	6.6	3.3	< 1.0	< 0.50< 1.0	5.9	3.5	< 0.50	< 0.50	< 0.50	0.52	0.52	< 0.50	< 0.50	< 0.50
Silicon	µg/L	-	17,500	16,800	13,800	13,000	14,200	18,400	16,600	18,200	17,800	23,000	23,000	21,000	21,000	21,000	20,300	20,300
Silver	µg/L	< 0.10	< 0.050	0.096	< 0.050	< 0.050	< 0.050	< 0.10	< 0.10	0.086	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050
Sodium	mg/L	1,520	1,880	1,500	1,090	419	409	1,670	1,590	1,960	1,440	1,230	1,230	1,270	1,270	1,210	1,080	1,080
Strontium	µg/L	-	4,220	3,900	2,930	2,640	2,550	4,050	3,910	3,690	2,980	5,410	5,410	4,250	4,250	4,260	4,100	4,100
Sulphur	µg/L	308,000	377,000	840,000	247,000	142,000	134,000	280,000	451,000	528,000	358,000	329,000	-	326,000	-	317,000	278,000	-
Tellurium	µg/L	< 2.0	< 0.20	< 1.0	< 1.0	< 0.40	-	-	< 2.0	< 1.0	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50
Thallium	µg/L	< 0.10	< 0.20	< 0.050	< 0.050	< 0.020	< 0.020	< 0.10	< 0.10	< 0.050	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020
Thorium	µg/L	< 1.0	0.16	< 0.50	< 0.50	< 0.20	-	-	< 1.0	< 0.50	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Tin	µg/L	-	< 90	< 60	< 60	< 30	< 30	< 60	< 90	4.2	5.42	4.37	4.37	4.63	4.63	3.83	1.12	1.12
Titanium	µg/L	< 50	58	< 50	< 50	< 50	< 50	< 50	62	55.1	49.1	38.5	38.5	42.7	42.7	33	20.4	20.4
Tungsten	µg/L	-	-	-	-	-	-	-	-	-	1.4	2.7	-	2.5	-	2.2	1.6	-
Uranium	µg/L	6.22	1.71	3.72	10.1	29.1	9.13	8.91	8.64	8.34	7.02	7.06	7.06	6.98	6.98	5.96	4.96	4.96
Vanadium	µg/L	< 90	< 90	< 60	< 60	< 30	< 30	< 60	< 90	18.9	10.8	18.3	18.3	18.3	18.3	15.3	11.1	11.1
Zinc	µg/L	< 15	< 15	< 10	< 10	< 5.0	< 5.0	< 10	25	< 5.0	< 4.0	< 4.0	< 4.0	< 4.0	< 4.0	< 4.0	< 4.0	< 4.0
Zirconium	µg/L	32.9	3	38.9	13.1	4	-	-	31	34.5	16.2	45.1	45.1	42	42	34.8	25.8	25.8
Polycyclic Aromatic Hydrocarbons																		
Acenaphthene	µg/L	0.403	0.416	0.347	0.234	0.057	< 0.050	0.311	0.339	0.331	0.264	0.389	0.389	0.369	0.369	0.213	0.321	0.321
Acenaphthylene	µg/L	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.010	< 0.200	< 0.200	< 0.200	< 0.200	< 0.200	< 0.200	< 0.200	< 0.200
Acridine	µg/L	< 0.050	< 0.050	0.05	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050
Anthracene	µg/L	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	0.021	< 0.010	0.019	0.019	0.017	0.017	< 0.010	0.015	0.015
Benz(a)anthracene	µg/L	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010
Benzo(a)pyrene	µg/L	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010
Benzo(b)fluoranthene	µg/L	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	-	-	-	-	-	-	-	-	-	-
Benzo(b+j)fluoranthene	µg/L	-	-	-	-	-	-	-	-	-	< 0.050	< 0.050	-	< 0.050	-	< 0.050	< 0.050	-
Benzo(g,h,i)perylene	µg/L	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.010	< 0.050	< 0.050	-	< 0.050	-	< 0.050	< 0.050	-
Benzo(k)fluoranthene	µg/L	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.010	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050
Chloronaphthalene, 2-	µg/L	-	-	-	-	-	-	-	-	-	< 0.100	< 0.100	-	< 0.100	-	< 0.100	< 0.100	-
Chrysene	µg/L	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.010	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050
Dibenz(a,h)anthracene	µg/L	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010
Fluoranthene	µg/L	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	0.027	< 0.030	< 0.030	< 0.030	0.043	0.043	< 0.040	0.072	0.072
Fluorene	µg/L	0.294	0.33	0.324	0.144	< 0.050	< 0.050	0.227	0.26	0.237	0.166	0.263	0.263	0.279	0.279	0.185	0.268	0.268
Indeno(1,2,3-cd)pyrene	µg/L	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.010	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050
Methylnaphthalene, 1-	µg/L	-	-	-	-	-	-	-	-	-	0.544	0.323	-	0.151	-	< 0.100	< 0.116	-
Methylnaphthalene, 2-	µg/L	-	-	-	-	-	-	-	-	-	0.687	0.496	-	< 0.100	-	< 0.100	< 0.100	-
Naphthalene	µg/L	0.662	0.894	0.675	1.28	0.106	< 0.050	0.66	0.545	0.806	1.04	1.05	1.05	0.607	0.607	0.254	0.313	0.313
Phenanthrene	µg/L	0.071	0.074	< 0.050	0.074	< 0.050	< 0.050	< 0.050	0.104	0.114	0.122	< 0.100	< 0.100	< 0.100	< 0.100	< 0.100	< 0.100	< 0.100
Pyrene	µg/L	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	0.022	< 0.020	0.029	0.029	0.029	0.029	< 0.020	0.037	0.037
Quinoline	µg/L	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.060	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050
Volatile Organic Compounds																		
Bromodichloromethane [BDCM]	µg/L	< 1.0	< 1.0	< 1.0	< 1.0	-	-	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Bromoform	µg/L	< 1.0	< 1.0	< 1.0	< 1.0	-	-	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Carbon Tetrachloride	µg/L	< 0.50	< 0.50	< 0.50	< 0.50	-	-	< 0.50	< 0.50	< 0.50	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
Chlorobenzene	µg/L	1.5	2.4	2.7	1.2	-	-	3.4	1.7	2.3	< 1.0	2.6	2.6	< 2.9	< 2.9	3.1	3.9	3.9
Chloroethane	µg/L	< 1.0	1.2	< 1.0	4	-	-	< 1.0	6	6.9	8.9	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0
Chloroform	µg/L	< 1.0	< 1.0	< 1.0	< 1.0	-	-	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Chloromethane	µg/L	< 5.0	< 5.0	< 5.0	< 5.0	-	-	< 5.0	< 5.0	< 5.0	-	-	-	-	-	-		-
Dibromochloromethane [DBCM]	µg/L	< 1.0	< 1.0	< 1.0	< 1.0	-	-	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Dibromoethane, 1,2-	µg/L	-	-	-	-	-	-	-	-	-	< 0.3	< 0.3	-	< 0.3	-	< 0.3	< 0.3	-
Dibromomethane	µg/L	-	-	-	-	-	-	-	-	-	< 1.0	< 1.0	-	< 1.0	-	< 1.0	< 1.0	-
Dichlorobenzene, 1,2-	µg/L	< 0.70	< 0.70	< 0.70	< 0.70	-	-	< 0.70	< 0.50	< 0.50	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
Dichlorobenzene, 1,3-	µg/L	< 1.0	< 1.0	< 1.0	< 1.0	-	-	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Dichlorobenzene, 1,4-	µg/L	< 1.0	1.1	< 1.0	< 1.0	-	-	< 1.0	< 1.0	1.1	< 1.0	< 1.0	< 1.0	< 1.2	< 1.2	< 1.0	< 1.0	< 1.0
Dichloroethane, 1,1-	µg/L	4.5	2.7	1.3	16.6	-	-	3.5	6.4	3.2	2.3	< 1.0	< 1.0	1	1	< 1.0	< 1.0	< 1.0
Dichloroethane, 1,2-	µg/L	< 1.0	< 1.0	< 1.0	< 1.0	-	-	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Dichloroethylene, 1,1-	µg/L	< 1.0	< 1.0	< 1.0	< 1.0	-	-	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Dichloroethylene, 1,2-cis-	µg/L	< 1.0	< 1.0	< 1.0	< 1.0	-	-	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Dichloroethylene, 1,2-trans-	µg/L	< 1.0	< 1.0	< 1.0	< 1.0	-	-	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Dichloromethane	µg/L	< 5.0	< 5.0	< 5.0	< 5.0	-	-	< 5.0	< 5.0	< 5.0	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
Dichloropropane, 1,2-	µg/L	< 1.0	< 1.0	< 1.0	< 1.0	-	-	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Dichloropropene, 1,3- (cis+trans)	µg/L	< 1.4	< 1.4	< 1.4	< 1.4	-	-	< 1.4	< 1.0	< 1.0	< 1.0	< 1.0	-	< 1.0	-	< 1.0	< 1.0	-
Dichloropropene, 1,3-cis-	µg/L	< 1.0	< 1.0	< 1.0	< 1.0	-	-	< 1.0	< 0.50	< 0.50	-	-	-	-	-	-		-
Dichloropropene, 1,3-trans-	µg/L	< 1.0	< 1.0	< 1.0	< 1.0	-	-	< 1.0	< 0.50	< 0.50	-	-	-	-	-	-		-
Dichloropropene, 1,3	µg/L																	
Methyl Tert-butyl Ether [MTBE]	µg/L	-	-	-	-	-	-	-	-	-	< 1.0	< 1.0	-	< 1.0	-	< 1.0	< 1.0	-
Tetrachloroethane, 1,1,1,2-	µg/L	< 1.0	< 1.0	< 1.0	< 1.0	-	-	< 1.0	< 1.0	< 1.0	-	-	-	-	-	-	-	-
Tetrachloroethene	µg/L	< 1.0	< 1.0	< 1.0	< 1.0	-	-	< 1.0	< 0.20	< 0.20	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
Trichloroethane, 1,1,1-	µg/L	< 1.0	< 1.0	< 1.0	< 1.0	-	-	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Trichloroethane, 1,1,2-	µg/L	< 1.0	< 1.0	< 1.0	< 1.0	-	-	< 1.0	< 0.50	< 0.50	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Trichloroethylene	µg/L	< 1.0	< 1.0	< 1.0	< 1.0	-	-	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Trichlorofluoromethane	µg/L	< 1.0	< 1.0	< 1.0	< 1.0	-	-	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Vinyl Chloride	µg/L	< 1.0	< 1.0	< 1.0	< 1.0	-	-	< 1.0	< 0.40	< 0.40	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Resin and Fatty Acids																		
Acetic Acid	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	< 3.0	-
Butyric Acid	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	< 2.0	-
Caporic Acid	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	< 2.0	-
Heptanoic Acid	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	< 2.0	-
Hexanoic Acid	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Isobutyric Acid	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	< 2.0	-
Isocaproic Acid	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	< 2.0	-
Isovaleric Acid	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	< 2.0	-
Propionic Acid	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	< 2.0	-
Valeric Acid	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	< 2.0	-
VFAs																		
8:2 Fluorotelomer sulfonic acid (8:2 FTS	µg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Perfluorobutane sulfonic acid (PFBS)	µg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Perfluorobutanoic acid (PFBA)	µg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Perfluoroheptanoic acid (PFHpA)	µg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Perfluorohexane sulfonic acid (PFHxS)	µg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Perfluorohexanoic acid (PFHxA)	µg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Perfluorononanoic acid (PFNA)	µg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Perfluorooctane sulfonic acid (PFOS)	µg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Perfluorooctanoic acid (PFOA)	µg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Perfluoropentanoic acid (PFPeA)	µg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Potassium Perfluorobutane Sulfonate	µg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Associated CARO file(s) available on request
Associated Exova file(s): 506479, 507801, 509233, 600276,
All terms defined within the body of Keltech's report.
< concentration less than indicated detection limit or RPD
- analysis not conducted.
n/a - no applicable standard/guideline.
RPD - relative percent difference

Table H4: Summary of Leachate Water Analytical Results- HISTORICAL to 2025

Sample Location		P1 L MH2																
Sample ID		P1 Leachate MH 2	P1 Leachate MH 2	P1 Leachate MH 2	P1 Leachate MH 2	P1 Leachate MH 2	P1 Leachate MH 2	P1 Leachate MH 2	P1 Leachate MH 2	P1 Leachate MH 2	P1 Leachate MH 2	P1 Leachate MH 2	P1 Leachate MH 2	P1 Leachate MH 2	P1 Leachate MH 2	P1 Leachate MH2	P1 Leachate MH-2	P1 Leachate MH-2
Sample Date (yyyy mm dd)		2020 09 29	2020 11 16	2021 03 18	2021 06 18	2021 09 16	2021 10 22	2022 02 04	2022 06 23	2022 09 20	2022 10 20	2023 03 21	2023 05 17	2023 09 28	2023 11 03	2024-05-09	2024-09-06	2024-10-18
Parameter	**Units**																	
Hydrocarbons																		
VH (C6-C10)	µg/L	1,430	889	1,570	287	1,240	481	439	<10000	1450	<2880	470	452	756	740	321	926	537
VPH (C6-C10)	µg/L	1,050	425	1,100	194	918	270	260	<10000	1290	<2880	324	350	666	701	297	837	524
EPH (C10-C19)	µg/L	615	1,250	1,600	384	7,600	3,930	4970	919	2140	2490	1890	1780	1380	1670	341	2,200	1,790
LEPH (C10-C19)	µg/L	614	1,250	1,600	384	7,600	3,930	4970	916	2140	2480	377	<250	304	<250	340	2,200	1,790
EPH (C19-C32)	µg/L	405	352	430	< 250	13,800	259	21800	528	253	663	1890	1780	1380	1670	<250	1,170	5,220
HEPH (C19-C32)	µg/L	405	352	430	< 250	13,800	259	21800	528	253	663	377	<250	304	<250	<250	1,170	5,220
Benzene	µg/L	5.8	7	8.1	1.9	8.4	5.2	4.1	<50.0	4.6	6.7	2.9	2.9	3.6	1.2	0.8	3.9	<0.5
Ethylbenzene	µg/L	25	29.1	39.2	6.3	39.3	33.3	16.8	<100	17.7	40.9	13.4	12	11.4	<1.0	4.0	12.0	<1.0
Toluene	µg/L	268	274	318	70.5	200	120	128	106	84.8	138	83.6	60.6	48	21.9	11.8	44.8	3.5
Xylenes	µg/L	45	57	66.5	9.7	51.9	40.8	26.2	<200	47.1	42.8	35.8	21.4	27.1	16.3	7.2	25.4	9.3
Styrene	µg/L	28.4	96.9	36.5	3.8	25.4	11.8	3.3	<100	6.2	<10.0	10.8	5.2	<1.0	<1.0	<1.0	3.1	<1.0
General																		
Alkalinity, Bicarbonate (as CaCO3)	mg/L	5,110	4,600	6,580	2,920	10,100	10,600	6530	4330	10900	8340	6930	6620	7760	8930	2,410	8,920	9,070
Alkalinity, Carbonate (as CaCO3)	mg/L	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Alkalinity, Hydroxide (as CaCO3)	mg/L	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Alkalinity, Phenolphthalein (as CaCO3)	mg/L	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Ammonia, Total (as N)	µg/L	462,000	110,000	433,000	175,000	892,000	935,000	522,000	465,000	1,320,000	1,010,000	1,010,000	841,000	1,190,000	1,360,000	168	1,400	1,580
Biochemical Oxygen Demand	mg/L	8,120	2,770	1,550	< 354	2,130	1,280	642	406	421	212	311	183	222	141	<67.6	167	136
Bromide	mg/L	< 1.00	32.2	23	1.85	< 10.0	< 10.0	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<10	<10	<5.00	<1.00	4.63
Chemical Oxygen Demand	mg/L	13,600	3,910	3,840	1,180	4,560	3,990	2130	5700	2320	1900	1840	1810	1890	2430	352	2,090	2,620
Chloride	mg/L	976	849	831	430	1,950	2,010	1030	719	2050	1630	1370	1470	1690	2110	472	2,220	2,270
Dissolved Organic Carbon	mg/L															113	571	604
Electrical Conductivity (Lab)	µS/cm															6,180	20,200	21,000
Fluoride	µg/L	< 1,000	< 1,000	< 1,000	< 1,000	< 1,000	< 1,000	< 1,000	1,000	< 1,000	< 1,000	< 1,000	1,000	< 1,000	< 1,000	<0.10	2.04	<1.00
Hardness as CaCO3 (filtered)	mg/L															1,450	1,560	2,010
Kjeldahl Nitrogen Total	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-			
Nitrate (as N)	µg/L	< 100	< 100	< 100	< 100	< 100	< 100	< 100	< 100	< 100	< 100	< 100	< 100	< 100	< 100	525	<100	<100
Nitrite (as N)	µg/L	< 100	191	543	< 100	< 100	< 100	< 100	< 100	< 100	< 100	< 100	117	< 100	< 100	<10	<100	<100
Ortho-Phosphate	mg/L	8.27	10.8	11	< 0.0500	3.95	2.91	-	-	-	-	-	-	-	-			
pH (Lab)																7.75	7.70	7.78
Phosphate	mg/L	-	-	-	-	-	-	0.221	2.3	6.57	3.78	6.87	5.24	7.67	8.2	2.39	-	-
Solids, Total Dissolved	mg/L															3,840	9,700	9,350
Phosphorus (filtered)	ug/L															-	9,800	10,000
Sulfate	mg/L	326	261	< 10.0	686	< 10.0	< 10.0	369	451	<10.0	382	<10.0	53.4	16.2	22.2	515	<10.0	30.0
Sulfide	mg/L	< 2.00	3.38	5.13	13.8	2.78	0.632	43.3	18.3	1.62	27.1	2.03	8.02	1.52	0.06	8.91	1.74	0.449
Total Alkalinity	mg/L	5,110	4,600	6,580	2,920	10,100	10,600	6530	4330	10900	8340	6930	6620	7760	8930	2,410	8,920	9,070
Total Organic Carbon	mg/L	-	-	-	-	-	-	381	140	994	615	528	458	475	550			
Total Phosphorous as P	mg/L	29.1	20.6	17.3	3.36	15.2	18.9	10.6	19.8	14.6	10.3	12	12.2	11.7	12.7	2.38	12.5	12.0
Dissolved Metals																		
Antimony	µg/L	17.2	10.9	13.1	4.3	20.3	23.1	13.5	6.4	21.1	25.8	16.8	15.7	17	15.6	58.4	220	343
Aluminium	µg/L	67.4	101	169	24.1	191	149	352	112	233	225	266	237	262	270	3.19	14.8	19.5
Arsenic	µg/L	36.9	30.9	27.2	5.77	33.5	54.8	27.7	17.9	29.8	39	33.8	25.8	30.6	22.7	8.58	15.1	22.6
Barium	µg/L	80.1	72.7	366	138	316	219	213	193	202	276	270	24.2	24.7	22.4	217	257	331
Beryllium	µg/L	0.01	< 1.00	0.025	0.015	0.052	0.059	<1.00	<0.050	<0.100	<0.100	0.061	0.104	0.081	<0.100	0.025	<0.100	0.121
Bismuth	µg/L	0.023	< 1.00	0.017	< 0.010	0.022	0.015	<1.00	<0.050	<0.100	<0.100	<0.050	0.145	<0.050	<0.100	<0.020	<0.100	<0.050
Boron	µg/L	4,720	3,210	7,480	2,880	11,600	12,100	7000	3310	14800	11600	10600	11100	10400	10600	2,630	12,100	13,900
Cadmium	µg/L	0.0254	< 0.200	0.0582	0.0119	0.0614	0.0318	<0.200	0.012	0.0343	0.0256	0.044	<0.0200	0.0326	0.0486	0.006	0.0226	0.0451
Calcium	mg/L	1,030	691	942	278	548	466	396	146	290	204	321	254	186	144	141	143	167
Chromium	µg/L	95.7	104	108	29.9	235	242	83.2	68.6	211	180	159	159	199	191	36.2	169	242
Cobalt	µg/L	51.5	16.2	18.6	5.85	37.2	47.2	14.1	13	45.7	30.9	30.1	33.1	40.1	37.9	8.07	35.7	48.5
Copper	µg/L	1.86	< 10.0	2.22	0.24	2.48	1.98	<10.0	0.78	1.65	<1.00	1.49	1.02	1.62	1.31	0.23	<1.00	1.67
Iron	µg/L	14,400	1,210	7,460	1,690	37,300	20,400	499	2720	4640	565	1810	1620	3250	4330	1,280	3,450	4,640
Lead	µg/L	0.239	< 5.00	0.468	< 0.050	0.586	0.262	<5.00	<0.250	<0.500	<0.500	0.28	<0.5	0.313	<0.5	<0.100	<0.500	<0.250
Lithium	µg/L	233	153	199	98.8	305	390	185	104	290	252	217	233	220	201	71.9	198	229
Magnesium	mg/L	239	278	375	256	413	457	369	273	430	383	410	387	277	277	267	292	388
Manganese	µg/L	14,300	8,140	13,500	2,920	7,660	7,450	4540	1530	1740	1260	2260	1580	1060	814	985	846	986
Mercury	µg/L	< 0.010	< 0.010	< 0.040	< 0.010	< 0.040	0.057	< 0.040	< 0.040	< 0.010	< 0.010	<0.010	<0.020	< 0.010	< 0.010	<0.010	<0.010	<0.100
Molybdenum	µg/L	4.62	2.92	2.91	7.04	5.72	6.89	2.69	6.95	6.43	6.25	3.52	4.22	5.82	6.05	3.96	4.96	7.42
Nickel	µg/L	204	128	130	46.9	273	354	131	87.7	339	249	233	257	261	267	58.1	266	369
Phosphrous	µg/L	2,470	14,500	23,100	1,990	13,900	13,900	10800	6470	10000	10200	12800	10500	13000	9180	3,250	9,460	14,400
Potassium	mg/L	566	588	487	208	985	964	406	340	893	853	728	717	838	725	187	713	966
Selenium	µg/L	3.34	< 10.0	2.48	1.05	4.46	13.7	31.6	9.09	6.85	4.93	5.6	5.43	6.72	4.71	1.41	4.36	8.18
Silicon	µg/L	33,600	23,400	42,100	21,300	34,400	30,600	19800	17600	20200	19700	24000	22400	18400	14500	17,600	15,900	20,200
Silver	µg/L	< 0.010	< 1.00	0.011	< 0.010	0.013	< 0.010	<1.00	<0.050	<0.100	<0.100	<0.050	<0.100	<0.050	<0.100	<0.020	<0.100	<0.050
Sodium	mg/L	1,190	972	896	834	1,770	1,810	1290	8200	1660	2210	1460	1510	1510	1470	847	1,520	2,050
Strontium	µg/L	5,490	4,530	7,300	4,000	5,260	5,160	4410	4000	3420	3650	3790	3550	2230	1980	4,200	1,890	2,600
Sulphur	µg/L	182,000	160,000	21,100	258,000	26,800	24,900	150000	179000	28900	197000	23700	66700	29500	24800	200,000	17,800	35,600
Tellurium	µg/L	0.159	< 5.00	0.201	< 0.050	0.23	0.422	<5.00	0.279	<0.500	<0.500	<0.250	<0.500	<0.250	<0.500	<0.100	<0.500	<0.250
Thallium	µg/L	0.0068	< 0.400	< 0.0040	< 0.0040	< 0.0040	< 0.0040	1.53	<0.0200	<0.0400	<0.0400	<0.020	<0.0400	<0.0200	<0.0400	<0.0080	<0.0400	<0.0200
Thorium	µg/L	0.02	< 1.00	0.033	< 0.010	0.057	0.119	<1.00	<0.050	0.109	0.162	0.17	0.168	0.231	0.143	0.025	0.147	0.255
Tin	µg/L	2.63	< 5.00	4.04	0.945	11	12.4	11.7	5.47	21.1	30.3	11.1	12.7	23.5	26.8	3.57	18.1	32.2
Titanium	µg/L	11.5	45.6	66.4	11	164	150	83.1	52.4	165	145	130	151	196	193	44.0	185	265
Tungsten	µg/L	1.16	< 20.0	2.8	0.97	6.17	8.01	<20.0	1.6	7.06	5.26	5.02	6.02	6.65	6.97	2.1	7.00	10.8
Uranium	µg/L	0.702	3.19	2.18	25.7	0.935	1.08	6.8	25.7	1.75	10.4	4.51	3.34	2.87	4.87	20.5	1.96	3.67
Vanadium	µg/L	8.45	< 20.0	38.7	11.7	83.3	90.1	20.6	28.5	86.5	76	69.2	80.2	102	96.2	22.9	96.2	132
Zinc	µg/L	59.9	< 100	30.8	2.5	39.3	24.4	<100	12.5	23	<10.0	23.1	<10	28.7	28.8	2.5	13.4	19.3
Zirconium	µg/L	7.22	12.9	13.6	3.49	41.2	51.3	19.5	18.9	61.9	60	50.2	58.3	70.1	70.2	17.8	81.6	118
Polycyclic Aromatic Hydrocarbons																		
Acenaphthene	µg/L	< 0.050	< 0.050	< 0.050	0.094	< 0.329	< 0.050	<0.504	0.879	<0.050	0.106	<0.050	<0.484	<0.050	<0.500	0.514	<0.105	0.173
Acenaphthylene	µg/L	< 0.200	< 0.200	< 0.200	< 0.200	< 1.32	< 0.200	<2.01	<0.200	<0.200	<0.200	<0.200	<1.94	<0.200	<2.00	<0.200	<0.200	<0.200
Acridine	µg/L	< 0.092	0.082	0.202	< 0.050	< 0.329	0.205	<0.504	0.471	0.159	<0.050	<0.050	<0.484	<0.050	<0.500	<0.050	0.207	0.337
Anthracene	µg/L	< 0.010	< 0.010	< 0.010	< 0.010	< 0.066	< 0.010	<0.101	<0.029	<0.010	<0.010	<0.010	<0.097	0.115	<0.100	<0.010	0.117	<0.023
Benz(a)anthracene	µg/L	< 0.010	< 0.010	< 0.010	< 0.010	< 0.066	< 0.010	<0.101	<0.010	<0.010	<0.010	<0.010	<0.097	<0.010	<0.100	<0.010	<0.010	<0.013
Benzo(a)pyrene	µg/L	< 0.010	< 0.010	< 0.010	0.023	< 0.066	< 0.010	<0.101	<0.010	<0.010	<0.010	<0.010	<0.097	<0.010	<0.100	<0.010	<0.010	<0.010
Benzo(b)fluoranthene	µg/L	-	-	-	-	-	-	-	-	-	-	-						
Benzo(b+j)fluoranthene	µg/L	< 0.050	0.053	< 0.050	< 0.050	< 0.329	< 0.050	<0.504	<0.050	<0.050	<0.050	<0.050	<0.484	<0.050	<0.500	<0.050	<0.050	<0.050
Benzo(g,h,i)perylene	µg/L	< 0.050	< 0.050	< 0.050	< 0.050	< 0.329	< 0.050	<0.504	<0.050	<0.050	<0.050	<0.050	<0.484	<0.050	<0.500	<0.050	<0.050	<0.050
Benzo(k)fluoranthene	µg/L	< 0.050	< 0.050	< 0.050	< 0.050	< 0.329	< 0.050	<0.504	<0.050	<0.050	<0.050	<0.050	<0.484	<0.050	<0.500	<0.050	<0.050	<0.050
Chloronaphthalene, 2-	µg/L	< 0.100	< 0.100	< 0.100	< 0.100	< 0.658	< 0.100	<1.01	<0.100	<0.100	<0.100	<0.100	<0.968	<0.100	<1.00	<0.100	0.104	<0.100
Chrysene	µg/L	< 0.050	< 0.050	< 0.050	< 0.050	< 0.329	< 0.050	<0.504	<0.050	<0.050	<0.050	<0.050	<0.484	<0.050	<0.500	<0.050	<0.050	<0.050
Dibenz(a,h)anthracene	µg/L	< 0.010	< 0.010	< 0.010	< 0.010	< 0.066	< 0.010	<0.101	<0.010	<0.010	<0.010	<0.010	<0.097	<0.010	<0.100	<0.012	<0.010	<0.010
Fluoranthene	µg/L	< 0.030	< 0.030	< 0.030	< 0.030	< 0.197	< 0.030	<0.302	<0.030	<0.030	<0.030	<0.030	<0.290	<0.030	<0.300	0.034	0.037	<0.171
Fluorene	µg/L	< 0.050	< 0.050	< 0.050	< 0.050	< 0.329	< 0.050	<0.504	0.541	<0.050	0.073	<0.050	<0.484	<0.050	<0.500	0.263	0.101	0.214
Indeno(1,2,3-cd)pyrene	µg/L	< 0.050	< 0.050	< 0.050	< 0.050	< 0.329	< 0.050	<0.504	<0.050	<0.050	<0.050	<0.050	<0.484	<0.050	<0.500	<0.050	<0.050	<0.050
Methylnaphthalene, 1-	µg/L	< 0.100	0.105	< 0.100	< 0.100	< 0.658	< 0.100	<1.01	0.335	<0.100	0.176	<0.100	<0.968	<0.128	<1.00	<0.100	0.210	0.167
Methylnaphthalene, 2-	µg/L	0.135	0.165	0.147	< 0.100	< 0.658	< 0.100	<1.01	0.264	0.11	<0.100	0.114	<0.968	<0.100	<1.00	<0.100	0.227	0.162
Naphthalene	µg/L	1.12	1.19	0.894	0.283	< 1.32	0.591	<2.01	1.11	0.762	1.16	0.776	<1.94	0.591	<2.00	0.262	1.77	0.728
Phenanthrene	µg/L	< 0.100	< 0.100	< 0.100	< 0.100	< 0.658	< 0.100	<1.01	0.129	<0.100	<0.100	<0.100	<0.968	<0.100	<1.00	<0.100	<0.100	0.478
Pyrene	µg/L	< 0.020	< 0.020	< 0.020	< 0.020	0.231	< 0.020	<0.201	<0.020	<0.020	<0.020	<0.020	<0.194	<0.020	<0.200	0.022	<0.020	0.164
Quinoline	µg/L	< 0.456	0.253	< 0.182	< 0.133	0.897	0.4	<0.504	<0.050	0.084	<0.142	<0.050	<0.484	<0.410	<0.500	<0.205	<0.300	<0.085
Volatile Organic Compounds																		
Bromodichloromethane [BDCM]	µg/L	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	<1.0	<100	<1.0	<10.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Bromoform	µg/L	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	<1.0	<100	<1.0	<10.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Carbon Tetrachloride	µg/L	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	<0.5	<50.0	<0.5	<5.0	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Chlorobenzene	µg/L	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	<1.0	<100	<1.0	<10.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Chloroethane	µg/L	< 8.0	9.9	17.4	4.7	< 6.8	< 3.0	4	<200	2.9	<20.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0
Chloroform	µg/L	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	<1.0	<100	<1.0	<10.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Chloromethane	µg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-			
Dibromochloromethane [DBCM]	µg/L	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	<1.0	<100	<1.0	<10.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Dibromoethane, 1,2-	µg/L	< 0.3	< 0.3	< 0.3	< 0.3	< 0.3	< 0.3	<0.3	<30.0	<0.3	<3.0	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3
Dibromomethane	µg/L	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	<1.0	<100	<1.0	<10.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Dichlorobenzene, 1,2-	µg/L	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	<0.5	<50.0	<0.5	<5.0	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Dichlorobenzene, 1,3-	µg/L	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	<1.0	<100	<1.0	<10.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Dichlorobenzene, 1,4-	µg/L	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	<1.0	<100	<1.0	<10.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Dichloroethane, 1,1-	µg/L	6.8	5	5.4	1.2	3.7	1.5	1.6	<100	<1.0	<10.0	<1.0	<1.0	<1.0	1.3	<1.0	<1.0	<1.0
Dichloroethane, 1,2-	µg/L	60.9	65.2	53.6	19.5	69.4	21.8	27.9	<100	27.2	14.2	17.7	11.3	7	10.6	4.0	6.9	9.8
Dichloroethylene, 1,1-	µg/L	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	2	<100	<1.0	<10.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Dichloroethylene, 1,2-cis-	µg/L	5	8.3	12.8	1.4	9	3.3	4	<100	4.4	<10.0	4.9	4.5	4.3	3.1	2.1	1.8	2.0
Dichloroethylene, 1,2-trans-	µg/L	15.2	19	14.6	4	11.1	14.3	7.8	<100	9.4	<10.0	6.1	5.3	5.8	3.8	1.2	4.5	2.3
Dichloromethane	µg/L	264	234	174	54.1	12.4	< 3.0	16.7	<300	4.2	<30.0	9.3	3.3	3	3.1	<3.0	<3.0	<3.0
Dichloropropane, 1,2-	µg/L	< 2.5	1.8	< 1.6	< 1.0	1.7	< 1.0	<1.0	<100	1.2	<10.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Dichloropropene, 1,3- (cis+trans)	µg/L	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	<1.0	<100	<1.0	<10.0	<1.0	<1.0	<1.0	<1.0			
Dichloropropene, 1,3-cis-	µg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-			
Dichloropropene, 1,3-trans-	µg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-			
Dichloropropene, 1,3	µg/L															<1.0	<1.0	<1.0
Methyl Tert-butyl Ether [MTBE]	µg/L	< 1.3	7.2	9.6	1.9	< 8.6	< 4.2	4.4	<100	6.2	<10	5.7	5.4	4.6	<1.0	1.0	4.2	4.0
Tetrachloroethane, 1,1,1,2-	µg/L		-	-	-	-	-	4.4	<100	6.2	<10.0	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Tetrachloroethene	µg/L	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	<0.5	<50.0	<0.5	<5.0	< 1.0	< 1.0	< 1.0	< 1.0	<1.0	<1.0	<1.0
Trichloroethane, 1,1,1-	µg/L	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	<1.0	<100	<1.0	<10.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Trichloroethane, 1,1,2-	µg/L	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	<1.0	<100	<1.0	<10.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Trichloroethylene	µg/L	< 2.4	2.7	7	< 1.0	3.9	1.8	2.5	<100	<1.0	<10.0	1.4	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Trichlorofluoromethane	µg/L	< 1.0	1.1	< 1.0	< 1.0	1.4	< 1.0	<1.0	<100	<1.0	<10.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Vinyl Chloride	µg/L	< 1.0	< 3.0	< 4.1	< 1.0	< 10.0	6.8	3	<100	21.6	<10.0	3.8	6.3	6.8	<1.0	1.4	6.9	3.1
Resin and Fatty Acids																		
Acetic Acid	mg/L	3,610	848	-	-	-	-	-	-	-	-	84.4	35.8	48.2	4	<3.0	10.8	<3.0
Butyric Acid	mg/L	1,730	169	-	-	-	-	-	-	-	-	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0
Caporic Acid	mg/L	771	86.7	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Heptanoic Acid	mg/L	124	11.6	-	-	-	-	-	-	-	-	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0
Hexanoic Acid	mg/L	-	-	-	-	-		-	-	-	-	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0
Isobutyric Acid	mg/L	2,540	102	-	-	-	-	-	-	-	-	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0
Isocaproic Acid	mg/L	19	6.6	-	-	-	-	-	-	-	-	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0
Isovaleric Acid	mg/L	359	53.6	-	-	-	-	-	-	-	-	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0
Propionic Acid	mg/L	445	466	-	-	-	-	-	-	-	-	14.6	4.2	<2.0	<2.0	<2.0	<2.0	<2.0
Valeric Acid	mg/L	870	89.9	-	-	-	-	-	-	-	-	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0
VFAs																		
8:2 Fluorotelomer sulfonic acid (8:2 FTS	µg/L	-	-	-	-	-	-	-	-	-	-	<0.02	-	-	-	-	-	-
Perfluorobutane sulfonic acid (PFBS)	µg/L	-	-	-	-	-	-	-	-	-	-	<0.1	-	-	-	-	-	-
Perfluorobutanoic acid (PFBA)	µg/L	-	-	-	-	-	-	-	-	-	-	<1.0	-	-	-	-	-	-
Perfluoroheptanoic acid (PFHpA)	µg/L	-	-	-	-	-	-	-	-	-	-	0.2	-	-	-	-	-	-
Perfluorohexane sulfonic acid (PFHxS)	µg/L	-	-	-	-	-	-	-	-	-	-	0.07	-	-	-	-	-	-
Perfluorohexanoic acid (PFHxA)	µg/L	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-
Perfluorononanoic acid (PFNA)	µg/L	-	-	-	-	-	-	-	-	-	-	<0.02	-	-	-	-	-	-
Perfluorooctane sulfonic acid (PFOS)	µg/L	-

Table H4: Summary of Leachate Water Analytical Results- HISTORICAL to 2025

Sample Location		P1 L MH2				S L WW												
Sample ID		P1 Leachate MH - 2	P1 Leachate MH - 2	P1 Leachate MH - 2	P1 Leachate MH - 2	S LEACHATE WET WELL-20131211	S LEACHATE WET WELL-20140408	S LEACHATE WET WELL-20140610	S LEACHATE WET WELL-20150615	S LEACHATE WET WELL-20150915	S LEACHATE WET WELL-20151203	S LEACHATE WET WELL-20160315	S LEACHATE WET WELL-20160623	S LEACHATE WET WELL-20160915	S LEACHATE WET WELL-20161117	S LEACHATE WET WELL-20170914	S LEACHATE WET WELL-20171204	S Leachate Wet Well
Sample Date (yyyy mm dd)		2025-03-28	2025-06-04	2025-09-15	2025-10-28	2013 12 11	2014 04 08	2014 06 10	2015 06 15	2015 09 15	2015 12 03	2016 03 15	2016 06 23	2016 09 15	2016 11 17	2017 09 14	2017 12 04	2018 03 15
Parameter	**Units**																	
Hydrocarbons																		
VH (C6-C10)	µg/L	481	673	4,820	444	-	< 100	120	130	140	< 100	< 100	-	-	< 100	-	-	136
VPH (C6-C10)	µg/L	430	620	4,500	437	-	< 100	< 100	< 100	< 100	< 100	< 100	-	-	< 100	-	-	< 100
EPH (C10-C19)	µg/L	1,290	2,280	801	696	-	1,230	1,960	770	260	640	380	290	760	520	300	380	1,020
LEPH (C10-C19)	µg/L	1,290	2,280	800	695	-	1,230	1,950	750	250	620	370	280	750	510	290	380	1,020
EPH (C19-C32)	µg/L	1,030	5,720	637	2,420	-	710	1,340	< 250	< 250	< 250	< 250	< 250	< 250	< 250	< 250	< 250	709
HEPH (C19-C32)	µg/L	1,030	5,720	637	2,420	-	710	1,340	< 250	< 250	< 250	< 250	< 250	< 250	< 250	< 250	< 250	709
Benzene	µg/L	1.4	1.5	12.3	<0.5	11.9	2.08	7.19	7.9	8.08	5.73	3.85	-	-	6.16	6.5	7.77	6.1
Ethylbenzene	µg/L	6.8	11.1	60	<1.0	123	26.2	70.4	44.4	43.9	42.1	27.2	-	-	19.5	56.4	68	71.6
Toluene	µg/L	26.8	18.8	116	1.8	18.6	4.61	6.26	2.36	2.08	1.52	1.49	-	-	22.3	1.73	1.82	1.5
Xylenes	µg/L	15.9	19.1	130	5.4	121	23.7	60.1	43.7	40.7	33.9	18.9	-	-	24.6	40.7	50.9	47.9
Styrene	µg/L	<1.0	2.7	<11.0	<1.0	-	-	-	-	-	-	-	-	-	-	-	-	< 1.0
General																		
Alkalinity, Bicarbonate (as CaCO3)	mg/L	3,950	5,730	6,430	5,550	-	-	-	-	8,640	6,960	4,450	-	-	-	-	-	5,380
Alkalinity, Carbonate (as CaCO3)	mg/L	<1.0	<1.0	<1.0	<1.0	-	-	-	-	< 1.0	< 1.0	< 1.0	-	-	-	-	-	< 1.0
Alkalinity, Hydroxide (as CaCO3)	mg/L	<1.0	<1.0	<1.0	<1.0	-	-	-	-	< 1.0	< 1.0	< 1.0	-	-	-	-	-	< 1.0
Alkalinity, Phenolphthalein (as CaCO3)	mg/L	<1.0	<1.0	<1.0	<1.0	-	-	-	-	-	-	-	-	-	-	-	-	< 1.0
Ammonia, Total (as N)	µg/L	490	665	854	987	128,000	65,400	46,500	189,000	255,000	224,000	99,200	119,000	192,000	142,000	90,800	71,800	71,600
Biochemical Oxygen Demand	mg/L	613	154	62	57.2	-	-	-	-	-	-	-	-	-	-	-	-	201
Bromide	mg/L	3.17	<1.00	2.67	1.96	9.1	4.6	3	7.1	8.3	6.9	4.7	4.5	8.1	1.3	7.5	7	< 2.50
Chemical Oxygen Demand	mg/L	1,380	1,110	1,200	1,210	1,090	676	398	982	1,130	996	705	686	1,110	967	1,110	1,020	784
Chloride	mg/L	549	834	1,150	1,490	909	524	352	803	924	886	598	613	890	168	888	903	815
Dissolved Organic Carbon	mg/L	373	249	382	394													
Electrical Conductivity (Lab)	µS/cm																	
Fluoride	µg/L	<1.00	<1.00	<1.00	<1.00	2,200	< 1,000	668	< 2,000	< 2,000	< 2,000	< 1,000	< 1,000	< 2,000	< 400	< 10,000	< 2,000	< 2,500
Hardness as CaCO3 (filtered)	mg/L																	
Kjeldahl Nitrogen Total	mg/L	-	-	-	933	-	-	-	-	-	-	-	-	-	-	-	-	-
Nitrate (as N)	µg/L	<0.100	0.121	<0.100	<0.100	< 500	< 250	< 250	< 500	< 500	< 500	< 250	< 250	< 500	< 100	< 500	< 500	< 250
Nitrite (as N)	µg/L	<0.100	<0.100	<0.100	<0.100	-	-	-	-	-	-	-	-	-	-	-	-	< 250
Ortho-Phosphate	mg/L	4.75	2.69	9.55	6.42	7.66	3.37	3.05	6.68	8.29	7.03	3.71	3.98	9.72	22	7.43	8.23	-
pH (Lab)																		
Phosphate	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	6.91
Solids, Total Dissolved	mg/L	-	-	-	-													
Phosphorus (filtered)	ug/L																	
Sulfate	mg/L	84.6	19.4	10.9	102	1,860	1,190	533	2,370	2,310	1,620	857	1,380	2,920	252	1,950	2,040	2,080
Sulfide	mg/L	6.93	7.07	3.58	2.22	-	-	-	-	-	-	-	-	-	-	-	-	87.9
Total Alkalinity	mg/L	3,950	5,730	6,430	5,550	-	3,250	2,990	7,730	8,640	6,960	4,450	4,030	9,780	24,600	5,680	6,440	5,380
Total Organic Carbon	mg/L	-	-	-	417	273	-	-	-	-	-	-	-	-	-	-	-	-
Total Phosphorous as P	mg/L	8.36	10.6	12	9.34	-	-	-	-	-	-	-	-	-	-	-	-	7.35
Dissolved Metals																		
Antimony	µg/L	6.44	11.6	11.7	11.6	-	3.9	15.5	19	27.4	16.1	7.8	10	34.7	12.4	18	8	25.9
Aluminium	µg/L	136	169	215	174	-	96	103	82	77	66	62	91	99	100	199	170	172
Arsenic	µg/L	16.8	22.5	13.7	12.5	-	17.7	46.7	60.9	75.3	46.9	21.7	29.7	83.9	35.9	45.2	32.7	73.5
Barium	µg/L	216	258	308	223	-	80	166	247	270	224	125	181	250	212	193	152	196
Beryllium	µg/L	<0.050	<0.050	<0.100	<0.050	-	< 10	< 20	< 25	< 50	< 25	< 10	< 15	< 50	< 20	< 25	< 1.0	< 0.10
Bismuth	µg/L	<0.050	<0.050	<0.100	<0.050	-	-	-	-	< 2,000	< 1,000	< 400	< 600	< 2,000	< 800	< 1,000	< 0.50	< 0.10
Boron	µg/L	5,550	5,610	7,870	7,040	-	1,650	2,170	2,670	3,300	3,050	1,980	2,210	2,900	3,120	2,490	2,250	2,790
Cadmium	µg/L	0.0155	<0.0100	<0.0200	0.0136	-	< 0.50	< 0.50	< 0.10	< 0.10	< 0.10	< 0.050	< 0.050	< 0.10	< 0.050	< 0.050	< 0.050	0.014
Calcium	mg/L	286	330	284	222	-	60.6	64.2	94.8	78.8	73.5	79.6	142	68.3	88.1	73.4	57.8	101
Chromium	µg/L	64.1	88.3	128	132	-	16.6	26.2	43.2	55.1	44.4	18.1	21.2	58.3	30.1	28.5	29	36.6
Cobalt	µg/L	14.9	19.1	27.3	27	-	6.4	7.2	13.8	15.5	14.9	7.6	7.7	13.8	13.3	6.6	5.7	7.37
Copper	µg/L	1.05	0.73	<1.00	0.88	-	< 5.0	< 5.0	< 4.0	< 4.0	< 4.0	< 2.0	< 2.0	< 4.0	< 2.0	< 2.0	3.4	1.27
Iron	µg/L	698	989	1,580	2,150	-	198	< 120	< 150	< 300	< 150	70	< 90	< 300	< 120	< 150	< 100	89
Lead	µg/L	<0.250	<0.250	<0.500	<0.250	-	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 0.50	< 0.20
Lithium	µg/L	111	117	155	148	-	< 50	75	< 50	< 100	< 50	50	55	< 100	58	75	71	96.5
Magnesium	mg/L	259,000	373,000	369,000	324,000	-	178	294	319	374	344	250	276	413	313	302	312	344
Manganese	µg/L	2,270	2,050	1,670	1,350	-	251	335	320	297	308	460	538	207	364	433	300	581
Mercury	µg/L	<0.010	<0.010	<0.010	<0.010	-	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.25	< 0.010
Molybdenum	µg/L	1.82	1.82	2.76	2.79	-	3.2	4.3	3.1	3.3	3	2.6	1.9	4.1	2.4	3.4	2.7	4.76
Nickel	µg/L	91.4	123	181	192	-	26.8	30.2	36	40	37	23.7	25	41	33.8	32.8	30.7	28.6
Phosphrous	µg/L	7,440	11,900	12,800	9,910	-	-	-	-	9,000	7,100	3,890	4,510	10,400	6,100	7,600	9,180	11,100
Potassium	mg/L	346,000	463,000	551,000	519,000	-	-	-	-	426	364	224	270	370	402	307	285	280
Selenium	µg/L	1.6	3.94	3.35	4.34	-	< 10	< 10	11	3.6	2.1	8.3	1.1	2.1	6.19	14.5	18.3	1.28
Silicon	µg/L	21,200	21,200	23,100	19,900	-	-	-	-	17,300	16,200	12,000	14,300	17,300	16,600	12,400	12,400	20,900
Silver	µg/L	<0.050	<0.050	<0.100	<0.050	-	< 0.10	< 0.10	< 0.20	< 0.20	< 0.20	< 0.10	< 0.10	< 0.20	< 0.10	< 0.10	0.14	< 0.050
Sodium	mg/L	849	1,030	1,310	1,290	-	1,850	3,100	3,590	4,490	3,530	1,820	2,250	5,330	2,970	3,560	3,680	3,530
Strontium	µg/L	3,060	3,670	3,590	3,380	-	-	-	-	3,390	3,020	2,360	4,180	3,530	3,200	2,870	2,440	4,270
Sulphur	µg/L	53,200	19,300	20,900	40,200	-	-	-	2,160,000	1,270,000	1,780,000	603,000	496,000	3,380,000	752,000	1,590,000	1,460,000	1,270,000
Tellurium	µg/L	<0.250	<0.250	<0.500	<0.250	-	-	-	< 4.0	< 4.0	< 4.0	< 2.0	< 2.0	-	-	< 2.0	< 2.0	< 0.50
Thallium	µg/L	<0.0200	<0.0200	<0.0400	<0.0200	-	< 1.0	< 1.0	< 0.20	< 0.20	< 0.20	< 0.10	< 0.10	< 0.20	< 0.10	< 0.10	< 0.10	< 0.020
Thorium	µg/L	0.052	0.06	<0.100	<0.050	-	-	-	< 2.0	< 2.0	< 2.0	< 1.0	< 1.0	-	-	< 1.0	< 1.0	< 0.10
Tin	µg/L	5.62	5.89	11.6	14.4	-	-	-	-	< 300	< 150	< 60	< 90	< 300	< 120	< 150	28.6	56.6
Titanium	µg/L	60.8	80	123	122	-	62	84	129	150	132	52	55	210	103	77	61.4	130
Tungsten	µg/L	4.02	3.33	5.81	7.33	-	-	-	-	-	-	-	-	-	-	-	-	3.5
Uranium	µg/L	3.62	2.19	1.89	3.49	-	23.8	13.4	2.88	2.61	3.12	8.51	8.23	3.24	3.06	15.4	9.8	22
Vanadium	µg/L	35.7	48.6	65.1	66.9	-	< 60	< 120	< 150	< 300	< 150	< 60	< 90	< 300	< 120	< 150	20.1	24.1
Zinc	µg/L	7.4	5.3	<10.0	5.3	-	< 10	< 20	< 25	< 50	< 25	< 10	< 15	< 50	< 20	< 25	< 10	< 4.0
Zirconium	µg/L	22.5	29.6	49	56.8	-	-	-	46.4	60.9	46.2	19.6	20.5	-	-	37.3	37.3	52.2
Polycyclic Aromatic Hydrocarbons																		
Acenaphthene	µg/L	0.116	0.075	0.073	<0.050	-	0.358	0.42	0.454	0.504	0.457	0.465	0.351	0.368	0.384	0.389	0.42	0.422
Acenaphthylene	µg/L	<0.200	<0.200	<0.200	<0.200	-	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	0.011	< 0.200
Acridine	µg/L	<0.050	0.177	0.084	0.083	-	< 0.080	< 0.070	< 0.050	< 0.050	< 0.070	< 0.050	< 0.070	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050
Anthracene	µg/L	<0.010	<0.010	<0.010	<0.010	-	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	0.028	0.023
Benz(a)anthracene	µg/L	<0.010	<0.010	<0.010	<0.010	-	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.020	< 0.010
Benzo(a)pyrene	µg/L	<0.010	<0.010	<0.010	<0.010	-	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	0.0113	< 0.0050	0.005	0.0052	< 0.010
Benzo(b)fluoranthene	µg/L	-	-	-	-	-	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	-	-	-
Benzo(b+j)fluoranthene	µg/L	<0.050	<0.050	<0.050	<0.050	-	-	-	-	-	-	-	-	-	-	-	-	< 0.050
Benzo(g,h,i)perylene	µg/L	<0.050	<0.050	<0.050	<0.050	-	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.010	< 0.050
Benzo(k)fluoranthene	µg/L	<0.050	<0.050	<0.050	<0.050	-	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.010	< 0.050
Chloronaphthalene, 2-	µg/L	<0.100	<0.100	<0.100	<0.100	-	-	-	-	-	-	-	-	-	-	-	-	< 0.100
Chrysene	µg/L	<0.050	<0.050	<0.050	<0.050	-	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.020	< 0.050
Dibenz(a,h)anthracene	µg/L	<0.010	<0.010	<0.010	<0.010	-	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.010
Fluoranthene	µg/L	<0.030	0.038	<0.030	<0.030	-	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	0.065	0.07	< 0.030
Fluorene	µg/L	0.064	0.051	<0.050	<0.050	-	0.225	0.212	0.235	0.333	0.236	0.27	0.261	0.218	0.196	0.299	0.29	0.245
Indeno(1,2,3-cd)pyrene	µg/L	<0.050	<0.050	<0.050	<0.050	-	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.010	< 0.050
Methylnaphthalene, 1-	µg/L	0.131	0.121	0.108	<0.100	-	-	-	-	-	-	-	-	-	-	-	-	1.11
Methylnaphthalene, 2-	µg/L	0.125	0.15	0.126	<0.100	-	-	-	-	-	-	-	-	-	-	-	-	0.946
Naphthalene	µg/L	0.655	0.938	0.934	0.326	-	3.6	4.91	10.8	3.41	11.8	4.43	2.99	9.37	5.82	3.36	3.22	3.56
Phenanthrene	µg/L	<0.100	<0.100	<0.100	<0.100	-	0.272	0.261	0.205	0.157	0.185	0.189	0.268	0.203	0.161	0.327	0.34	0.302
Pyrene	µg/L	<0.020	0.049	<0.020	<0.020	-	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	0.064	0.065	0.032
Quinoline	µg/L	<0.050	0.058	<0.110	0.064	-	< 0.050	< 0.050	< 0.20	< 0.080	< 0.050	< 0.050	< 0.090	< 0.050	< 0.20	< 0.070	< 0.090	< 0.050
Volatile Organic Compounds																		
Bromodichloromethane [BDCM]	µg/L	<1.0	<1.0	<10.0	<1.0	< 2.0	< 1.0	-	< 1.0	< 1.0	< 1.0	< 1.0	-	-	< 1.0	< 1.0	< 1.0	< 1.0
Bromoform	µg/L	<1.0	<1.0	<10.0	<1.0	< 2.0	< 1.0	-	< 1.0	< 1.0	< 1.0	< 1.0	-	-	< 1.0	< 1.0	< 1.0	< 1.0
Carbon Tetrachloride	µg/L	<0.5	<0.5	<5.0	<0.5	< 1.0	< 0.50	-	< 0.50	< 0.50	< 0.50	< 0.50	-	-	< 0.50	< 0.50	< 0.50	< 0.5
Chlorobenzene	µg/L	<1.0	<1.0	<10.0	<1.0	< 2.0	< 1.0	-	2.3	2.1	1.2	< 1.0	-	-	< 1.0	< 1.0	< 1.0	< 1.0
Chloroethane	µg/L	<2.0	<2.0	<20.0	<2.0	< 2.0	< 1.0	-	1.4	1.1	< 1.0	< 1.0	-	-	< 1.0	< 1.0	< 1.0	< 2.0
Chloroform	µg/L	<1.0	<1.0	<10.0	<1.0	< 2.0	< 1.0	-	< 1.0	< 1.0	< 1.0	< 1.0	-	-	< 1.0	< 1.0	< 1.0	< 1.0
Chloromethane	µg/L	-	-	-	-	< 10	< 5.0	-	< 5.0	< 5.0	< 5.0	< 5.0	-	-	< 5.0	< 5.0	< 5.0	-
Dibromochloromethane [DBCM]	µg/L	<1.0	<1.0	<10.0	<1.0	< 2.0	< 1.0	-	< 1.0	< 1.0	< 1.0	< 1.0	-	-	< 1.0	< 1.0	< 1.0	< 1.0
Dibromoethane, 1,2-	µg/L	<0.3	<0.3	<3.0	<0.3	-	-	-	-	-	-	-	-	-	-	-	-	< 0.3
Dibromomethane	µg/L	<1.0	<1.0	<10.0	<1.0	-	-	-	-	-	-	-	-	-	-	-	-	< 1.0
Dichlorobenzene, 1,2-	µg/L	<0.5	<0.5	<5.0	<0.5	< 1.4	< 0.70	-	< 0.70	< 0.70	< 0.70	< 0.70	-	-	< 0.70	< 0.50	< 0.50	< 0.5
Dichlorobenzene, 1,3-	µg/L	<1.0	<1.0	<10.0	<1.0	< 2.0	< 1.0	-	< 1.0	< 1.0	< 1.0	< 1.0	-	-	< 1.0	< 1.0	< 1.0	< 1.0
Dichlorobenzene, 1,4-	µg/L	<1.0	<1.0	<10.0	<1.0	2.9	< 1.0	-	2	2.2	1.3	1.1	-	-	< 1.0	2.2	2.4	< 2.5
Dichloroethane, 1,1-	µg/L	<1.0	<1.0	<10.0	<1.0	5.2	< 1.0	-	< 1.0	< 1.0	< 1.0	1.1	-	-	< 1.0	1.6	2.2	1.8
Dichloroethane, 1,2-	µg/L	4.7	5.2	18.7	5.1	< 2.0	< 1.0	-	< 1.0	< 1.0	< 1.0	< 1.0	-	-	< 1.0	< 1.0	< 1.0	< 1.0
Dichloroethylene, 1,1-	µg/L	<1.0	<1.0	<10.0	<1.0	< 2.0	< 1.0	-	< 1.0	< 1.0	< 1.0	< 1.0	-	-	< 1.0	< 1.0	< 1.0	< 1.0
Dichloroethylene, 1,2-cis-	µg/L	1.7	2.8	<10.0	1.1	< 2.0	< 1.0	-	< 1.0	< 1.0	< 1.0	< 1.0	-	-	< 1.0	< 1.0	< 1.0	< 1.0
Dichloroethylene, 1,2-trans-	µg/L	2.7	2.7	17.9	2.1	< 2.0	< 1.0	-	< 1.0	< 1.0	< 1.0	< 1.0	-	-	< 1.0	< 1.0	< 1.0	< 1.0
Dichloromethane	µg/L	<3.0	<3.0	<30.0	<3.0	< 10	< 5.0	-	< 5.0	< 5.0	< 5.0	< 5.0	-	-	< 5.0	< 5.0	< 5.0	< 3.0
Dichloropropane, 1,2-	µg/L	<1.0	<1.0	<10.0	<1.0	< 2.0	< 1.0	-	< 1.0	< 1.0	< 1.0	< 1.0	-	-	< 1.0	< 1.0	< 1.0	< 1.0
Dichloropropene, 1,3- (cis+trans)	µg/L	<1.0	<1.0	<10.0	<1.0	< 2.8	< 1.4	-	< 1.4	< 1.4	< 1.4	< 1.4	-	-	< 1.4	< 1.0	< 1.0	< 1.0
Dichloropropene, 1,3-cis-	µg/L	-	-	-	-	< 2.0	< 1.0	-	< 1.0	< 1.0	< 1.0	< 1.0	-	-	< 1.0	< 0.50	< 0.50	-
Dichloropropene, 1,3-trans-	µg/L	-	-	-	-	< 2.0	< 1.0	-	< 1.0	< 1.0	< 1.0	< 1.0	-	-	< 1.0	< 0.50	< 0.50	-
Dichloropropene, 1,3	µg/L																	
Methyl Tert-butyl Ether [MTBE]	µg/L	3	3.1	<21.3	<3.5	-	-	-	-	-	-	-	-	-	-	-	-	< 1.0
Tetrachloroethane, 1,1,1,2-	µg/L	<0.5	<0.5	<5.0	<0.5	< 2.0	< 1.0	-	< 1.0	< 1.0	< 1.0	< 1.0	-	-	< 1.0	< 1.0	< 1.0	-
Tetrachloroethene	µg/L	<1.0	<1.0	<10.0	<1.0	< 2.0	< 1.0	-	< 1.0	< 1.0	< 1.0	< 1.0	-	-	< 1.0	< 0.20	< 0.20	< 0.5
Trichloroethane, 1,1,1-	µg/L	<1.0	<1.0	<10.0	<1.0	< 2.0	< 1.0	-	< 1.0	< 1.0	< 1.0	< 1.0	-	-	< 1.0	< 1.0	< 1.0	< 1.0
Trichloroethane, 1,1,2-	µg/L	<1.0	<1.0	<10.0	<1.0	< 2.0	< 1.0	-	< 1.0	< 1.0	< 1.0	< 1.0	-	-	< 1.0	< 0.50	< 0.50	< 1.0
Trichloroethylene	µg/L	<1.0	<1.0	<10.0	<1.0	< 2.0	< 1.0	-	< 1.0	< 1.0	< 1.0	< 1.0	-	-	< 1.0	< 1.0	< 1.0	< 1.0
Trichlorofluoromethane	µg/L	<1.0	<1.0	<10.0	<1.0	< 2.0	< 1.0	-	< 1.0	< 1.0	< 1.0	< 1.0	-	-	< 1.0	< 1.0	< 1.0	< 1.0
Vinyl Chloride	µg/L	2.4	7.5	<10.0	<4.2	< 2.0	< 1.0	-	< 1.0	< 1.0	< 1.0	< 1.0	-	-	< 1.0	< 0.40	< 0.50	< 1.0
Resin and Fatty Acids																		
Acetic Acid	mg/L	256	14.3	<3.0	<3.0	-	-	-	-	-	-	-	-	-	-	-	-	-
Butyric Acid	mg/L	16.6	<2.0	<2.0	<2.0	-	-	-	-	-	-	-	-	-	-	-	-	-
Caporic Acid	mg/L	10.8	<2.0	<2.0	<2.0	-	-	-	-	-	-	-	-	-	-	-	-	-
Heptanoic Acid	mg/L	<2.0	<2.0	<2.0	<2.0	-	-	-	-	-	-	-	-	-	-	-	-	-
Hexanoic Acid	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Isobutyric Acid	mg/L	18.5	<2.0	<2.0	<2.0	-	-	-	-	-	-	-	-	-	-	-	-	-
Isocaproic Acid	mg/L	2.5	<2.0	<2.0	<2.0	-	-	-	-	-	-	-	-	-	-	-	-	-
Isovaleric Acid	mg/L	9	<2.0	<2.0	<2.0	-	-	-	-	-	-	-	-	-	-	-	-	-
Propionic Acid	mg/L	17.7	<2.0	<2.0	<2.0	-	-	-	-	-	-	-	-	-	-	-	-	-
Valeric Acid	mg/L	7.1	<2.0	<2.0	<2.0	-	-	-	-	-	-	-	-	-	-	-	-	-
VFAs																		
8:2 Fluorotelomer sulfonic acid (8:2 FTS	µg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Perfluorobutane sulfonic acid (PFBS)	µg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Perfluorobutanoic acid (PFBA)	µg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Perfluoroheptanoic acid (PFHpA)	µg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Perfluorohexane sulfonic acid (PFHxS)	µg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Perfluorohexanoic acid (PFHxA)	µg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Perfluorononanoic acid (PFNA)	µg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Perfluorooctane sulfonic acid (PFOS)	µg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Perfluorooctanoic acid (PFOA)	µg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Perfluoropentanoic acid (PFPeA)	µg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Potassium Perfluorobutane Sulfonate	µg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Associated CARO file(s) available on request
Associated Exova file(s): 506479, 507801, 509233, 600276,
All terms defined within the body of Keltech's report.
< concentration less than indicated detection limit or RPD
- analysis not conducted.
n/a - no applicable standard/guideline.
RPD - relative percent difference

Table H4: Summary of Leachate Water Analytical Results- HISTORICAL to 2025

Sample Location		S L WW																
Sample ID		S Leachate Wet Well	S Leachate Wet Well-20180524	S Leachate Wet Well	S Leachate Wet Well-20180816	S Leachate Wet Well	S Leachate Wet Well-20181108	S Leachate Wet Well	S Leachate Wet Well-20190315	S Leachate Wet Well	S Leachate Wet Well-20190603	S Leachate Wet Well	S Leachate Wet Well	S Leachate Wet Well	S Leachate Wet Well	S Leachate Wet Well	S Leachate Wet Well	S Leachate Wet Well
Sample Date (yyyy mm dd)		2018 05 24	2018 05 24	2018 08 16	2018 08 16	2018 11 08	2018 11 08	2019 03 15	2019 03 15	2019 06 03	2019 06 03	2019 09 03	2019 09 03	2019 10 31	2019 10 31	2020 03 05	2020 06 03	2020 09 29
Parameter	**Units**																	
Hydrocarbons																		
VH (C6-C10)	µg/L	159	159	186	186	219	219	206	206	127	127	270	270	200	200	237	< 100	120
VPH (C6-C10)	µg/L	< 100	< 100	< 100	< 100	< 100	< 100	< 100	< 100	< 100	< 100	< 100	< 100	< 100	< 100	< 100	< 100	< 100
EPH (C10-C19)	µg/L	804	804	312	312	484	484	1,020	1,020	458	458	2,580	2,580	600	600	337	< 250	2,300
LEPH (C10-C19)	µg/L	799	799	306	306	480	480	1,020	1,020	452	452	2,580	2,580	592	-	334	< 250	2,290
EPH (C19-C32)	µg/L	665	665	< 250	< 250	891	891	604	604	334	334	3,470	3,470	380	380	268	439	785
HEPH (C19-C32)	µg/L	665	665	< 250	< 250	891	891	604	604	334	334	3,470	3,470	380	-	267	439	785
Benzene	µg/L	4.8	4.8	7.9	7.9	8.7	8.7	5.5	5.5	4	4	9.7	9.7	11.3	11.3	4.1	4.1	5.9
Ethylbenzene	µg/L	80.3	80.3	74.6	74.6	61.6	61.6	109	109	82.1	82.1	91.4	91.4	93.1	93.1	84.7	60.1	70.7
Toluene	µg/L	4	4	3.2	3.2	2.3	2.3	3.4	3.4	< 1.0	< 1.0	2.9	2.9	2.4	2.4	3.6	< 1.6	< 1.0
Xylenes	µg/L	60.1	60.1	61.4	61.4	95.9	95.9	72.8	72.8	46.6	46.6	120	120	98.2	98.2	58.9	34.7	41.8
Styrene	µg/L	< 1.0	-	< 1.0	-	< 1.0	-	< 1.0	-	< 1.0	-	< 1.0	-	< 2.0	-	< 1.0	< 1.0	< 1.0
General																		
Alkalinity, Bicarbonate (as CaCO3)	mg/L	3,890	3,890	5,470	5,470	6,690	6,690	3,650	3,650	3,260	3,260	7,300	7,300	7,190	7,190	2,550	2,610	4,400
Alkalinity, Carbonate (as CaCO3)	mg/L	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	222	222	123	123	< 1.0	< 1.0	484	484	17.4	22.7	< 1.0
Alkalinity, Hydroxide (as CaCO3)	mg/L	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Alkalinity, Phenolphthalein (as CaCO3)	mg/L	< 1.0	-	< 1.0	-	< 1.0	-	111	-	61.6	-	< 1.0	-	242	-	8.7	11.4	< 1.0
Ammonia, Total (as N)	µg/L	54,500	54,500	56,200	56,200	48,800	48,800	17,800	17,800	28,600	28,600	25,900	25,900	59,500	59,500	25,000	28,600	103,000
Biochemical Oxygen Demand	mg/L	174	-	227	-	329	-	195	-	114	-	323	-	354	-	111	174	-
Bromide	mg/L	< 1.00	< 1.00	< 10.0	< 10.0	< 10.0	< 10.0	3.16	3.16	< 10.0	< 10.0	< 10.0	< 10.0	< 1.00	< 1.00	2.57	2.73	1.77
Chemical Oxygen Demand	mg/L	711	711	826	826	988	988	646	646	617	617	935	935	865	865	512	585	890
Chloride	mg/L	523	523	871	871	980	980	698	698	587	587	949	949	908	908	487	540	673
Dissolved Organic Carbon	mg/L																	
Electrical Conductivity (Lab)	µS/cm																	
Fluoride	µg/L	< 1,000	< 1,000	< 1,000	< 1,000	< 1,000	< 1,000	< 1,000	< 1,000	< 1,000	< 1,000	< 10,000	< 10,000	< 1,000	< 1,000	490	< 1,000	< 1,000
Hardness as CaCO3 (filtered)	mg/L																	
Kjeldahl Nitrogen Total	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Nitrate (as N)	µg/L	< 100	< 100	< 100	< 100	< 100	< 100	< 100	< 100	< 1,000	< 1,000	< 1,000	< 1,000	< 100	< 100	< 10	< 100	< 100
Nitrite (as N)	µg/L	< 100	-	< 100	-	< 100	-	< 100	-	< 100	-	< 1,000	-	< 100	-	< 10	< 100	< 100
Ortho-Phosphate	mg/L	-	6.35	-	6.24	-	6.58	5.4	5.4	-	2.66	8.72	8.72	1.91	1.91	3.59	3.67	3.93
pH (Lab)																		
Phosphate	mg/L	6.35	-	6.24	-	6.58	-	-	-	2.66	-	-	-	-	-	-	-	-
Solids, Total Dissolved	mg/L																	
Phosphorus (filtered)	ug/L																	
Sulfate	mg/L	1,440	1,440	2,240	2,240	2,990	2,990	1,950	1,950	1,570	1,570	2,500	2,500	2,370	2,370	1,200	1,350	1,260
Sulfide	mg/L	63	-	93.8	-	85.4	-	46.5	-	60.9	-	139	-	178	-	63.9	49.1	95.7
Total Alkalinity	mg/L	3,890	3,890	5,470	5,470	6,690	6,690	3,870	3,870	3,390	3,390	7,300	7,300	7,670	7,670	2,570	2,630	4,400
Total Organic Carbon	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Total Phosphorous as P	mg/L	7.43	-	9.07	-	8.24	-	6.08	-	5.94	-	9.99	-	9.99	-	3.84	5.24	6.36
Dissolved Metals																		
Antimony	µg/L	14.8	14.8	26.8	26.8	26.5	26.5	11.6	11.6	6.14	6.14	13.7	13.7	33.9	33.9	6.82	8.65	15.1
Aluminium	µg/L	154	154	187	187	177	177	124	124	129	129	186	186	149	149	66.7	91.7	107
Arsenic	µg/L	42.1	42.1	87.4	87.4	91.3	91.3	33	33	28.3	28.3	40.1	40.1	134	134	26.2	35.8	51.7
Barium	µg/L	132	132	179	179	133	133	85.6	85.6	89.2	89.2	145	145	177	177	56.7	77.7	157
Beryllium	µg/L	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	0.057	0.057	0.02	< 0.010	0.035
Bismuth	µg/L	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.010	< 0.010	< 0.010	< 0.010	0.011
Boron	µg/L	1,610	1,610	2,090	2,090	1,860	1,860	1,390	1,390	1,470	1,470	2,140	2,140	1,740	1,740	1,160	< 2.0	2,070
Cadmium	µg/L	0.011	0.011	0.015	0.015	0.013	0.013	< 0.010	< 0.010	< 0.010	< 0.010	0.014	0.014	0.0119	0.0119	0.0042	0.0056	0.0079
Calcium	mg/L	63.1	63.1	70.9	70.9	47.5	47.5	54.5	54.5	59	59	43.2	43.2	61.4	61.4	38.6	< 0.04	79
Chromium	µg/L	21.3	21.3	40.1	40.1	44.3	44.3	18.2	18.2	17.8	17.8	54.2	54.2	52.5	52.5	13.2	14.3	33.9
Cobalt	µg/L	4.62	4.62	5.98	5.98	4.93	4.93	2.72	2.72	2.98	2.98	5.52	5.52	7.47	7.47	2.47	2.57	7.88
Copper	µg/L	< 0.40	< 0.40	1.1	1.1	0.48	0.48	0.63	0.63	0.6	0.6	0.45	0.72	0.48	0.48	0.42	0.57	0.25
Iron	µg/L	59	59	69	69	56	56	46	46	64	64	70	70	87.4	87.4	32.4	38.2	40.9
Lead	µg/L	< 0.20	< 0.20	< 0.20	< 0.20	0.26	0.26	< 0.20	< 0.20	< 0.20	< 0.20	0.2	0.2	0.157	0.157	0.068	< 0.050	0.106
Lithium	µg/L	63.6	63.6	69.7	69.7	55.8	55.8	66.1	66.1	52.4	52.4	63	63	54.2	54.2	36.9	< 0.050	55.5
Magnesium	mg/L	187	187	228	228	248	248	220	220	174	174	202	202	217	217	143	134	190
Manganese	µg/L	451	451	273	273	180	180	215	215	228	228	133	133	192	192	174	211	344
Mercury	µg/L	< 0.010	< 0.010	< 0.020	< 0.020	< 0.200	< 0.200	< 0.100	< 0.100	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010
Molybdenum	µg/L	3.71	3.71	5.46	5.46	4.81	4.81	4.22	4.22	2.42	2.42	5.8	5.8	6.04	6.04	3.23	2.67	2.71
Nickel	µg/L	22.3	22.3	30.6	30.6	32.2	32.2	17.8	17.8	17.3	17.3	36.9	36.9	34.1	34.1	12.5	13.5	23.7
Phosphrous	µg/L	7,970	7,970	10,300	10,300	9,850	9,850	6,880	6,880	6,440	6,440	10,300	10,300	9,650	9,650	3,860	4,860	6,040
Potassium	mg/L	223	223	276	276	313	313	195	195	203	203	255	255	289	289	141	158	245
Selenium	µg/L	0.79	0.79	1.69	1.69	1.27	1.27	0.76	0.76	0.78	0.78	26.6	26.6	1.25	1.25	0.73	< 0.10	0.89
Silicon	µg/L	12,900	12,900	15,900	15,900	13,000	13,000	10,300	10,300	10,300	10,300	14,500	14,500	14,500	14,500	7,810	10,000	15,300
Silver	µg/L	< 0.050	< 0.050	< 0.050	< 0.050	0.053	0.053	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	0.014	0.014	< 0.010	< 0.010	< 0.010
Sodium	mg/L	2,100	2,100	3,130	3,130	4,450	4,450	2,770	2,770	2,300	2,300	4,380	4,380	4,120	4,120	1,700	1,820	2,770
Strontium	µg/L	2,490	2,490	3,150	3,150	2,250	2,250	2,050	2,050	2,310	2,310	2,220	2,220	2,470	2,470	1,460	1,870	2,440
Sulphur	µg/L	666,000	-	995,000	-	1,420,000	-	810,000	-	625,000	-	3,180,000	-	1,210,000	-	421,000	428,000	663,000
Tellurium	µg/L	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	0.62	0.62	0.132	0.132	0.079	< 0.050	0.121
Thallium	µg/L	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.0040	< 0.0040	< 0.0040	< 0.0040	0.005
Thorium	µg/L	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	0.03	0.03	0.014	< 0.010	0.021
Tin	µg/L	30.6	30.6	67	67	65.2	65.2	24	24	15	15	61.7	61.7	66.3	66.3	15.4	18.8	38.8
Titanium	µg/L	67.6	67.6	119	119	101	101	48.4	48.4	52.2	52.2	120	120	124	124	27.2	32.7	65.1
Tungsten	µg/L	3.7	-	5.2	-	4.9	-	2.6	-	3.1	-	5	-	5.07	-	1.8	< 0.20	3.36
Uranium	µg/L	17.1	17.1	22.7	22.7	39.2	39.2	30.3	30.3	17.9	17.9	27.5	27.5	17.7	17.7	21.3	0.0206	7.62
Vanadium	µg/L	19.3	19.3	28.1	28.1	25.5	25.5	12.4	12.4	15.9	15.9	24.8	24.8	32.1	32.1	7.9	13	14.7
Zinc	µg/L	< 4.0	< 4.0	< 4.0	< 4.0	< 4.0	< 4.0	< 4.0	< 4.0	< 4.0	< 4.0	4.7	4.7	3.8	3.8	1.4	1.4	2.7
Zirconium	µg/L	27.4	27.4	51.3	51.3	52.3	52.3	21.5	21.5	17.6	17.6	55.2	55.2	60	60	12.1	13.8	27
Polycyclic Aromatic Hydrocarbons																		
Acenaphthene	µg/L	0.397	0.397	0.438	0.438	0.276	0.276	0.309	0.309	0.392	0.392	0.389	0.389	0.373	0.373	0.185	0.281	0.58
Acenaphthylene	µg/L	< 0.200	< 0.200	< 0.200	< 0.200	< 0.200	< 0.200	< 0.200	< 0.200	< 0.200	< 0.200	< 0.200	< 0.200	< 0.0200	< 0.0200	< 0.200	< 0.200	< 0.200
Acridine	µg/L	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	0.137	0.137	< 0.050	< 0.050	< 0.0700	< 0.0700	< 0.050	< 0.050	< 0.050
Anthracene	µg/L	0.031	0.031	< 0.010	< 0.010	< 0.010	< 0.010	0.021	0.021	0.031	0.031	0.063	0.063	< 0.0500	< 0.0500	0.015	0.018	0.04
Benz(a)anthracene	µg/L	< 0.010	< 0.010	0.019	0.019	0.021	0.021	< 0.010	< 0.010	0.015	0.015	0.016	0.016	< 0.0200	< 0.0200	< 0.010	< 0.010	< 0.010
Benzo(a)pyrene	µg/L	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	0.023	0.023	0.0054	0.0054	< 0.010	< 0.010	< 0.010
Benzo(b)fluoranthene	µg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Benzo(b+j)fluoranthene	µg/L	< 0.050	-	< 0.050	-	< 0.050	-	< 0.050	-	< 0.050	-	< 0.050	-	< 0.0100	-	< 0.050	< 0.050	< 0.050
Benzo(g,h,i)perylene	µg/L	< 0.050	-	< 0.050	-	< 0.050	-	< 0.050	-	< 0.050	-	< 0.050	-	< 0.0100	-	< 0.050	< 0.050	< 0.050
Benzo(k)fluoranthene	µg/L	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.0100	< 0.0100	< 0.050	< 0.050	< 0.050
Chloronaphthalene, 2-	µg/L	< 0.100	-	< 0.100	-	< 0.100	-	< 0.100	-	< 0.100	-	< 0.100	-	-	-	< 0.100	< 0.100	< 0.100
Chrysene	µg/L	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.0300	< 0.0300	< 0.050	< 0.050	< 0.050
Dibenz(a,h)anthracene	µg/L	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	0.016	0.016	0.017	0.017	< 0.010	< 0.010	< 0.00500	< 0.00500	< 0.010	< 0.010	< 0.010
Fluoranthene	µg/L	< 0.030	< 0.030	0.129	0.129	0.192	0.192	0.096	0.096	0.122	0.122	0.096	0.096	0.112	0.112	0.062	0.091	0.095
Fluorene	µg/L	0.242	0.242	0.312	0.312	0.205	0.205	0.205	0.205	0.269	0.269	0.267	0.267	0.337	0.337	0.124	0.195	0.319
Indeno(1,2,3-cd)pyrene	µg/L	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.0100	< 0.0100	< 0.050	< 0.050	< 0.050
Methylnaphthalene, 1-	µg/L	0.897	-	0.967	-	0.548	-	1.03	-	0.811	-	1.23	-	1.09	-	0.408	0.569	1.03
Methylnaphthalene, 2-	µg/L	0.8	-	0.476	-	0.43	-	1.07	-	0.606	-	1.55	-	0.662	-	0.259	0.302	0.486
Naphthalene	µg/L	3.37	3.37	5.02	5.02	3.44	3.44	5.51	5.51	4.21	4.21	7.64	7.64	6.43	6.43	2.43	3.99	8.56
Phenanthrene	µg/L	0.333	0.333	0.464	0.464	0.365	0.365	0.254	0.254	0.464	0.464	0.401	0.401	0.464	0.464	0.202	0.291	0.368
Pyrene	µg/L	0.039	0.039	0.104	0.104	0.089	0.089	0.07	0.07	0.063	0.063	0.077	0.077	0.1	0.1	0.045	0.054	0.069
Quinoline	µg/L	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.175	< 0.175	< 0.0800	< 0.0800	< 0.050	< 0.050	< 0.050
Volatile Organic Compounds																		
Bromodichloromethane [BDCM]	µg/L	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Bromoform	µg/L	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Carbon Tetrachloride	µg/L	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
Chlorobenzene	µg/L	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Chloroethane	µg/L	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0
Chloroform	µg/L	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Chloromethane	µg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Dibromochloromethane [DBCM]	µg/L	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Dibromoethane, 1,2-	µg/L	< 0.3	-	< 0.3	-	< 0.3	-	< 0.3	-	< 0.3	-	< 0.3	-	< 0.3	-	< 0.3	< 0.3	< 0.3
Dibromomethane	µg/L	< 1.0	-	< 1.0	-	< 1.0	-	< 1.0	-	< 1.0	-	< 1.0	-	< 1.0	-	< 1.0	< 1.0	< 1.0
Dichlorobenzene, 1,2-	µg/L	< 0.5	< 0.5	0.6	0.6	0.6	0.6	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
Dichlorobenzene, 1,3-	µg/L	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Dichlorobenzene, 1,4-	µg/L	< 2.2	< 2.2	3.3	3.3	3.4	3.4	2.9	2.9	2.8	2.8	3.3	3.3	3.1	3.1	< 2.6	2	2.4
Dichloroethane, 1,1-	µg/L	1.5	1.5	3.6	3.6	9.7	9.7	4.1	4.1	2.5	2.5	9.7	9.7	8.3	8.3	2.3	2.2	3.8
Dichloroethane, 1,2-	µg/L	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Dichloroethylene, 1,1-	µg/L	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Dichloroethylene, 1,2-cis-	µg/L	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	1.2	1.2	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Dichloroethylene, 1,2-trans-	µg/L	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Dichloromethane	µg/L	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
Dichloropropane, 1,2-	µg/L	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Dichloropropene, 1,3- (cis+trans)	µg/L	< 1.0	-	< 1.0	-	< 1.0	-	< 1.0	-	< 1.0	-	< 1.0	-	< 1.0	-	< 1.0	< 1.0	< 1.0
Dichloropropene, 1,3-cis-	µg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Dichloropropene, 1,3-trans-	µg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Dichloropropene, 1,3	µg/L																	
Methyl Tert-butyl Ether [MTBE]	µg/L	< 1.0	-	< 1.0	-	< 1.0	-	< 1.0	-	< 1.0	-	< 1.0	-	< 1.0	-	< 1.0	< 1.0	< 1.0
Tetrachloroethane, 1,1,1,2-	µg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-			
Tetrachloroethene	µg/L	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
Trichloroethane, 1,1,1-	µg/L	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Trichloroethane, 1,1,2-	µg/L	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Trichloroethylene	µg/L	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Trichlorofluoromethane	µg/L	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Vinyl Chloride	µg/L	< 1.0	< 1.0	< 1.0	< 1.0	1.1	1.1	< 1.0	< 1.0	< 1.0	< 1.0	1.3	1.3	< 1.8	< 1.8	< 1.0	< 1.0	< 1.0
Resin and Fatty Acids																		
Acetic Acid	mg/L	-	-	-	-	-	-	< 3.0	-	< 3.0	-	3.5	-	< 3.0	-	< 3.0	< 3.0	23.1
Butyric Acid	mg/L	-	-	-	-	-	-	< 2.0	-	< 2.0	-	< 2.0	-	< 2.0	-	< 2.0	< 2.0	10.5
Caporic Acid	mg/L	-	-	-	-	-	-	< 2.0	-	2.3	-	< 2.0	-	< 2.0	-	< 2.0	< 2.0	4.9
Heptanoic Acid	mg/L	-	-	-	-	-	-	< 2.0	-	< 2.0	-	< 2.0	-	< 2.0	-	< 2.0	< 2.0	< 2.0
Hexanoic Acid	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Isobutyric Acid	mg/L	-	-	-	-	-	-	< 2.0	-	< 2.0	-	< 2.0	-	< 2.0	-	< 2.0	< 2.0	4
Isocaproic Acid	mg/L	-	-	-	-	-	-	< 2.0	-	< 2.0	-	< 2.0	-	< 2.0	-	< 2.0	< 2.0	3.5
Isovaleric Acid	mg/L	-	-	-	-	-	-	< 2.0	-	< 2.0	-	< 2.0	-	< 2.0	-	< 2.0	< 2.0	< 2.0
Propionic Acid	mg/L	-	-	-	-	-	-	< 2.0	-	< 2.0	-	< 2.0	-	< 2.0	-	< 2.0	< 2.0	< 2.0
Valeric Acid	mg/L	-	-	-	-	-	-	< 2.0	-	< 2.0	-	< 2.0	-	< 2.0	-	< 2.0	< 2.0	2.7
VFAs																		
8:2 Fluorotelomer sulfonic acid (8:2 FTS	µg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Perfluorobutane sulfonic acid (PFBS)	µg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Perfluorobutanoic acid (PFBA)	µg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Perfluoroheptanoic acid (PFHpA)	µg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Perfluorohexane sulfonic acid (PFHxS)	µg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Perfluorohexanoic acid (PFHxA)	µg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Perfluorononanoic acid (PFNA)	µg/L	-	-	-	-	-	-	-	-	-	-

Table H4: Summary of Leachate Water Analytical Results- HISTORICAL to 2025

Sample Location		S L WW																
Sample ID		S Leachate Wet Well	S Leachate Wet Well	S Leachate Wet Well	S Leachate Wet Well	S Leachate Wet Well	S Leachate Wet Well	S Leachate Wet Well	S Leachate Wet Well	S Leachate Wet Well	S Leachate Wet Well	S Leachate Wet Well	S Leachate Wet Well	S Leachate Wet Well	S Leachate Wetwell	S Leachate Wet Well (LS#2)	S Leachate Wet Well (LS#2)	South Leachate Wet Well (LS#2)
Sample Date (yyyy mm dd)		2020 11 16	2021 03 18	2021 06 17	2021 09 15	2021 10 22	2022 02 04	2022 06 23	2022 09 20	2022 10 20	2023 03 21	2023 05 17	2023 09 28	2023 10 31	2024-05-09	2024-09-06	2024-10-18	2025-03-28
Parameter	**Units**																	
Hydrocarbons																		
VH (C6-C10)	µg/L	215	235	179	114	< 100	125	157	<400	<2880	121	<100	196	<100	147	153	102	101
VPH (C6-C10)	µg/L	< 100	120	< 100	< 100	< 100	<100	<100	<400	<2880	<100	<100	<100	<100	108	127	<100	<100
EPH (C10-C19)	µg/L	424	< 250	483	544	< 2,500	<2500	368	<2500	1040	449	1340	553	575	334	944	1,370	509
LEPH (C10-C19)	µg/L	417	< 250	480	536	< 2,500	<2500	362	<2500	1030	<250	6090	<250	<250	329	936	1,360	504
EPH (C19-C32)	µg/L	322	< 250	685	313	< 2,500	3320	<250	<2500	825	443	1330	547	570	<250	453	8,080	<250
HEPH (C19-C32)	µg/L	322	< 250	685	313	< 2,500	3320	<250	<2500	825	<250	6090	<250	<250	<250	453	8,080	<250
Benzene	µg/L	7.9	6.3	8	9.5	7.4	7	5.7	9.6	10.7	5.7	9.6	6.3	5.7	4.2	3.3	5.6	2.7
Ethylbenzene	µg/L	103	55.3	55	114	97.3	97.4	61	104	94.5	77.6	77.8	55.1	64.2	15.6	13.3	24.0	7.3
Toluene	µg/L	2.4	1.9	1.5	2.1	1.1	1.8	1.8	2.6	<10.0	2.1	2.6	1.7	1.7	<1.0	<1.0	<1.0	<1.0
Xylenes	µg/L	77.8	51.4	44	80.2	66.7	69.7	48	72.8	66.2	58.6	79.6	43.6	56.9	19.0	9.2	20.4	6.3
Styrene	µg/L	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	<1.0	1	1.4	<10.0	1.4	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
General																		
Alkalinity, Bicarbonate (as CaCO3)	mg/L	5680	3910	4,380	5,770	6,070	5560	3980	5340	5590	3600	2970	6620	6240	4,530	4,880	5,400	4,150
Alkalinity, Carbonate (as CaCO3)	mg/L	263	321	306	893	1,220	<1.0	138	1060	580	443	22.3	508	458	<1.0	<1.0	<1.0	<1.0
Alkalinity, Hydroxide (as CaCO3)	mg/L	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Alkalinity, Phenolphthalein (as CaCO3)	mg/L	131	161	153	446	612	<1.0	69.1	529	290	222	11.1	254	229	<1.0	<1.0	<1.0	<1.0
Ammonia, Total (as N)	µg/L	66400	35500	50,300	59,900	71,800	50,600	38,900	69,300	65,700	50,200	41,100	94,400	86,900	148	183	5,400	173
Biochemical Oxygen Demand	mg/L	469	178	123	351	605	291	161	295	313	217	60.7	363	376	<67.6	101	188	36.3
Bromide	mg/L	5.6	< 10.0	1.31	< 1.00	< 10.0	<1.00	2.18	2.24	2.67	<1.00	1.03	<10	<10	<0.10	3.48	88.4	4.08
Chemical Oxygen Demand	mg/L	859	564	642	856	794	752	658	844	887	580	502	868	950	690	702	5.33	612
Chloride	mg/L	834	620	595	788	792	789	654	859	805	640	566	870	880	680	607	719	547
Dissolved Organic Carbon	mg/L														140	122	820	134
Electrical Conductivity (Lab)	µS/cm														14,400	11,200	133	
Fluoride	µg/L	< 1,000	< 1,000	< 1,000	< 1,000	< 1,000	< 1,000	< 1,000	< 1,000	< 1,000	< 1,000	< 1,000	< 1,000	< 1,000	<0.10	<1.00	13,800	<1.00
Hardness as CaCO3 (filtered)	mg/L														2,440	1,460	<1.00	
Kjeldahl Nitrogen Total	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	-				-
Nitrate (as N)	µg/L	< 100	3260	16,600	21,400	< 100	< 100	< 100	< 100	142	3390	3530	< 100	7150	296000	<100	1,930,000	169
Nitrite (as N)	µg/L	< 100	961	7,970	20,000	10,300	< 100	< 100	8,190	< 100	9450	17700	38800	43100	<10	<100	125,000	0.381
Ortho-Phosphate	mg/L	6.14	2.19	1.25	5.13	5.19	-	-	-	-	-	-	-	-				3.04
pH (Lab)															7.75	7.84	17.2	
Phosphate	mg/L	-	-	-	-	-	3.62	0.664	2.87	1.49	11.4	23.2	1.28	0.882	1.91	-	7.84	-
Solids, Total Dissolved	mg/L														10,900	7,910	9,660	-
Phosphorus (filtered)	ug/L														-	3,180	-	
Sulfate	mg/L	1900	1540	1,410	1,730	1,710	1880	1620	1820	1770	1570	1540	2090	1880	2,150	910	1,810	1,090
Sulfide	mg/L	250	114	71.1	85.5	219	156	61.6	179	139	69.1	52.7	158	150	3.47	54.0	57.8	2.57
Total Alkalinity	mg/L	5940	4230	4,680	6,670	7,290	5560	4110	6400	6170	4040	2990	7130	6700	4,530	4,880	5.15	4,150
Total Organic Carbon	mg/L	-	-	-	-	-	88.8	105	153	127	367	90.5	319	189				-
Total Phosphorous as P	mg/L	7.84	5.03	6.07	6.66	7.7	6.15	4.75	6	6.74	4.32	3.76	7.42	7.84	4.61	4.43	4,370	4.52
Dissolved Metals																		
Antimony	µg/L	37.3	14.2	13.4	39.2	32.9	31.5	12.3	30.8	41.4	22.6	10.2	42	39	53.0	56.5	57.0	6.05
Aluminium	µg/L	196	114	160	298	125	359	90.7	100	113	641	54	114	125	14.3	7.31	13.8	45.3
Arsenic	µg/L	81.4	79.4	32.7	95.5	95	74	31.3	65.2	97.2	52.8	29.2	11.7	99.5	42.2	26.1	41.7	21.1
Barium	µg/L	145	90.8	153	175	156	108	95.6	112	144	112	85.9	15.7	170	162	205	191	196
Beryllium	µg/L	< 1.00	0.031	1.72	< 1.00	0.053	<1.00	<0.050	<0.100	<0.100	<0.050	<0.050	0.054	<0.100	<0.100	0.033	<0.050	<0.020
Bismuth	µg/L	< 1.00	0.013	< 1.00	< 1.00	< 0.010	<1.00	<0.050	<0.100	<0.100	<0.050	<0.050	<0.050	<0.100	<0.100	<0.020	<0.050	<0.020
Boron	µg/L	2340	1660	1,930	2,420	2,040	1990	1610	1770	1950	1630	1310	2480	2350	2,670	3,760	3,240	2,760
Cadmium	µg/L	< 0.200	0.0046	< 0.200	< 0.200	0.0082	<0.200	<0.0100	<0.0200	<0.0200	0.0169	0.0114	0.0156	<0.020	0.0511	<0.0040	0.0113	0.0483
Calcium	mg/L	60.3	56.6	141	120	129	69.1	48.1	71.6	85.9	91.5	127	154	136	469	147	289	332
Chromium	µg/L	41.7	24.7	18.1	46.7	42.1	15.3	16.2	32.7	39.7	18	13.1	43.8	21.6	20.9	22.0	29.9	17.9
Cobalt	µg/L	5.11	3.14	5.23	6.37	6.88	3.45	2.78	3.9	6.01	2.67	2.62	7.87	6.33	11.8	12.2	14.4	11.1
Copper	µg/L	< 10.0	0.42	27.1	< 10.0	0.66	<10.0	0.74	<1.00	<1.00	0.5	0.69	0.73	5.39	<1.00	<0.20	<0.50	0.23
Iron	µg/L	< 200	36.4	< 200	< 200	29.3	<200	26.7	23.7	69.2	22.1	19.8	42.6	54.4	203	175	49.5	77
Lead	µg/L	< 5.00	0.092	< 5.00	< 5.00	0.087	<5.00	<0.250	<0.500	<0.500	<0.250	<0.250	<0.250	<0.50	<0.500	<0.100	<0.250	<0.100
Lithium	µg/L	65.9	64.6	68.1	74.6	92.8	76.9	61	62.7	73.9	70.4	63.6	71.4	69.6	57.7	83.0	66.9	84.8
Magnesium	mg/L	229	195	235	262	249	217	199	198	252	215	190	283	287	308	266	294	296,000
Manganese	µg/L	200	137	382	206	204	128	197	104	275	122	155	156	151	153	410	290	334
Mercury	µg/L	< 0.010	< 0.040	< 0.010	< 0.040	< 0.020	< 0.020	< 0.040	< 0.010	< 0.010	< 0.010	< 0.020	< 0.010	< 0.010	<0.010	<0.010	<0.010	<0.010
Molybdenum	µg/L	5.62	4.27	3.78	5.92	4.09	4.73	2.28	2.97	7.98	2.94	1.94	5.56	5.71	7.53	6.4	5.73	2.39
Nickel	µg/L	31	17.6	23	25.3	27.1	17.9	14.4	18.8	26.1	13.6	10.7	29.9	31.1	22.5	20.5	25.0	18
Phosphrous	µg/L	8240	7230	5,280	9,840	8,790	6890	4920	5940	7090	4920	3800	8510	8100	3,230	4,990	6,130	4,390
Potassium	mg/L	271	208	222	283	221	180	195	192	269	182	164	273	251	259	315	306	250,000
Selenium	µg/L	12.2	1.07	< 10.0	< 10.0	1.12	40.5	54	<1.00	1.26	1.17	0.86	1.89	1.58	<1.00	1.21	1.17	0.66
Silicon	µg/L	13700	12100	< 5,000	14,100	15,200	12100	10800	10200	13300	10500	10400	14500	14100	16,400	20,400	18,800	15,800
Silver	µg/L	< 1.00	< 0.010	< 1.00	< 1.00	< 0.010	<1.00	<0.050	<0.100	<0.100	<0.050	0.104	<0.050	<0.100	<0.100	<0.020	<0.050	<0.020
Sodium	mg/L	4000	2810	2,100	4,070	4,370	2900	2080	2630	3840	2570	2060	3850	3940	2,800	2,120	2,790	2,130
Strontium	µg/L	2420	2130	3,030	2,950	3,320	2020	2010	2140	2900	2110	2360	3160	3080	5,120	3,550	4,370	4,320
Sulphur	µg/L	882000	892000	555,000	792,000	1,010,000	723000	889000	566000	788000	751000	563000	925000	704000	730,000	478,000	592,000	330,000
Tellurium	µg/L	< 5.00	< 0.050	13.7	< 5.00	0.169	<5.00	1.13	<0.500	<0.500	<0.250	<0.250	<0.250	<0.500	<0.500	<0.100	<0.250	<0.100
Thallium	µg/L	< 0.400	< 0.0040	< 0.400	< 0.400	< 0.0040	0.451	<0.0200	<0.0400	<0.0400	<0.0200	<0.0200	<0.0200	<0.0400	<0.0400	<0.0080	<0.0200	<0.0080
Thorium	µg/L	< 1.00	0.024	< 1.00	< 1.00	0.02	<1.00	<0.050	<0.100	<0.100	0.098	0.158	0.263	<0.100	<0.100	0.061	0.128	<0.020
Tin	µg/L	93.6	34.6	17.5	127	90.1	93.7	37.3	93.7	129	63.4	33.2	132	82.2	39.5	18.6	20.4	15.8
Titanium	µg/L	99.8	52.3	38	75.2	67.3	71.1	30.5	53.6	75.8	30.7	<25	81.2	75.2	58.7	56.5	80.0	40.4
Tungsten	µg/L	< 20.0	2.54	< 20.0	< 20.0	4.65	<20.0	2.86	4.18	5.34	2.44	2.17	6.04	5.73	4.45	3.62	6.50	3.15
Uranium	µg/L	17.8	15.7	18.3	12	8.94	28.5	17.4	10.5	18.5	27.8	19	11.5	12.6	12.2	7.39	7.01	6.23
Vanadium	µg/L	< 20.0	13.9	< 20.0	< 20.0	17.1	<20.0	10.5	11.1	14.5	6.22	6.03	1.43	1.62	13.2	13.5	17.4	11.6
Zinc	µg/L	< 100	1.1	< 100	< 100	1.2	<100	<5.0	<10.0	<10.0	<5.0	<5.0	<5.0	<10	<10.0	<2.0	<5.0	<2.0
Zirconium	µg/L	30.9	20.3	17.6	37.4	43.9	20.3	17.4	31.7	43.1	17.9	12.5	43	41.1	29.6	26.5	36.6	22.2
Polycyclic Aromatic Hydrocarbons																		
Acenaphthene	µg/L	0.354	0.229	0.265	0.503	< 0.545	<0.583	0.403	<0.500	0.356	0.384	0.337	0.429	0.271	0.404	0.802	0.760	0.629
Acenaphthylene	µg/L	< 0.200	< 0.200	< 0.995	< 0.200	< 2.18	<2.33	<0.200	<2.00	<0.200	<0.200	<0.200	<0.200	<0.200	<0.200	<0.200	<0.200	<0.200
Acridine	µg/L	< 0.050	< 0.050	< 0.249	< 0.050	< 0.545	<0.583	<0.050	<0.500	<0.050	<0.050	<0.052	<0.050	<0.050	<0.050	0.095	0.099	<0.050
Anthracene	µg/L	0.037	0.019	< 0.050	0.026	< 0.109	<0.117	<0.010	<0.100	<0.010	<0.010	<0.010	<0.010	<0.010	0.017	0.018	0.055	0.02
Benz(a)anthracene	µg/L	0.021	< 0.010	< 0.050	< 0.010	< 0.109	<0.117	<0.010	<0.100	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010
Benzo(a)pyrene	µg/L	< 0.010	< 0.010	< 0.050	< 0.010	< 0.109	<0.117	<0.010	<0.100	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010
Benzo(b)fluoranthene	µg/L	-	-	-	-	-	-	-	-	-	-	-	-	-				-
Benzo(b+j)fluoranthene	µg/L	0.057	< 0.050	< 0.249	< 0.050	< 0.545	<0.583	<0.050	<0.500	<0.050	<0.050	0.325	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050
Benzo(g,h,i)perylene	µg/L	< 0.050	< 0.050	< 0.249	< 0.050	< 0.545	<0.583	<0.050	<0.500	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050
Benzo(k)fluoranthene	µg/L	< 0.050	< 0.050	< 0.249	< 0.050	< 0.545	<0.583	<0.050	<0.500	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050
Chloronaphthalene, 2-	µg/L	< 0.100	< 0.100	< 0.498	< 0.100	< 1.09	<1.17	<0.100	<1.00	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100
Chrysene	µg/L	< 0.050	< 0.050	< 0.249	< 0.050	< 0.545	<0.583	<0.050	<0.500	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050
Dibenz(a,h)anthracene	µg/L	< 0.010	< 0.010	< 0.050	< 0.010	< 0.109	<0.117	<0.010	<0.100	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010
Fluoranthene	µg/L	0.11	0.077	< 0.149	0.111	< 0.327	<0.350	0.062	<0.300	<0.030	0.055	<0.030	0.291	<0.030	0.078	0.107	<0.210	0.04
Fluorene	µg/L	0.229	0.179	< 0.249	0.324	< 0.545	<0.583	0.309	<0.500	0.243	0.254	<0.215	0.293	<0.050	0.244	0.487	0.501	0.425
Indeno(1,2,3-cd)pyrene	µg/L	< 0.050	< 0.050	< 0.249	< 0.050	< 0.545	<0.583	<0.050	<0.500	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050
Methylnaphthalene, 1-	µg/L	0.808	0.549	0.596	1.19	< 1.09	<1.17	1.03	<1.00	1.01	1.04	0.943	1.05	1.03	1.02	1.52	1.34	1.34
Methylnaphthalene, 2-	µg/L	0.471	0.247	< 0.498	0.439	< 1.09	<1.17	0.359	<1.00	0.205	0.275	0.368	0.952	0.172	0.104	0.198	0.316	<0.100
Naphthalene	µg/L	5.43	3.06	2.47	6.43	3.57	7.25	5.21	6.27	5.44	4.87	3.62	5.62	5.36	3.90	5.75	5.25	3.64
Phenanthrene	µg/L	0.34	0.266	< 0.498	0.422	< 1.09	<1.17	0.451	<1.00	0.299	0.281	0.398	0.346	0.207	0.235	0.448	0.829	0.262
Pyrene	µg/L	0.091	0.071	< 0.100	0.079	< 0.218	<0.233	0.056	<0.200	<0.020	0.021	<0.020	0.046	<0.020	0.044	<0.020	0.201	<0.020
Quinoline	µg/L	< 0.050	< 0.050	< 0.249	< 0.050	< 0.545	<0.583	<0.050	<0.500	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050
Volatile Organic Compounds																		
Bromodichloromethane [BDCM]	µg/L	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	<1.0	<1.0	<1.0	<10.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Bromoform	µg/L	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	<1.0	<1.0	<1.0	<10.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Carbon Tetrachloride	µg/L	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	<0.5	<0.5	<0.5	<5.0	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Chlorobenzene	µg/L	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	<1.0	<1.0	<1.0	<10.0	<1.0	<1.0	<1.0	<1.0	1.2	<1.0	1.2	<1.0
Chloroethane	µg/L	< 2.0	< 2.0	< 2.0	2	< 2.0	<2.0	<2.0	4.9	<20.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0
Chloroform	µg/L	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	<1.0	<1.0	<1.0	<10.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Chloromethane	µg/L	-	-	-	-	-	-	-	-	-	-	-	-	-				-
Dibromochloromethane [DBCM]	µg/L	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	<1.0	<1.0	<1.0	<10.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Dibromoethane, 1,2-	µg/L	< 0.3	< 0.3	< 0.3	< 0.3	< 0.3	<0.3	<0.3	<0.3	<3.0	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3
Dibromomethane	µg/L	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	<1.0	<1.0	<1.0	<10.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Dichlorobenzene, 1,2-	µg/L	0.5	< 0.5	< 0.5	< 0.5	< 0.5	<0.5	<0.5	0.6	<5.0	<0.5	0.8	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Dichlorobenzene, 1,3-	µg/L	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	<1.0	<1.0	<1.0	<10.0	3.2	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Dichlorobenzene, 1,4-	µg/L	3.6	3.4	3.1	2.8	2.7	3.2	2.8	7.3	<10.0	3.5	5	2.2	1.9	<1.0	<1.0	<1.0	<1.0
Dichloroethane, 1,1-	µg/L	5.8	3.6	5.6	6	4.3	4.3	1.9	4.4	<10.0	2.6	4.3	2.6	3.3	1.4	<1.0	1.2	<1.0
Dichloroethane, 1,2-	µg/L	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	<1.0	<1.0	<1.0	<10.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Dichloroethylene, 1,1-	µg/L	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	<1.0	<1.0	<1.0	<10.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Dichloroethylene, 1,2-cis-	µg/L	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	<1.0	<1.0	1.1	<10.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Dichloroethylene, 1,2-trans-	µg/L	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	<1.0	<1.0	<1.0	<10.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Dichloromethane	µg/L	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0	<3.0	<3.0	<3.0	<30.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0
Dichloropropane, 1,2-	µg/L	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	<1.0	<1.0	<1.0	<10.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Dichloropropene, 1,3- (cis+trans)	µg/L	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	<1.0	<1.0	<1.0	<10.0	<1.0	<1.0	<1.0	<1.0				<1.0
Dichloropropene, 1,3-cis-	µg/L	-	-	-	-	-	-	-	-	-	-	-	-	-				-
Dichloropropene, 1,3-trans-	µg/L	-	-	-	-	-	-	-	-	-	-	-	-	-				-
Dichloropropene, 1,3	µg/L														<1.0	<1.0	<1.0	
Methyl Tert-butyl Ether [MTBE]	µg/L	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	<10.0	< 1.0	< 1.0	< 1.0	< 1.0	<1.0	<1.0	<1.0	<1.0
Tetrachloroethane, 1,1,1,2-	µg/L		-	-	-	-	<0.5	<0.5	<0.5	<5.0	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Tetrachloroethene	µg/L	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	<1.0	<1.0	<1.0	<10.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Trichloroethane, 1,1,1-	µg/L	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	<1.0	<1.0	<1.0	<10.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Trichloroethane, 1,1,2-	µg/L	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	<1.0	<1.0	<1.0	<10.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Trichloroethylene	µg/L	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	<1.0	<1.0	<1.0	<10.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Trichlorofluoromethane	µg/L	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	<1.0	<1.0	<1.0	<10.0	<1.0	<1.0	<1.0	1.4	<1.0	<1.0	<1.0	<1.0
Vinyl Chloride	µg/L	< 1.3	< 1.0	< 1.0	3.2	< 1.0	1.5	<1.0	2.4	<10.0	<1.0	1.4	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Resin and Fatty Acids			-	-	-	-	-	-	-	-								
Acetic Acid	mg/L	5.2	-	-	-	-	-	-	-	-	<3.0	<3.0	<3.0	<3.0	4.0	4.4	<3.0	<3.0
Butyric Acid	mg/L	< 2.0	-	-	-	-	-	-	-	-	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0
Caporic Acid	mg/L	< 2.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<2.0
Heptanoic Acid	mg/L	< 2.0	-	-	-	-	-	-	-	-	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0
Hexanoic Acid	mg/L	-	-	-	-	-	-	-	-	-	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	-
Isobutyric Acid	mg/L	< 2.0	-	-	-	-	-	-	-	-	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0
Isocaproic Acid	mg/L	< 2.0	-	-	-	-	-	-	-	-	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0
Isovaleric Acid	mg/L	< 2.0	-	-	-	-	-	-	-	-	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0
Propionic Acid	mg/L	< 2.0	-	-	-	-	-	-	-	-	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0
Valeric Acid	mg/L	< 2.0	-	-	-	-	-	-	-	-	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0
VFAs																		
8:2 Fluorotelomer sulfonic acid (8:2 FTS	µg/L	-	-	-	-	-	-	-	-	-	<0.02	-	-	-	-	-	-	-
Perfluorobutane sulfonic acid (PFBS)	µg/L	-	-	-	-	-	-	-	-	-	0.1	-	-	-	-	-	-	-
Perfluorobutanoic acid (PFBA)	µg/L	-	-	-	-	-	-	-	-	-	<0.2	-	-	-	-	-	-	-
Perfluoroheptanoic acid (PFHpA)	µg/L	-	-	-	-	-	-	-	-	-	0.1	-	-	-	-	-	-	-
Perfluorohexane sulfonic acid (PFHxS)	µg/L	-	-	-	-	-	-	-	-	-	0.1	-	-	-	-	-	-	-
Perfluorohexanoic acid (PFHxA)	µg/L	-	-	-	-	-	-	-	-	-	0.4	-	-	-	-	-	-	-
Perfluorononanoic acid (PFNA)	µg/L	-	-	-	-	-	-	-

Table H4: Summary of Leachate Water Analytical Results- HISTORICAL to 2025

Sample Location		S L WW																
Sample ID		South Leachate Wet Well (LS#2)	South Leachate Wet well (LS#2)	South Leachate Wet well (LS#2)	P2 A2 Leachate MH	P2 A2 Leachate MH	P2 A2 Leachate MH	P2 A2 Leachate MH	P2 A2 Leachate MH	P2 A2 Leachate MH	P2 A2 Leachate MH	P2 A2 Leachate MH	P2 A2 Leachate MH	P2 A2 Leachate MH	P2 A2 Leachate MH	P2 A2 Leachate MH	P2A2 Leachate MH	P2 A2 Leachate MH
Sample Date (yyyy mm dd)		2025-06-04	2025-09-15	2025-10-28	2021 03 19	2021 06 18	2021 09 16	2021 10 21	2022 02 07	2022 06 23	2022 09 14	2022 10 20	2023 03 21	2023 05 17	2023 09 27	2023 11 03	2024-05-09	2024-09-06
Parameter	**Units**																	
Hydrocarbons																		
VH (C6-C10)	µg/L	115	<1,000	1,290	284	496	439	< 100	<100	195	430	<425	<100	<100	160	106	219	205
VPH (C6-C10)	µg/L	<100	<1,000	1,210	258	413	343	< 100	<100	185	417	<425	<100	<100	158	106	217	205
EPH (C10-C19)	µg/L	483	<250	438	299	1,150	< 2,500	< 2,500	1600	998	913	774	459	917	691	508	805	1,350
LEPH (C10-C19)	µg/L	479	<250	428	299	1,140	< 2,500	< 2,500	1600	998	913	774	<250	949	<250	<250	805	1,350
EPH (C19-C32)	µg/L	271	554	1,330	< 250	859	< 2,500	< 2,500	16400	284	<250	<250	459	917	691	508	<250	295
HEPH (C19-C32)	µg/L	271	554	1,330	< 250	859	< 2,500	< 2,500	16400	284	<250	<250	<250	949	<250	<250	<250	295
Benzene	µg/L	3.6	7	5.1	0.8	1.2	3.1	0.7	<2.0	1.4	3.4	<0.5	<0.5	1	<0.5	<0.5	0.6	0.7
Ethylbenzene	µg/L	18	54.1	35	< 1.0	3.1	9.1	2.1	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	1.2	<1.0	<1.0	<1.0
Toluene	µg/L	<1.0	<10.0	<10.0	17.4	64.6	61.5	6.3	<1.0	3.8	5	<1.0	<1.0	1.4	<1.0	<1.0	1.2	<1.0
Xylenes	µg/L	18	50.9	31.8	5.5	11.4	20.3	2.8	<1.0	5.4	5	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0
Styrene	µg/L	<1.0	<10.0	<10.0	2.3	3.5	2.3	< 1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
General																		
Alkalinity, Bicarbonate (as CaCO3)	mg/L	4,130	5,600	6,570	2,940	3,390	4450	4470	2450	4550	4520	4000	3170	3460	4310	3300	4,050	4,040
Alkalinity, Carbonate (as CaCO3)	mg/L	<1.0	<1.0	<1.0	< 1.0	< 1.0	< 1.0	< 1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Alkalinity, Hydroxide (as CaCO3)	mg/L	<1.0	<1.0	<1.0	< 1.0	< 1.0	< 1.0	< 1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Alkalinity, Phenolphthalein (as CaCO3)	mg/L	<1.0	<1.0	<1.0	< 1.0	< 1.0	< 1.0	< 1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Ammonia, Total (as N)	µg/L	115	90.5	123	81,400	127,000	161000	155000	69800	210000	212000	211000	139000	152000	206000	141000	213	233
Biochemical Oxygen Demand	mg/L	27	321	458	1,270	3,260	3160	< 34268.8	2520	107	37	128	155	25.4	42.6	<25.3	<67.6	59.0
Bromide	mg/L	<1.00	3.91	6.2	13.6	73.4	70.5	< 10.0	1.51	<1.00	4.4	3.2	2.11	2.1	<1.0	<10	<5.00	2.66
Chemical Oxygen Demand	mg/L	589	798	990	1,870	6,460	4690	644	4100	822	787	662	509	712	800	655	840	793
Chloride	mg/L	589	714	994	1,030	830	1150	1310	934	1480	1480	1420	1360	1410	1390	1430	1,370	1,500
Dissolved Organic Carbon	mg/L	116	179	188													356	193
Electrical Conductivity (Lab)	µS/cm																10,900	10,900
Fluoride	µg/L	<1.00	<1.00	<1.00	< 1,000	< 1,000	< 1,000	< 1,000	< 1,000	< 1,000	< 1,000	< 1,000	< 1,000	< 1,000	< 1,000	< 1,000	<0.10	2.21
Hardness as CaCO3 (filtered)	mg/L																2,090	2,260
Kjeldahl Nitrogen Total	mg/L	-	-	149	-	-	-	-	-	-	-	-	-	-	-	-		
Nitrate (as N)	µg/L	56.3	<0.100	73.3	< 100	221	< 100	388	7700	<100	<100	1570	23200	<100	<100	9640	950.000	12600
Nitrite (as N)	µg/L	<0.100	<0.100	<0.100	< 100	< 100	< 1,000	< 100	290	< 100	< 100	< 100	599	<100	195	1010	<10	<100
Ortho-Phosphate	mg/L	2.7	4.91	3.34	< 0.0500	< 0.0500	< 0.0500	< 0.0500	-	-	-	-	-	-	-	-		
pH (Lab)																	7.85	7.85
Phosphate	mg/L	-	-	-	-	-	-	-	<0.0500	<0.0500	<0.0500	<0.0500	<0.0500	<0.0500	<0.0500	0.273	0.0110	-
Solids, Total Dissolved	mg/L	-	-	-													6,290	6,280
Phosphorus (filtered)	ug/L																-	360
Sulfate	mg/L	1,200	1,500	3,440	345	305	115	145	410	66	<100	104	185	106	50.2	220	151	67.3
Sulfide	mg/L	25.8	214	0.236	0.114	1.8	3.41	2.49	29.8	0.108	0.026	0.02	<0.020	0.028	<0.020	<0.020	0.039	0.024
Total Alkalinity	mg/L	4,130	5,600	6,570	2,940	3,390	4450	4470	2450	4550	4520	4000	3170	3460	4310	3300	4,050	4,040
Total Organic Carbon	mg/L	-	-	192	-	-	-	-	112	535	186	224	182	191	291	381		
Total Phosphorous as P	mg/L	3.73	5.91	6.85	3.19	5.79	4.42	1.66	85.8	2.42	1.64	1.13	0.472	1.33	2.46	1.58	2.39	1.62
Dissolved Metals																		
Antimony	µg/L	16.7	37.8	51.9	4.2	9.73	4.1	< 5.00	<5.00	1.96	2.02	2.06	2.26	1.68	1.71	2.34	20.4	21.8
Aluminium	µg/L	54.8	85.7	80.4	42.8	56.8	34.6	153	264	24.4	20.2	19.5	17.5	19.2	21.6	46.2	2.35	2.42
Arsenic	µg/L	47.7	95.2	137	20.7	16.8	55.8	64.1	73.7	116	34.2	33	12.8	16	41.8	31.4	23.4	38.6
Barium	µg/L	156	176	185	380	924	1,240	1830	2060	1930	1340	1490	994	1020	1300	1010	942	1,470
Beryllium	µg/L	<0.050	<0.100	<0.050	0.017	0.013	0.016	< 1.00	<1.00	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	0.020
Bismuth	µg/L	<0.050	<0.100	<0.050	< 0.010	< 0.010	< 0.010	< 1.00	<1.00	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.020
Boron	µg/L	2,270	2,210	2,540	5,170	7,330	6,100	4710	3870	5680	6170	5770	6540	6290	6040	6520	5,590	7,120
Cadmium	µg/L	0.0284	<0.0200	0.135	0.116	0.0198	0.0253	< 0.200	<0.200	0.0108	0.02	0.0133	0.322	0.0616	0.0475	0.127	0.0222	0.104
Calcium	mg/L	275	95.7	429	280	675	525	163	146	145	134	144	150	146	138	129	126	132
Chromium	µg/L	16.6	26.9	32.8	25.9	51	23.5	15	17.1	21.2	18.6	17.5	15.2	16	18.4	17.4	19.5	22.7
Cobalt	µg/L	6.51	6.58	8.7	61.9	157	31.8	15.8	40.8	14.6	13.9	15.1	41.3	25.5	17.2	24.7	22.2	20.7
Copper	µg/L	<0.50	<1.00	<0.50	3.66	0.64	1.13	< 10.0	<10.0	1.19	1.83	1.92	15.9	2.96	1.93	4.7	1.48	4.53
Iron	µg/L	30	34.2	48.5	6,890	37,900	85,300	9530	13600	16000	2240	1870	909	12500	5630	2550	1,550	2,260
Lead	µg/L	<0.250	<0.500	<0.250	0.37	< 0.050	0.13	< 5.00	<5.00	<0.250	<0.250	<0.250	0.484	<0.250	<0.250	0.361	<0.250	0.149
Lithium	µg/L	83.4	105	82.7	39.9	65	37.7	29.3	42.3	33.6	31.9	34.9	33.5	35.5	33.3	35.7	35.8	32.9
Magnesium	mg/L	240,000	298,000	303,000	401	322	421	410	422	461	441	454	445	411	429	453	431	468
Manganese	µg/L	356	230	162	4,990	20,800	21,900	671	369	107	135	140	126	206	191	95.4	316	100
Mercury	µg/L	<0.010	<0.010	<0.010	< 0.040	< 0.010	< 0.040	< 0.020	< 0.020	< 0.040	< 0.010	< 0.010	< 0.010	<0.020	< 0.010	< 0.010	<0.010	<0.010
Molybdenum	µg/L	2.49	5.38	4.80	60.7	4.43	6.49	8.25	31.2	8.06	5.5	7.01	24.4	12	8.42	35.2	13.0	13.3
Nickel	µg/L	16.7	21.3	24.3	305	356	149	183	201	182	192	198	231	193	183	224	174	187
Phosphrous	µg/L	3,940	5,580	5,710	791	655	2,550	1600	1480	1440	459	457	205	192	584	486	234	967
Potassium	mg/L	216,000	266,000	288,000	228	186	205	222	221	209	208	233	228	219	225	246	283	296
Selenium	µg/L	0.96	1.12	0.99	3.97	2.32	2.12	< 10.0	<10.0	3.74	2.01	2.17	2.84	3.05	2.41	2.61	2.56	2.81
Silicon	µg/L	13,500	15,100	15,200	28,600	51,600	38,400	36000	21400	33500	27900	27400	23600	28200	27800	21600	26,900	27,100
Silver	µg/L	<0.050	<0.100	<0.050	0.012	< 0.010	0.012	< 1.00	<1.00	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.020
Sodium	mg/L	2,010	3,010	3,720	1,270	922	1,070	1380	1120	1300	1430	1450	1360	1300	1380	1500	1,430	1,630
Strontium	µg/L	3,900	3,140	4,870	7,100	6,710	7,670	7600	6430	8490	8000	9110	7520	7950	7440	7100	7,460	7,730
Sulphur	µg/L	402,000	753,000	833,000	140,000	121,000	49,600	58000	170000	38900	45500	44800	75900	52200	27600	92900	54,400	40,600
Tellurium	µg/L	<0.250	<0.500	<0.250	0.258	0.265	0.271	< 5.00	<5.00	<0.250	<0.250	<0.250	<0.250	<0.250	<0.250	<0.250	<0.250	0.137
Thallium	µg/L	<0.0200	<0.0400	<0.0200	< 0.0040	< 0.0040	< 0.0040	< 0.400	<0.400	<0.0200	<0.0200	<0.0200	<0.0200	<0.0200	<0.0200	<0.0200	<0.0200	<0.0080
Thorium	µg/L	<0.050	<0.100	<0.050	0.018	< 0.010	0.018	< 1.00	<1.00	<0.050	<0.050	<0.050	<0.050	0.138	0.054	<0.050	0.169	<0.020
Tin	µg/L	29.3	110	138	1.99	1.41	2	< 5.00	<5.00	2.44	2.13	2.32	1.94	2	2.25	2.11	1.91	2.53
Titanium	µg/L	31.4	54.1	61.8	19.1	5.49	22.8	30.3	<20.0	25.5	17.3	16.4	10.7	7.13	15	15	12.3	22.6
Tungsten	µg/L	3.25	4.95	6.15	2.23	0.96	2.88	< 20.0	<20.0	4.58	3.8	3.83	3.23	3.15	4.5	4.59	4.31	5.42
Uranium	µg/L	10.6	9.9	9	12.6	3.07	2.73	3.58	22.5	2.84	1.98	3.03	9.97	5.82	2.96	10.2	7.87	4.31
Vanadium	µg/L	8.81	12.5	12.9	19.3	7.39	36	39.7	<20.0	57.8	28.2	24.8	17.6	26.7	30.5	24.8	19.0	30.0
Zinc	µg/L	<5.0	<10.0	<5.0	15.7	15.1	13.2	< 100	<100	<5.0	<5.0	<5.0	41.3	7.8	<5.0	8	<5.0	6.5
Zirconium	µg/L	18.9	28.7	39.8	81.8	5.82	77.5	95.3	86.9	94.4	102	102	104	97.7	94.9	146	114	138
Polycyclic Aromatic Hydrocarbons																		
Acenaphthene	µg/L	0.454	0.629	1.08	< 0.050	< 0.050	< 0.524	< 0.491	7840	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050
Acenaphthylene	µg/L	<0.200	<0.200	<0.200	< 0.200	< 0.200	< 2.09	< 1.97	0.193	<0.200	<0.200	<0.200	<0.200	<0.200	<0.200	<0.200	<0.200	<0.200
Acridine	µg/L	<0.050	<0.050	<0.065	< 0.050	0.539	< 0.524	< 0.491	<0.200	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	0.088
Anthracene	µg/L	0.033	0.073	0.1	< 0.010	< 0.038	< 0.105	< 0.098	0.414	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	0.273
Benz(a)anthracene	µg/L	<0.010	<0.024	<0.012	< 0.010	< 0.039	< 0.105	< 0.098	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010
Benzo(a)pyrene	µg/L	<0.010	<0.010	<0.010	< 0.010	0.064	< 0.105	< 0.098	<0.071	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010
Benzo(b)fluoranthene	µg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
Benzo(b+j)fluoranthene	µg/L	<0.050	<0.050	<0.050	< 0.050	< 0.150	< 0.524	< 0.491	<0.010	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050
Benzo(g,h,i)perylene	µg/L	<0.050	<0.050	<0.050	< 0.050	0.116	< 0.524	< 0.491	<0.398	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050
Benzo(k)fluoranthene	µg/L	<0.050	<0.050	<0.050	< 0.050	0.076	< 0.524	< 0.491	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050
Chloronaphthalene, 2-	µg/L	<0.100	<0.100	<0.100	< 0.100	< 0.100	< 1.05	< 0.983	<0.055	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100
Chrysene	µg/L	<0.050	<0.050	<0.050	< 0.050	0.057	< 0.524	< 0.491	<0.100	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050
Dibenz(a,h)anthracene	µg/L	<0.010	<0.010	<0.010	< 0.010	0.095	< 0.105	< 0.098	<0.241	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010
Fluoranthene	µg/L	<0.030	0.125	0.079	< 0.030	< 0.030	< 0.314	< 0.295	<0.010	<0.030	<0.030	<0.030	<0.030	<0.030	<0.030	<0.030	<0.030	<0.030
Fluorene	µg/L	0.306	0.427	0.511	< 0.050	< 0.050	< 0.524	< 0.491	0.079	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050
Indeno(1,2,3-cd)pyrene	µg/L	<0.050	<0.050	<0.050	< 0.050	0.102	< 0.524	< 0.491	0.111	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050
Methylnaphthalene, 1-	µg/L	0.691	1.24	1.35	< 0.100	< 0.100	< 1.05	< 0.983	<0.050	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100
Methylnaphthalene, 2-	µg/L	<0.100	0.234	0.235	< 0.100	0.109	< 1.05	< 0.983	0.297	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100
Naphthalene	µg/L	2.67	5.5	6.85	< 0.200	0.525	< 2.09	< 1.97	0.291	<0.200	<0.200	<0.200	<0.200	<0.200	<0.200	<0.200	<0.200	<0.200
Phenanthrene	µg/L	0.273	0.427	0.664	< 0.100	< 0.100	< 1.05	< 0.983	0.928	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100
Pyrene	µg/L	<0.020	0.084	<0.020	< 0.020	0.045	< 0.209	< 0.197	0.184	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020
Quinoline	µg/L	<0.050	<0.050	<0.050	< 0.264	< 0.778	1.19	< 0.491	<0.020	<0.610	<0.100	<0.776	<0.050	<0.228	<14.6	<8.55	<0.750	<0.465
Volatile Organic Compounds																		
Bromodichloromethane [BDCM]	µg/L	<1.0	<10.0	<10.0	< 1.0	< 1.0	< 1.0	< 1.0	<0.5	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Bromoform	µg/L	<1.0	<10.0	<10.0	< 1.0	< 1.0	< 1.0	< 1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Carbon Tetrachloride	µg/L	<0.5	<5.0	<5.0	< 0.5	< 0.5	< 0.5	< 0.5	<1.0	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Chlorobenzene	µg/L	<1.0	<10.0	<10.0	< 1.0	< 1.0	< 1.0	< 1.0	<0.5	1.2	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Chloroethane	µg/L	<2.0	<20.0	<20.0	< 2.0	< 2.0	< 5.2	< 2.0	<1.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0
Chloroform	µg/L	<1.0	<10.0	<10.0	< 1.0	1.2	< 1.0	< 1.0	<2.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Chloromethane	µg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
Dibromochloromethane [DBCM]	µg/L	<1.0	<10.0	<10.0	< 1.0	< 1.0	< 1.0	< 1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Dibromoethane, 1,2-	µg/L	<0.3	<3.0	<3.0	< 0.3	< 0.3	< 0.3	< 0.3	<1.0	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3
Dibromomethane	µg/L	<1.0	<10.0	<10.0	< 1.0	< 1.0	< 1.0	< 1.0	<0.3	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Dichlorobenzene, 1,2-	µg/L	<0.5	<5.0	<5.0	< 0.5	< 0.5	< 0.5	< 0.5	<1.0	1.8	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Dichlorobenzene, 1,3-	µg/L	<1.0	<10.0	<10.0	< 1.0	< 1.0	< 1.0	< 1.0	<0.5	1.5	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Dichlorobenzene, 1,4-	µg/L	<1.0	<10.0	<10.0	< 1.0	< 1.0	< 1.0	< 1.0	<1.0	2.1	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Dichloroethane, 1,1-	µg/L	1	<10.0	<10.0	< 1.0	< 1.0	2.2	< 1.0	<1.0	2.3	3.2	<1.0	<1.0	1.9	<1.0	<1.0	1.1	<1.0
Dichloroethane, 1,2-	µg/L	<1.0	<10.0	<10.0	2	7.6	10.6	< 1.0	<1.0	1.1	1.6	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Dichloroethylene, 1,1-	µg/L	<1.0	<10.0	<10.0	< 1.0	< 1.0	< 1.0	< 1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Dichloroethylene, 1,2-cis-	µg/L	<1.0	<10.0	<10.0	< 1.0	2	6.7	5.7	<1.0	4.4	6	<1.0	<1.0	2.9	<1.0	<1.0	3.7	<1.0
Dichloroethylene, 1,2-trans-	µg/L	<1.0	<10.0	<10.0	1.8	2	2.8	< 1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Dichloromethane	µg/L	<3.0	<30.0	<30.0	38.3	58.1	32.4	< 3.0	<1.0	<3.0	<3.0	<3.0	<3.0	3.6	<3.0	<3.0	<3.0	<3.0
Dichloropropane, 1,2-	µg/L	<1.0	<10.0	<10.0	< 1.0	< 1.0	< 1.0	< 1.0	<3.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Dichloropropene, 1,3- (cis+trans)	µg/L	<1.0	<10.0	<10.0	< 1.0	< 1.0	< 1.0	< 1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0		
Dichloropropene, 1,3-cis-	µg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
Dichloropropene, 1,3-trans-	µg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
Dichloropropene, 1,3	µg/L																<1.0	<1.0
Methyl Tert-butyl Ether [MTBE]	µg/L	<1.0	<10.0	<10.0	4	3.5	< 9.0	< 5.0	<1.0	9.1	11.5	<1.0	4.5	9.9	6	3.3	4.9	9.2
Tetrachloroethane, 1,1,1,2-	µg/L	<0.5	<5.0	<5.0	-	-	-	-	<1.0	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Tetrachloroethene	µg/L	<1.0	<10.0	<10.0	< 0.5	< 0.5	< 0.5	< 0.5	<0.5	<1.0	<1.0	<1.0	<1.0	1.3	<1.0	<1.0	<1.0	<1.0
Trichloroethane, 1,1,1-	µg/L	<1.0	<10.0	<10.0	< 1.0	< 1.0	< 1.0	< 1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Trichloroethane, 1,1,2-	µg/L	<1.0	<10.0	<10.0	< 1.0	< 1.0	< 1.0	< 1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Trichloroethylene	µg/L	<1.0	<10.0	<10.0	< 1.0	< 1.0	1.6	< 1.0	<1.0	1.3	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Trichlorofluoromethane	µg/L	<1.0	<10.0	<10.0	< 1.0	< 1.0	< 1.0	< 1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Vinyl Chloride	µg/L	<1.0	<10.0	<10.0	< 1.0	< 1.0	< 2.8	1.9	<1.0	1.6	5.2	1.7	<1.0	1.8	1.1	<1.0	1.1	1.6
Resin and Fatty Acids																		
Acetic Acid	mg/L	<3.0	<3.0	<3.0	-	-	-	-	-	-	-	-	<3.0	<3.0	-	<3.0	<3.0	<3.0
Butyric Acid	mg/L	<2.0	<2.0	<2.0	-	-	-	-	-	-	-	-	<2.0	<2.0	-	<2.0	<2.0	<2.0
Caporic Acid	mg/L	<2.0	<2.0	<2.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Heptanoic Acid	mg/L	<2.0	<2.0	<2.0	-	-	-	-	-	-	-	-	<2.0	<2.0	-	<2.0	<2.0	<2.0
Hexanoic Acid	mg/L	-	-	-	-	-	-	-	-	-	-	-	<2.0	<2.0	-	<2.0	<2.0	<2.0
Isobutyric Acid	mg/L	<2.0	<2.0	<2.0	-	-	-	-	-	-	-	-	<2.0	<2.0	-	<2.0	<2.0	<2.0
Isocaproic Acid	mg/L	<2.0	<2.0	<2.0	-	-	-	-	-	-	-	-	<2.0	<2.0	-	<2.0	<2.0	<2.0
Isovaleric Acid	mg/L	<2.0	<2.0	<2.0	-	-	-	-	-	-	-	-	<2.0	<2.0	-	<2.0	<2.0	<2.0
Propionic Acid	mg/L	<2.0	<2.0	<2.0	-	-	-	-	-	-	-	-	<2.0	<2.0	-	<2.0	<2.0	<2.0
Valeric Acid	mg/L	<2.0	<2.0	<2.0	-	-	-	-	-	-	-	-	<2.0	<2.0	-	<2.0	<2.0	<2.0
VFAs																		
8:2 Fluorotelomer sulfonic acid (8:2 FTS	µg/L	-	-	-	-	-	-	-	-	-	-	-	<0.02	-	-	-	-	-
Perfluorobutane sulfonic acid (PFBS)	µg/L	-	-	-	-	-	-	-	-	-	-	-	0.1	-	-	-	-	-
Perfluorobutanoic acid (PFBA)	µg/L	-	-	-	-	-	-	-	-	-	-	-	<1.0	-	-	-	-	-
Perfluoroheptanoic acid (PFHpA)	µg/L	-	-	-	-	-	-	-	-	-	-	-	0.6	-	-	-	-	-
Perfluorohexane sulfonic acid (PFHxS)	µg/L	-	-	-	-	-	-	-	-	-	-	-	0.7	-	-	-	-	-
Perfluorohexanoic acid (PFHxA)	µg/L	-	-	-	-	-	-	-	-	-	-	-	3	-	-	-	-	-
Perfluorononanoic acid (PFNA)	µg/L	-	-	-	-	-	-	-	-	-	-	-	<0.02	-	-	-	-	-
Perfluorooctane

Table H4: Summary of Leachate Water Analytical Results- HISTORICAL to 2025

Sample Location		P2A2 L MH					LS4	
Sample ID		P2 A2 Leachate MH	P2 A2 Leachate MH	P2 A2 Leachate MH	P2 A2 Leachate MH	P2 A2 Leachate MH	Area 3 ((LS #4)	LS#4
Sample Date (yyyy mm dd)		2024-10-18	2025-03-28	2025-06-04	2025-09-15	2025-10-28	2025-09-15	2025-10-28
Parameter	**Units**							
Hydrocarbons								
VH (C6-C10)	µg/L	169	174	200	2,270	365	2,450	10,300
VPH (C6-C10)	µg/L	168	174	200	2,120	208	2,200	336
EPH (C10-C19)	µg/L	1,060	947	1,090	1,250	546	2,200	2,130
LEPH (C10-C19)	µg/L	1,060	947	1,090	1,250	545	2,200	2,120
EPH (C19-C32)	µg/L	2,230	867	971	332	2,130	389	925
HEPH (C19-C32)	µg/L	2,230	867	971	332	2,130	389	925
Benzene	µg/L	0.9	<0.5	<0.5	<5.0	<0.5	0.6	1.1
Ethylbenzene	µg/L	<1.0	<1.0	<1.0	<10.0	<1.0	2.8	8.2
Toluene	µg/L	<1.0	<1.0	<1.0	148	157	234	9,910
Xylenes	µg/L	<2.0	<2.0	<2.0	<20.0	<2.0	11.9	15.7
Styrene	µg/L	<1.0	<1.0	<1.0	<10.0	<1.0	<1.0	<1.0
General								
Alkalinity, Bicarbonate (as CaCO3)	mg/L	3,880	3,640	3,970	3,910	2,060	5,240	4,080
Alkalinity, Carbonate (as CaCO3)	mg/L	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Alkalinity, Hydroxide (as CaCO3)	mg/L	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Alkalinity, Phenolphthalein (as CaCO3)	mg/L	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Ammonia, Total (as N)	µg/L	246	195	271	293	126	398	420
Biochemical Oxygen Demand	mg/L	44.2	72	40.8	3,030	160	> 4200	285
Bromide	mg/L	4.75	4.35	<1.00	77.4	<1.00	89.3	<1.00
Chemical Oxygen Demand	mg/L	879	756	722	4,590	1,230	15,900	1,350
Chloride	mg/L	1,660	1,060	1,320	937	814	735	805
Dissolved Organic Carbon	mg/L	237	227	164	1,180	169	4,860	361
Electrical Conductivity (Lab)	µS/cm	10,800						
Fluoride	µg/L	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00
Hardness as CaCO3 (filtered)	mg/L	2,140						
Kjeldahl Nitrogen Total	mg/L		-	-	-	137	-	504
Nitrate (as N)	µg/L	1980	1.08	0.664	<0.100	<0.100	<0.100	<0.100
Nitrite (as N)	µg/L	<100	0.527	<0.100	0.419	<0.100	1.49	<0.100
Ortho-Phosphate	mg/L		0.157	0.0682	0.0465	0.102	0.0175	1.36
pH (Lab)		7.86						
Phosphate	mg/L	-	-	-	-	-	-	-
Solids, Total Dissolved	mg/L	6,240	-	-	-	-	-	-
Phosphorus (filtered)	ug/L	580						
Sulfate	mg/L	24.1	219	173	125	226	<10.0	14.2
Sulfide	mg/L	<0.040	0.04	0.024	1.22	0.14	9.23	0.958
Total Alkalinity	mg/L	3,880	3,640	3,970	3,910	2,060	5,240	4,080
Total Organic Carbon	mg/L		-	-	-	177	-	366
Total Phosphorous as P	mg/L	6.89	0.966	2.02	6.71	1.94	19.8	11.8
Dissolved Metals								
Antimony	µg/L	90.2	2.09	2.47	8.83	2.59	25.8	15.7
Aluminium	µg/L	2.44	17	18	63.8	20.8	1,020	467
Arsenic	µg/L	316	22.8	44.9	28	12.1	34.7	25.6
Barium	µg/L	4,560	989	1,210	528	314	672	444
Beryllium	µg/L	<0.050	<0.050	<0.050	<0.100	<0.020	0.224	0.118
Bismuth	µg/L	<0.050	<0.050	<0.050	<0.100	<0.020	<0.100	<0.050
Boron	µg/L	7,460	6,390	5,980	6,220	2,540	12,000	8,870
Cadmium	µg/L	0.0317	0.219	0.0297	<0.0200	0.0298	0.141	0.279
Calcium	mg/L	127	120	116	443	123	1,750	446
Chromium	µg/L	26.0	19.1	21.7	47.7	20.2	160	96.8
Cobalt	µg/L	18.3	42.3	21.7	18	7.45	36.4	19.2
Copper	µg/L	2.77	7.38	1.96	<1.00	1.38	4.23	3.98
Iron	µg/L	16,100	1,860	5,440	6,800	1,200	81,600	7,810
Lead	µg/L	<0.250	<0.250	<0.250	<0.500	0.202	4.29	3.4
Lithium	µg/L	31.1	35.1	32.6	66.7	49.8	138	80.9
Magnesium	mg/L	443	442,000	501,000	325,000	240,000	325,000	228,000
Manganese	µg/L	142	176	200	4,800	652	26,000	4,590
Mercury	µg/L	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010
Molybdenum	µg/L	15.7	32.50	13.80	6.63	10.60	3.60	3.93
Nickel	µg/L	180	226	187	108	66.1	129	198
Phosphrous	µg/L	3,770	487	734	519	577	4,230	9,120
Potassium	mg/L	258	267,000	299,000	363,000	142,000	584,000	419,000
Selenium	µg/L	2.61	3.99	3.09	<1.00	1.54	<1.00	1.27
Silicon	µg/L	23,700	22,700	26,300	25,200	15,000	38,400	23,500
Silver	µg/L	<0.050	<0.050	<0.050	<0.100	<0.020	<0.100	<0.050
Sodium	mg/L	1,510	1,450	1,430	999	617	797	807
Strontium	µg/L	10,000	7,000	7,920	5,670	4,180	9,500	4,980
Sulphur	µg/L	28,500	99,200	74,300	58,800	58,800	28,900	11,200
Tellurium	µg/L	<0.250	<0.250	<0.250	<0.500	<0.100	<0.500	<0.250
Thallium	µg/L	<0.0200	<0.0200	<0.0200	<0.0400	<0.0080	<0.0400	<0.0200
Thorium	µg/L	<0.050	<0.050	<0.050	<0.100	<0.020	0.633	0.454
Tin	µg/L	2.92	2.39	2.32	1.5	1.06	3.89	3.05
Titanium	µg/L	39.2	13.3	20.2	24.1	17.2	130	111
Tungsten	µg/L	5.41	4.22	4.97	2.31	1.36	2.83	4.62
Uranium	µg/L	2.94	17.6	7.77	6.92	23.1	1.31	1.4
Vanadium	µg/L	102	30.3	29.7	22.8	17.3	34.3	40.5
Zinc	µg/L	5.4	12.8	<5.0	29.6	23.3	765	732
Zirconium	µg/L	89.2	142	127	68.1	39	32.9	35.1
Polycyclic Aromatic Hydrocarbons								
Acenaphthene	µg/L	0.060	<0.050	<0.050	<0.050	<0.050	0.146	<0.060
Acenaphthylene	µg/L	<0.200	<0.200	<0.200	<0.200	<0.200	<0.200	<0.200
Acridine	µg/L	0.106	<0.050	<0.050	0.141	<0.058	0.187	0.157
Anthracene	µg/L	<0.010	<0.132	<0.010	<0.010	<0.010	<0.026	<0.040
Benz(a)anthracene	µg/L	<0.010	<0.010	<0.010	<0.014	<0.010	0.024	<0.010
Benzo(a)pyrene	µg/L	<0.010	<0.010	<0.010	<0.010	<0.010	<0.028	<0.010
Benzo(b)fluoranthene	µg/L		-	-	-	-	-	-
Benzo(b+j)fluoranthene	µg/L	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050
Benzo(g,h,i)perylene	µg/L	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050
Benzo(k)fluoranthene	µg/L	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050
Chloronaphthalene, 2-	µg/L	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100
Chrysene	µg/L	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050
Dibenz(a,h)anthracene	µg/L	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010
Fluoranthene	µg/L	<0.030	<0.030	<0.030	0.036	<0.030	<0.086	<0.030
Fluorene	µg/L	0.110	<0.050	<0.050	<0.050	<0.050	<0.050	<0.120
Indeno(1,2,3-cd)pyrene	µg/L	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050
Methylnaphthalene, 1-	µg/L	<0.100	<0.100	<0.100	<0.100	<0.100	0.409	0.205
Methylnaphthalene, 2-	µg/L	<0.100	<0.100	<0.100	0.149	<0.100	0.844	0.455
Naphthalene	µg/L	0.271	<0.200	<0.200	1.02	0.234	4.18	2.41
Phenanthrene	µg/L	0.207	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100
Pyrene	µg/L	0.080	<0.020	<0.020	0.031	<0.020	<0.044	<0.020
Quinoline	µg/L	<0.086	<0.430	<0.476	<0.648	0.265	<0.545	<0.918
Volatile Organic Compounds								
Bromodichloromethane [BDCM]	µg/L	<1.0	<1.0	<1.0	<10.0	<1.0	<1.0	<1.0
Bromoform	µg/L	<1.0	<1.0	<1.0	<10.0	<1.0	<1.0	<1.0
Carbon Tetrachloride	µg/L	<0.5	<0.5	<0.5	<5.0	<0.5	<0.5	<0.5
Chlorobenzene	µg/L	<1.0	<1.0	<1.0	<10.0	<1.0	<1.0	<1.0
Chloroethane	µg/L	<2.0	<2.0	<2.0	<20.0	<2.0	<2.0	<2.0
Chloroform	µg/L	<1.0	<1.0	<1.0	<10.0	<1.0	<1.0	<1.0
Chloromethane	µg/L		-	-	-	-	-	-
Dibromochloromethane [DBCM]	µg/L	<1.0	<1.0	<1.0	<10.0	<1.0	<1.0	<1.0
Dibromoethane, 1,2-	µg/L	<0.3	<0.3	<0.3	<3.0	<0.3	<0.3	<0.3
Dibromomethane	µg/L	<1.0	<1.0	<1.0	<10.0	<1.0	<1.0	<1.0
Dichlorobenzene, 1,2-	µg/L	<0.5	<0.5	<0.5	<5.0	<0.5	<0.5	<0.5
Dichlorobenzene, 1,3-	µg/L	<1.0	<1.0	<1.0	<10.0	<1.0	<1.0	<1.0
Dichlorobenzene, 1,4-	µg/L	<1.0	<1.0	<1.0	<10.0	<1.0	<1.0	<1.0
Dichloroethane, 1,1-	µg/L	<1.0	<1.0	<1.0	<10.0	<1.0	<1.0	<1.0
Dichloroethane, 1,2-	µg/L	<1.0	<1.0	<1.0	<10.0	<1.0	1.6	<1.0
Dichloroethylene, 1,1-	µg/L	<1.0	<1.0	<1.0	<10.0	<1.0	<1.0	<1.0
Dichloroethylene, 1,2-cis-	µg/L	<1.0	<1.0	2.5	<10.0	<1.0	<1.0	<1.0
Dichloroethylene, 1,2-trans-	µg/L	<1.0	<1.0	<1.0	<10.0	<1.0	<1.0	<1.0
Dichloromethane	µg/L	<3.0	<3.0	<3.0	<30.0	<3.0	<3.0	<3.0
Dichloropropane, 1,2-	µg/L	<1.0	<1.0	<1.0	<10.0	<1.0	<4.2	<1.0
Dichloropropene, 1,3- (cis+trans)	µg/L		<1.0	<1.0	<10.0	<1.0	<1.0	<1.0
Dichloropropene, 1,3-cis-	µg/L		-	-	-	-	-	-
Dichloropropene, 1,3-trans-	µg/L		-	-	-	-	-	-
Dichloropropene, 1,3	µg/L	<1.0						
Methyl Tert-butyl Ether [MTBE]	µg/L	11.0	4.2	5.4	<10.0	<1.0	<2.3	2.1
Tetrachloroethane, 1,1,1,2-	µg/L	<0.5	<0.5	<0.5	<5.0	<0.5	<0.5	<0.5
Tetrachloroethene	µg/L	<1.0	<1.0	1.5	<10.0	<1.0	<1.0	<1.0
Trichloroethane, 1,1,1-	µg/L	<1.0	<1.0	<1.0	<10.0	<1.0	<1.0	<1.0
Trichloroethane, 1,1,2-	µg/L	<1.0	<1.0	<1.0	<10.0	<1.0	<3.1	2
Trichloroethylene	µg/L	<1.0	<1.0	1.2	<10.0	<1.0	<1.0	<1.0
Trichlorofluoromethane	µg/L	<1.0	<1.0	<1.0	<10.0	<1.0	<1.0	<1.0
Vinyl Chloride	µg/L	1.2	<1.0	2.9	<10.0	<1.0	<1.0	<1.7
Resin and Fatty Acids								
Acetic Acid	mg/L	<3.0	<3.0	<3.0	451	29.1	2,080	21.3
Butyric Acid	mg/L	<2.0	<2.0	<2.0	265	5.3	1,080	<2.0
Caporic Acid	mg/L	-	<2.0	<2.0	199	<2.0	725	<2.0
Heptanoic Acid	mg/L	<2.0	<2.0	<2.0	36.5	<2.0	140	<2.0
Hexanoic Acid	mg/L	<2.0	-	-	-	-	-	-
Isobutyric Acid	mg/L	<2.0	<2.0	<2.0	30.2	7.3	156	2.2
Isocaproic Acid	mg/L	<2.0	<2.0	<2.0	3.5	<2.0	12.6	<2.0
Isovaleric Acid	mg/L	<2.0	<2.0	<2.0	21.3	4.9	100	<2.0
Propionic Acid	mg/L	<2.0	<2.0	<2.0	469	21.9	1,670	10.8
Valeric Acid	mg/L	<2.0	<2.0	<2.0	144	4	785	<2.0
VFAs								
8:2 Fluorotelomer sulfonic acid (8:2 FTS	µg/L	-	-	-	-	-	-	-
Perfluorobutane sulfonic acid (PFBS)	µg/L	-	-	-	-	-	-	-
Perfluorobutanoic acid (PFBA)	µg/L	-	-	-	-	-	-	-
Perfluoroheptanoic acid (PFHpA)	µg/L	-	-	-	-	-	-	-
Perfluorohexane sulfonic acid (PFHxS)	µg/L	-	-	-	-	-	-	-
Perfluorohexanoic acid (PFHxA)	µg/L	-	-	-	-	-	-	-
Perfluorononanoic acid (PFNA)	µg/L	-	-	-	-	-	-	-
Perfluorooctane sulfonic acid (PFOS)	µg/L	-	-	-	-	-	-	-
Perfluorooctanoic acid (PFOA)	µg/L	-	-	-	-	-	-	-
Perfluoropentanoic acid (PFPeA)	µg/L	-	-	-	-	-	-	-
Potassium Perfluorobutane Sulfonate	µg/L	-	-	-	-	-	-	-

Associated CARO file(s) available on request
Associated Exova file(s): 506479, 507801, 509233, 600276,
All terms defined within the body of Keltech's report.
< concentration less than indicated detection limit or RPD
- analysis not conducted.
n/a - no applicable standard/guideline.
RPD - relative percent difference

APPENDIX G

QUALITY ASSURANCE AND QUALITY CONTROL

QUALITY ASSURANCE AND QUALITY CONTROL

1.0 Methodology

A quality assurance and quality control (QA/QC) program was implemented in accordance with the Glenmore Landfill (GLF) operational certificate (OC). This ensures that sampling and analytical data are meaningful, reproducible, and reliable. Standard industry QA/QC procedures were used to collect and analyze water samples. The following includes a summary of the QA/QC measures that were implemented during the field program and data review as well as QA/QC measures implemented by the laboratory.

1.1 Field QA/QC

Quality control (QC) measures used in the collection, preservation, and delivery of samples include the following:

- Sampling methods to be consistent with established protocols and provincial requirements. https://www2.gov.bc.ca/gov/content/environment/research-monitoring-reporting/monitoring/laboratory-standards-quality-assurance/bc-field-sampling-manual
- Field notes, including the geographic locations of samples collected, to be recorded during the stages of the monitoring program and to be available upon request.
- Samples to be placed and stored in laboratory-provided containers. Sample containers are not to be reused.
- Samples to be stored in coolers and chilled with ice or ice packs during transport to the analytical laboratory; and,
- Samples to be transported to the laboratory using laboratory chain of custody procedures.

The Quality Assurance (QA) measures established for the field program should include:

- Submission of blind field duplicate samples for a minimum of 10% of the samples analyzed. A blind field duplicate sample is a second sample of certain media (e.g., soil, water, soil vapour) from the same location that is submitted to the analytical laboratory under a separate label such that the lab has no prior knowledge that it is a duplicate.
- Submission of trip and field blank samples for each parameter.
- Evaluation of the data acceptability based on criteria set by such laboratory.

1.2 RPD

The British Columbia Laboratory Manual: *Section A - Laboratory Quality Assurance/Quality Control* (updated May 27, 2024). contains recommended Data Quality Objectives (DQOs) for laboratory duplicate RPD. It is recognized that these DQOs are intended for laboratory duplicates and do not include provisions for additional variability in field duplicates. However, these DQOs are considered a conservative screen for assessing the quality of field duplicates.

The DQOs applied to this monitoring program should be less than 30 percent.

Keltech calculated the relative percent difference (RPD) for parameters when both the sample and the duplicate were greater than five times the laboratory detection limit (RL). Elevated analytical variability is

common when analyte concentrations are within a factor of five of the RL. The RPD measures the variability between two outcomes from the same procedure process.

The RPD for the original sample concentration (Concentration A) and the duplicate sample concentration (Concentration B) are calculated using the following formula:

*[(Concentration A – Concentration B) / (Concentration A + Concentration B)/2)]*100*

In general, an RPD greater than these DQOs may reflect "within sample" variability which reflects the nature of the contaminant distribution, or variation in the test procedures; the DQOs described above were established for laboratory results and have been applied to this program.

1.3 Laboratory

CARO Analytical Services of Kelowna, BC was used to analyze the water samples for this program. CARO is accredited by the Canadian Association for Laboratory Accreditation Inc. (CALA) for the analyses performed. The analyzed samples were subject to QA/QC procedures specific to the laboratory, which included internal and surrogate samples, replicates and duplicates, method blanks, and method spikes. Reports from the laboratory are internally reviewed before delivery. CARO reported the results of internal checks, which were used to assess the data's reliability, accuracy, and reproducibility.

The following criteria were considered acceptable for laboratory QA/QC samples:

- Analytical blanks should below the detection limits used for the specified analyses
- Laboratory duplicates within the DQO set by the laboratory
- Analytical results for the reference materials or spiked standards within the target specified by the laboratory.

The laboratory records the sample integrity upon arrival at the laboratory, including:

- Sample condition (i.e., broken bottles, missing labels)
- Sample temperature
- Analysis hold time

2.0 Results

2.1 Field

Chain-of-custody procedures were followed during the sampling events, and the chain of custody accompanied for sample submissions. Samples were submitted to the laboratory under chain-of-custody protocols using forms that did not identify the physical sampling locations, expected concentrations or duplicate samples. Samples were stored in ice chilled coolers in the field and during transport prior to submission to the analytical laboratory.

The standard industry target for QA/QC for the monitoring program for duplicates is one samples for up to every ten samples analyzed for a regulated substance. This target was met.

Field and Trip Blanks

Tables QA2, QA4 and QA6 appended below provide the analytical results of field blank and trip blank samples.

2.2 RPD

Tables QA1, QA3 and QA5 below summarize analytical results for duplicate samples and include relative percent difference (RPD) calculations for each pair (i.e. parent and duplicate sample). The RPDs for all collected duplicate pairs met the RPD thresholds except those listed in Table A below.

Table A: Summary of High RPDs and Data Reliability - 2025

Sample ID	Sample Date	Parameter (RPD)	CARO Laboratory Comments
Groundwater			
GL39-1 / DUP 4	2025 05 21	Tin (35%)	As the rest of the total metals analytes are all within acceptable RPDs, we would accept the result
GL44-1 / DUP 9	2025 06 02	Boron (32%) Lithium (50%)	As the rest of the total metals analytes are all within acceptable RPDs, we would accept the result
Surface Water			
Bredin Pond / Dup A	2025 03 11	Zirconium (51%)	As the rest of the total metals analytes and dissolved metals analytes are all within acceptable RPDs, we would accept the result
Little Robert Lake / DUP B	2025 03 12	Total Coliforms (33%)	CARO uses the difference in Log method to determine acceptance of microbiological duplicates. Current acceptance limit for Total Coliforms is 0.4659. The difference in Log value is 0.143 so this duplicate passes
Culvert 1002026 / DUP C	2025 03 13	Chemical Oxygen Demand (45%)	This is a strange result. The other tests from the nutrient bottle (Total Phosphorus, TKN, Ammonia) all had good RPDs. We would have advised to re-analyze the sample, if this was brought up when we still had the sample.
Tutt Pond / DUP 2	2025 05 15	Total Coliforms (84%)	CARO uses the difference in Log method to determine acceptance of microbiological duplicates. Current acceptance limit for Total Coliforms is 0.4659. The difference in Log value is 0.386 so this duplicate passes
Little Robert Lake / DUP 3	2025 05 16	Fecal Coliforms (72%)	CARO uses the difference in Log method to determine acceptance of microbiological duplicates. Current acceptance limit for Fecal Coliforms is 0.9399. The difference in Log value is 0.328 so this duplicate passes
Little Robert Lake / DUP 11	2025 09 23	Total Suspended Solids (31%)	TSS is a measure of particulate in the sample. Therefore the acceptance for a field duplicate would be higher than for a lab duplicate. A 30% RPD seems good, to us, for field duplicate for TSS.
Tutt Pond / DUP E	2025 11 05	Chloride (41%) Sulphate (38%) Total Coliforms (39%)	CARO uses the difference in Log method to determine acceptance of microbiological duplicates. Current acceptance limit for Total Coliforms is 0.4659. The difference in Log value is 0.386 so this duplicate passes

Sample ID	Sample Date	Parameter (RPD)	CARO Laboratory Comments
			The Chloride and Sulphate values do seem off. The rest of the general chemistry parameters from the general bottle have good RPDs. We would have advised to re-analyze the sample, if this was brought up when we still had the sample.
Leachate			
South Leachate Wet Well (LS#2) / DUP 9	2025 09 15	Total Sulfide (30%)	Sulfide with an RPD of 30% for a field duplicate sample doesn't seem too far off to CARO. Field subsampling could produce a larger RPD than we would accept for lab duplicates. The amount of sediment could affect the results.
N Pumphouse MH / Dup A	2025 10 28	Acenaphthene (41%) Fluorene (41%) 1-methylnaphthalene (36%)	Since all PAHs are biased high in the field duplicate sample compared with N Pumphouse MH, suspect field subsampling effect. EPH is also biased but only 20%

CARO has found that the data is acceptable and can be relied upon and that field variability and sample composition may influence the few RPDs that were higher than the thresholds.

2.3 Laboratory Quality Control

The laboratory assessed the quality of the analytical data using method blanks, analysis of reference materials, laboratory replicate samples, and laboratory analytical spikes. Lab reports are internally reviewed prior to issue. If internal QA/QC problems are encountered, the field samples and internal QA/QC samples may be re-analyzed.

Keltech reviewed the CARO analytical reports for sample qualifiers and QC qualifiers and discussed these with CARO. The following qualifiers were identified:

Qualifiers – Water

The following sample qualifiers were identified in groundwater:

Table B: Laboratory Sample Qualifiers in Groundwater - 2025

Work Order No.	Date	Sample ID	Parameter	Qualifier
All Reports	multiple	All Samples	pH	HT2
25E3424	2025 05 26	GL4-1	Cadmium	RA1
	2025 05 26	GL4-2	Cadmium	RA1
	2025 05 26	GL 28-1	Bromide	RA1
			nitrate	RA1
			nitrite	RA1
	2025 05 26	Dup 7	Bromide	RA1
		dup of 28-1	nitrate	RA1
			nitrite	RA1
			cadmium	RA1
	2025 05 26	GL 28-2	bromide	RA1
			fluoride	RA1
			nitrite	RA1
	2025 05 26	GL 28-3	bromide	RA1

Work Order No.	Date	Sample ID	Parameter	Qualifier
			fluoride	RA1
			nitrite	RA1
	2025 05 26	Trip Blank	copper	RE2
			manganese	RE2
25e4018	2025 05 28	Field	Copper	RE2
			Mn	RE2
25f0108	2025 06 02	GL44-1	Bromide	RA1
			nitrate	RA1
			nitrite	RA1
			Ca	RA1
		GL44-2	Bromide	RA1
			nitrate	RA1
			nitrite	RA1
			Ca	RA1
		GL45-1	All Diss Met	RS1
			Bromide	RA1
			nitrate	RA1
			nitrite	RA1
			Cd	RA1
		GL45-2	Bromide	RA1
			nitrate	RA1
			nitrite	RA1
		GL 09BH06-D	Bromide	RA1
			nitrate	RA1
			nitrite	RA1
			Cd	RA1
		Field Blank	Cu	RE2
			Mo	RE2
			Na	RE2
		Dup 9	Bromide	RA1
			nitrate	RA1
			nitrite	RA1
			Cd	RA1
25h2860	2025 08 20	Trip Blank	Sr	RE2
		Field Blank	Tin	RE2
25h3114	2025 08 21	GL43-1	Bromide	RA1
		GL15-1	Bromide	RA1
			nitrate	RA1
		Field blank	aluminum	RE2
		Dup 2	nitrate	RA1
			nitrite	RA1
25h3772	2025 08 26	GL39-1	Bromide	RA1
			nitrate	RA1
		GL39-2	nitrate	RA1
			fluoride	RA1
			nitrite	RA1
		GL46-1	Bromide	RA1
			nitrate	RA1
			nitrite	RA1
			All Diss Met except mercury	RS1
		GL20-1	bromide	RE2
			All Diss Met except mercury	RS1

Work Order No.	Date	Sample ID	Parameter	Qualifier
		Dup 3	Bromide	RA1
			nitrate	RA1
			nitrite	RA1
			fluoride	RA1
		Field Blank	Cd	RE2
			Na	RE3
			U	RE4
25h3964	2025 08 27	GL27-1	Cd	RA1
		GL27-3	Bromide	RA1
			nitrate	RA1
			nitrite	RA1
			fluoride	RA1
			All Diss Met except mercury	RS1
		GL29-1	Bromide	RA1
		GL29-2	Bromide	RA1
			nitrate	RA1
			nitrite	RA1
			All Diss Met except mercury	RS1
		Dup 4	Bromide	RA1
			nitrate	RA1
			nitrite	RA1
			All Diss Met except mercury	RS1
		Field Blank	sulfate	RE2
			DOC	RE2
25h4198	2025 08 28	GL44-1	Cd	RA1
			Bromide	RA1
			nitrate	RA1
			nitrite	RA1
			Diss Reactive P	HT1
		GL44-2	Bromide	RA1
			nitrate	RA1
			nitrite	RA1
			fluoride	RA1
			Cd	RA1
			Diss Reactive P	HT1
		GL45-1	Bromide	RA1
			nitrate	RA1
			nitrite	RA1
			TDS	HT1
		GL45-2	Bromide	RA1
			nitrate	RA1
			nitrite	RA1
			fluoride	RA1
			Diss Reactive P	HT1
		Dup 5	Bromide	RA1
			nitrate	RA1
			nitrite	RA1
			Cd	RA1
			Diss Reactive P	HT1
			potassium	RE2
25h4267	2025 08 29	GL2-1	Cd	RA1
		GL4-1	Al	RA3

Work Order No.	Date	Sample ID	Parameter	Qualifier
			Cd	RA1
			TDS	HT1
		GL4-2	Cd	RA1
			TDS	HT1
		Dup 6	Cd	RA1
		Field Blank	DOC	RE2
25i0165	2025 09 02	GL28-1	Bromide	RA1
			nitrate	RA1
			nitrite	RA1
			Cd	RA1
		GL28-2	Bromide	RA1
			nitrite	RA1
			fluoride	RA1
		GL28-3	Bromide	RA1
			nitrite	RA1
			fluoride	RA1
			All Diss Met except mercury	RS1
		Dup 7	Bromide	RA1
			nitrate	RA1
			nitrite	RA1
			Cd	RA1
		Field Blank	Cd	RE2
			potassium	RE2
25i1149	2025 09 09	Field Blank	Tin	RE2
25i2281	none			

The following comments were provided by CARO for the sample qualifiers

- HT1 - The parameter was analyzed past the recommended hold time. The impact on the result would be difficult to know for sure but typically would be expected to be lower due to microbial or chemical reactions.
- HT2 - This parameter is recommended to be taken in the field due to a very short holding time. For pH the recommended holding time is just 15 minutes.
- RA1 - This qualifier is applied to samples where there is a matrix interferant that requires the reporting limit to be raised. The matrix interferant does not allow for the parameter to be actually determined and is biasing the result high. But how much is not possible to be determine. So we raise the reporting limit and report as less than the raised reporting limit.
- RA3 - This qualifier is applied to samples where the lab blank in the extraction and/or analysis batch had a detectable value for this parameter and we suspect the same level in all of the samples of the batch. We therefore have raised the reporting limit and reported as less than as we don't expect the parameter is actually in the sample.
- RE2 - The result for the qualified parameter was confirmed by re-analysis prior to the parameter being reported.
- RS1 - For some samples, there is an expectation of high results (client notification, historical values to compare with, lab screen) so the sample was diluted prior to analysis. This dilution requires the reporting limit to be raised. The qualifier is then stating that the reason for the raised reporting limit is that the sample had to be dilution due to high analyte concentration.

For nitrite in groundwater, based on the composition of select samples the lab was unable to reach a detection limit below the BCWQG applicable criteria. The criteria are based on the concentration of chloride in each sample. Depending on the concentration of chloride in each sample, it is possible that a different analytical method could be used in 2026 with the objective of achieving a detection limit below the BCWQG AW guideline for nitrite.

The following laboratory internal QC qualifiers were identified in groundwater:

Table C: Laboratory Internal QC Qualifiers in Groundwater - 2025

Work Order No.	Sample ID	Parameter	Qualifier
25E3424	B5F1768-BLK1	Co, P	BLK
25e1808	B5E3645-MS1	Mg, Mn, Na, Sr, S	MS
25e3008	B5E4393-BLK1	Zn, Co	BLK
25E3100	B5E4546-BLK1	Co	RA3
25e3308	B5E4757-BLK1	NH3	BLK
	B5E4757-BLK2	NH3	BLK
	B5E4757-BLK3	NH3	BLK
	B5E4757-BLK4	NH3	BLK
	B5E4757-BLK5	NH3	BLK
25e3424	B5F1768-BLK1	Co, P	BLK
25E4018	B5F1863-BS1	B, Li	MES
25f0108	B5F2562-BLK1	Al	BLK
	B5F2649-MS1	Hg	SPK
	B5F2387-MS1	Ca, Mg Mn Na Sr	MS2
25h2860	B5H4361-BLK1	Zn	BLK
	B5H4360-MS1	Mg, Na, Sr	MS2
25h3114	B5H4565-BLK1	Mo, Ba	BLK
25h3772	B5I1889-BLK1	P, Zn	BLK
25h3964	(B5H5117-BLK1)	Na, P, Ba, B,	BLK
25h4198	B5I2207-MS4	Hg	SPK
	B5I2147-DUP1	Cd	RA1
		Al	RPD
	B5I2145-DUP1	Cd	RA1
	B5I2121-MS1	Na, Sr, S, Mg, Mn, Ca	MS2
25h4267	B5I2224-BLK1	Al	BLK
25i0165	B5I2482-BLK1	P	BLK
25i2281	none		
25i1149	none		

The following comments were provided by CARO for the laboratory internal QC qualifiers.

- BLK - This qualifier is typically applied to lab internal blank samples. This qualifier states that the result is above the reporting limit for the parameter in question. The lab blank should be less than reporting limit. The lab would have used other QA/QC and reviewed client results before approving the data
- MS2 - This is applied to samples that were spiked with a known concentration of the analyte. This qualifier is stating that the level of the compound in the sample is at a similar or higher value than in the spike so the spike recovery will be biased due to the background level of the parameter in the sample.

- RA3 - The lab internal blank was found to have the parameter of interest and lab suspected contamination. As such the lab raised the reporting limit on the parameter.
- MES - This is applied to lab internal spikes (on blank samples), where we have some parameters out of all in the spike, less than 10% of the parameters in the parameter list, that are outside of our acceptance criteria, for unknown reasons, but since >90% of parameters were within acceptance limits that results were accepted.
- SPK - The recovery was outside of our acceptance limits. The data was accepted based on other QA/QC parameters and results.
- RA1 - This qualifier would be applied to lab internal duplicates, done on client samples, where there is a matrix interferant that requires the reporting limit to be raised.
- RPD - This qualifier would be applied to lab internal duplicates, done on client samples, where the duplicates don't pass our acceptance criteria. We are stating that the data was accepted based on other QA/QC parameters and results.

Table QA2: Summary of Water Analytical Results - Groundwater QA/QC - 2025

SAMPLING EVENT			Spring Event																					Fall Event					
DATE SAMPLED			13 May 2025	13 May 2025		21 May 2025	21 May 2025		22 May 2025	22 May 2025		23 May 2025	23 May 2025		26 May 2025	26 May 2025		28 May 2025	28 May 2025		02 Jun 2025	02 Jun 2025		20 Aug 2025	20 Aug 2025		21 Aug 2025	21 Aug 2025	
SAMPLE ID			GL 27-1	DUP 1		GL 39-1	DUP 4		GL 46-1	DUP 5		GL 1-1	DUP 6		GL 28-1	DUP 7		GL41-3	DUP 8		GL 44-1	DUP 9		GL 41-2	DUP 1		GL 15-1	DUP 2	
MATRIX			Water	Water		Water	Water		Water	Water		Water	Water		Water	Water		Water	Water		Water	Water		Water	Water		Water	Water	
FIELD DUPLICATE			FDA	FD of GL27-1	RPD (%)	FDA	FD of GL39-1	RPD (%)	FDA	FD of GL46-1	RPD (%)	FDA	FD of GL1-1	RPD (%)	FDA	FD of GL28-1	RPD (%)	FDA	FD of GL41-3	RPD (%)	FDA	FD of GL44-1	RPD (%)	FDA	FD of GL41-2	RPD (%)	FDA	FD of GL15-1	RPD (%)
LAB ID			25E1808-01	25E1808-08		25E3008-01	25E3008-07		25E3100-05	25E3100-08		25E3308-01	25E3308-08		25E3424-03	25E3424-08		25E4018-04	25E4018-07		25F0108-01	25F0108-08		25H2860-02	25H2860-05		25H3114-02	25H3114-05	
Parameter	**Unit**	**RL**																											
Calculations																													
Hardness, Dissolved (as CaCO3)	mg/L	0.125	92.9	93.9	1.07	1,970	2,000	1.51	1,920	2,130	10.37	688	692	0.58	1,870	1,890	1.06	401	402	0.25	2,960	2,950	0.34	388	388	0.00	412	416	0.97
General																													
Alkalinity (total) as CaCO3	mg/L	1.0	1,320	1,330	0.75	595	591	0.67	1,530	1,530	0.00	571	572	0.17	498	494	0.81	369	365	1.09	675	675	0.00	365	365	0.00	417	414	0.72
Alkalinity (P)	mg/L	1.0	<1.0	<1.0	NA	<1.0	<1.0	NA	<1.0	<1.0	NA	<1.0	<1.0	NA	<1.0	<1.0	NA	<1.0	<1.0	NA	<1.0	<1.0	NA	<1.0	<1.0	NA	<1.0	<1.0	NA
Alkalinity (Bicarbonate as CaCO3)	mg/L	1.0	1,320	1,330	0.75	595	591	0.67	1,530	1,530	0.00	571	572	0.17	498	494	0.81	369	365	1.09	675	675	0.00	365	365	0.00	417	414	0.72
Alkalinity (Carbonate as CaCO3)	mg/L	1.0	<1.0	<1.0	NA	<1.0	<1.0	NA	<1.0	<1.0	NA	<1.0	<1.0	NA	<1.0	<1.0	NA	<1.0	<1.0	NA	<1.0	<1.0	NA	<1.0	<1.0	NA	<1.0	<1.0	NA
Alkalinity (Hydroxide) as CaCO3	mg/L	1.0	<1.0	<1.0	NA	<1.0	<1.0	NA	<1.0	<1.0	NA	<1.0	<1.0	NA	<1.0	<1.0	NA	<1.0	<1.0	NA	<1.0	<1.0	NA	<1.0	<1.0	NA	<1.0	<1.0	NA
Ammonia as N	mg/L	0.050	0.265	0.262	1.14	<0.050	<0.050	NA	0.279	0.288	3.17	<0.050	<0.050	NA	0.103	0.1	NA	<0.050	<0.050	NA	0.313	0.33	5.29	<0.050	<0.050	NA	<0.050	<0.050	NA
Carbon, Dissolved Organic	mg/L	0.50	2.49	1.93	NA	9.9	9.77	1.32	5.97	6.02	0.83	3.02	2.42	NA	13.4	13	3.03	2.26	2.23	NA	4.6	4.4	4.44	2.32	2.28	NA	1.68	1.62	NA
Chemical Oxygen Demand	mg/L	20	<20	<20	NA	29	29	NA	<20	22	NA	<20	<20	NA	31	47	NA	<20	<20	NA	<20	<20	NA	<20	20	NA	<20	<20	NA
pH (Lab)	-	0.10	8.26	8.27	0.12	7.88	7.87	0.13	7.97	7.98	0.13	8.09	8.05	0.50	7.82	7.84	0.26	8.08	8.19	1.35	7.86	7.77	1.15	8.07	8.05	0.25	8.1	8.11	0.12
Phosphorus, Dissolved Reactive	mg/L	0.0050	0.0382	0.0364	4.83	<0.0050	<0.0050	NA	0.983	1.07	8.48	0.0057	0.0072	NA	<0.0050	<0.0050	NA	0.0287	0.0294	2.41	<0.0050	<0.0050	NA	0.0355	0.0352	0.85	0.0201	0.0179	NA
Solids, Total Dissolved	mg/L	15	1,430	1,520	6.10	3,890	3,910	0.51	5,430	5,640	3.79	1,120	1,000	11.32	2,790	3,370	18.83	674	691	2.49	5,430	5,810	6.76	717	714	0.42	971	1,030	5.90
Anions																													
Bromide	mg/L	0.10	<0.10	<0.10	NA	<1.00	<1.00	NA	0.22	0.23	NA	0.13	<1.00	NA	<1.00	<1.00	NA	<0.10	<0.10	NA	<1.00	<1.00	NA	<0.10	<0.10	NA	<1.00	<1.00	NA
Chloride	mg/L	0.10	36	36.5	1.38	121	121	0.00	104	97.8	6.14	108	110	1.83	99.5	99.5	0.00	123	130	5.53	48.5	50.7	4.44	105	101	3.88	18.6	18.2	2.17
Fluoride	mg/L	0.10	3.14	3.14	0.00	1.32	1.34	1.50	0.99	0.99	0.00	1.38	1.1	22.58	2.05	2.15	4.76	0.78	0.81	3.77	2.27	2.29	0.88	0.75	0.75	0.00	1.83	1.81	1.10
Nitrate (as N)	mg/L	0.010	<0.010	<0.010	NA	12.4	12.4	0.00	<0.010	<0.010	NA	0.164	0.153	6.94	<0.100	<0.100	NA	1.74	1.74	0.00	<0.100	<0.100	NA	2	1.99	0.50	<0.100	<0.100	NA
Nitrite (as N)	mg/L	0.010	<0.010	<0.010	NA	<0.100	<0.100	NA	0.016	0.016	NA	<0.010	<0.100	NA	<0.100	<0.100	NA	<0.010	<0.010	NA	<0.100	<0.100	NA	<0.010	<0.010	NA	<0.010	<0.100	NA
Sulphate	mg/L	1.0	16.6	16.8	1.20	1,800	1,950	8.00	2,350	2,350	0.00	232	235	1.28	1,740	1,800	3.39	75.3	78.9	4.67	3,700	3,950	6.54	92.9	90.9	2.18	350	356	1.70
Metals, Dissolved																													
Aluminum	µg/L	1.0	1.6	2.1	NA	12.5	1.1	NA	<1.0	1.4	NA	4.2	1.1	NA	<1.0	<1.0	NA	<1.0	<1.0	NA	2	1.9	NA	3.7	3.1	NA	1.8	2.3	NA
Antimony	µg/L	0.050	<0.050	<0.050	NA	<0.050	<0.050	NA	0.511	0.514	0.59	0.126	0.117	NA	<0.050	<0.050	NA	0.066	0.054	NA	<0.050	<0.050	NA	0.064	0.062	NA	<0.050	<0.050	NA
Arsenic	µg/L	0.050	6.48	6.14	5.39	0.353	0.37	4.70	5.73	6.2	7.88	0.545	0.514	5.85	1.64	1.62	1.23	0.967	0.895	7.73	5.53	5.45	1.46	0.902	0.93	3.06	0.336	0.325	3.33
Barium	µg/L	0.10	496	510	2.78	9.78	9.81	0.31	131	146	10.83	41.6	42.2	1.43	10.8	11	1.83	39.7	39.5	0.51	39.2	41.2	4.98	43.8	42.8	2.31	36.5	36.8	0.82
Beryllium	µg/L	0.010	0.056	0.058	3.51	<0.010	<0.010	NA	<0.010	0.014	NA	<0.010	<0.010	NA	0.011	0.012	NA	<0.010	<0.010	NA	<0.010	0.017	NA	<0.010	<0.010	NA	<0.010	<0.010	NA
Bismuth	µg/L	0.010	<0.010	<0.010	NA	<0.010	<0.010	NA	<0.010	<0.010	NA	<0.010	<0.010	NA	<0.010	<0.010	NA	<0.010	<0.010	NA	<0.010	<0.010	NA	<0.010	<0.010	NA	<0.010	<0.010	NA
Boron	µg/L	2.0	70.6	74.1	4.84	18.2	19.6	7.41	58.2	73.4	23.10	38.9	40.8	4.77	16.7	17.3	3.53	22.2	23.6	6.11	27.1	37.3	31.68	18.4	18.3	0.54	11.5	11.3	1.75
Cadmium	µg/L	0.0020	<0.0040	<0.0040	NA	0.0661	0.0642	2.92	<0.0060	<0.0060	NA	0.0708	0.0717	1.26	0.0275	<0.0120	NA	0.0123	0.0141	13.64	<0.0040	<0.0080	NA	0.0097	0.0106	NA	0.141	0.159	12.00
Calcium	mg/L	0.050	14.3	14.2	0.70	217	216	0.46	202	231	13.39	63.4	63.4	0.00	244	246	0.82	39.6	40.2	1.50	317	316	0.32	42.8	43.6	1.85	41.2	41.7	1.21
Chromium (III+VI)	µg/L	0.50	<0.50	<0.50	NA	<0.50	<0.50	NA	<0.50	<0.50	NA	<0.50	<0.50	NA	<0.50	<0.50	NA	1.93	1.92	NA	<0.50	<0.50	NA	2.35	2.36	NA	<0.50	<0.50	NA
Cobalt	µg/L	0.0050	<0.0050	<0.0050	NA	0.175	0.177	1.14	0.784	0.837	6.54	0.126	0.123	2.41	0.916	0.935	2.05	0.0256	0.0252	1.57	4.17	4.26	2.14	0.0381	0.0416	8.78	0.258	0.259	0.39
Copper	µg/L	0.10	<0.10	<0.10	NA	3.1	2.41	25.05	0.44	0.41	NA	0.72	0.67	7.19	0.38	0.25	NA	0.61	0.61	0.00	<0.10	<0.10	NA	0.63	0.69	9.09	0.15	0.13	NA
Iron	µg/L	2.0	525	546	3.92	<2.0	<2.0	NA	31.2	32.4	3.77	<2.0	<2.0	NA	1,240	1,260	1.60	<2.0	<2.0	NA	2,490	2,530	1.59	<2.0	2.5	NA	4.8	6.1	NA
Lead	µg/L	0.050	<0.050	<0.050	NA	<0.050	<0.050	NA	<0.050	<0.050	NA	<0.050	<0.050	NA	<0.050	<0.050	NA	<0.050	<0.050	NA	<0.050	<0.050	NA	<0.050	<0.050	NA	<0.050	<0.050	NA
Lithium	µg/L	0.050	211	222	5.08	76.4	79.5	3.98	414	550	28.22	40.2	40.9	1.73	75.1	76	1.19	30	32.5	8.00	132	221	50.42	26.3	24.2	8.32	17.8	17.2	3.43
Magnesium	µg/L	5.0	13,900	14,200	2.14	347,000	355,000	2.28	343,000	376,000	9.18	129,000	130,000	0.77	306,000	310,000	1.30	73,400	73,200	0.27	525,000	525,000	0.00	68,300	67,700	0.88	75,100	75,700	0.80
Manganese	µg/L	0.050	71	72.7	2.37	20.1	20.9	3.90	191	214	11.36	20.7	20.1	2.94	403	410	1.72	<0.050	<0.050	NA	1,590	1,650	3.70	2.92	3.27	11.31	103	107	3.81
Mercury	µg/L	0.010	<0.010	<0.010	NA	<0.010	<0.010	NA	<0.010	<0.010	NA	<0.010	<0.010	NA	<0.010	<0.010	NA	<0.010	<0.010	NA	<0.010	<0.010	NA	<0.010	<0.010	NA	<0.010	<0.010	NA
Molybdenum	µg/L	0.010	24.1	23.5	2.52	24.5	24.6	0.41	21.6	21.9	1.38	24.7	24.8	0.40	14.2	14.6	2.78	9.03	9.15	1.32	15	15.4	2.63	9.66	9.04	6.63	6.47	6.58	1.69
Nickel	µg/L	0.040	<0.040	<0.040	NA	1.16	1.14	1.74	4.83	4.98	3.06	1.35	1.32	2.25	2.96	2.87	3.09	0.319	0.337	5.49	7.43	7.82	5.11	0.304	0.346	12.92	1.4	1.37	2.17
Phosphorus	µg/L	10	75	80	6.45	<10	<10	NA	1,450	1,500	3.39	<10	<10	NA	15	16	NA	36	35	NA	29	33	NA	37	36	NA	19	20	NA
Potassium	µg/L	20	14,400	14,500	0.69	13,500	13,900	2.92	14,100	18,500	26.99	11,800	11,800	0.00	10,900	11,000	0.91	12,800	12,800	0.00	26,800	26,800	0.00	10,700	11,700	8.93	1,700	1,780	4.60
Selenium	µg/L	0.10	0.21	0.13	NA	0.6	0.58	3.39	1.19	1.3	8.84	3.13	3	4.24	0.12	0.13	NA	0.82	0.81	1.23	0.15	0.21	NA	1.27	1.12	12.55	0.26	0.23	NA
Silicon	µg/L	100	6,140	6,290	2.41	11,600	11,400	1.74	9,410	10,100	7.07	11,000	10,900	0.91	11,400	11,300	0.88	11,100	11,400	2.67	15,400	15,200	1.31	10,700	10,700	0.00	9,950	10,000	0.50
Silver	µg/L	0.010	<0.010	<0.010	NA	0.01	0.017	NA	<0.010	<0.010	NA	<0.010	<0.010	NA	<0.010	<0.010	NA	<0.010	<0.010	NA	<0.010	<0.010	NA	<0.010	<0.010	NA	<0.010	<0.010	NA
Sodium	mg/L	0.020	654	659	0.76	491	503	2.41	1,010	1,110	9.43	165	162	1.83	379	386	1.83	147	147	0.00	869	870	0.12	119	123	3.31	192	197	2.57
Strontium	µg/L	0.10	3,230	3,270	1.23	6,140	6,240	1.62	5,880	6,870	15.53	2,890	2,870	0.69	6,630	6,690	0.90	1,550	1,530	1.30	9,140	9,340	2.16	1,710	1,850	7.87	4,760	4,830	1.46
Sulfur	µg/L	1,000	6,430	6,290	2.20	851,000	839,000	1.42	1,010,000	1,110,000	9.43	96,800	97,700	0.93	786,000	769,000	2.19	30,900	31,900	3.18	1,430,000	1,400,000	2.12	33,200	34,800	4.71	122,000	124,000	1.63
Tellurium	µg/L	0.050	<0.050	<0.050	NA	<0.050	<0.050	NA	<0.050	<0.050	NA	<0.050	<0.050	NA	<0.050	<0.050	NA	<0.050	<0.050	NA	<0.050	<0.050	NA	<0.050	<0.050	NA	<0.050	<0.050	NA
Thallium	µg/L	0.0040	<0.0040	<0.0040	NA	0.0288	0.0276	4.26	0.0341	0.0336	1.48	0.0057	0.0052	NA	0.0106	0.0084	NA	<0.0040	<0.0040	NA	0.0075	0.0077	NA	<0.0040	<0.0040	NA	0.0062	0.0048	NA
Thorium	µg/L	0.010	<0.010	<0.010	NA	<0.010	<0.010	NA	<0.010	<0.010	NA	<0.010	<0.010	NA	<0.010	<0.010	NA	<0.010	<0.010	NA	<0.010	0.01	NA	<0.010	<0.010	NA	<0.010	<0.010	NA
Tin	µg/L	0.100	<0.100	<0.100	NA	0.914	0.641	35.11	<0.100	<0.100	NA	<0.100	<0.100	NA	<0.100	<0.100	NA	<0.100	<0.100	NA	<0.100	<0.100	NA	<0.100	<0.100	NA	<0.100	<0.100	NA
Titanium	µg/L	0.20	<0.20	<0.20	NA	<0.20	<0.20	NA	0.69	0.67	NA	<0.20	<0.20	NA	<0.20	<0.20	NA	<0.20	<0.20	NA	<0.20	<0.20	NA	<0.20	<0.20	NA	<0.20	<0.20	NA
Tungsten	µg/L	0.20	1.5	1.41	6.19	<0.20	<0.20	NA	0.72	0.83	NA	0.35	0.35	NA	<0.20	<0.20	NA	<0.20	<0.20	NA	<0.20	<0.20	NA	<0.20	<0.20	NA	<0.20	<0.20	NA
Uranium	µg/L	0.0010	0.302	0.372	20.77	226	229	1.32	222	256	14.23	48	48.4	0.83	149	152	1.99	12.5	12.7	1.59	172	175	1.73	13.4	12.9	3.80	9.72	9.84	1.23
Vanadium	µg/L	1.00	<1.00	<1.00	NA	<1.00	<1.00	NA	1.82	1.64	NA	<1.00	<1.00	NA	<1.00	<1.00	NA	1.74	1.71	NA	<1.00	<1.00	NA	1.81	1.88	NA	1.43	1.45	NA
Zinc	µg/L	1.0	<1.0	<1.0	NA	<1.0	<1.0	NA	1.6	1.7	NA	<1.0	<1.0	NA	1.2	1.1	NA	<1.0	<1.0	NA	1.2	1.1	NA	<1.0	<1.0	NA	<1.0	<1.0	NA
Zirconium	µg/L	0.020	1.91	2.05	7.07	0.056	0.045	NA	5.96	7.23	19.26	0.079	0.082	NA	0.141	0.149	5.52	<0.020	0.021	NA	0.611	0.647	5.72	0.025	<0.020	NA	0.055	0.056	NA

Analytical Reports: CARO 25C2620, 25C2966, 25D0598, 25E1808, 25E3008, 25E3100, 25E3308, 25E3424, 25E4018, 25F0108, 25H2860, 25H3114, 25H3772, 25H3964, 25H4198, 25H4267, 25I0165, 25I1149, 25J4101, 25J4396, 25K0306

- - not analyzed
- < less than laboratory detection limit
- FD Field Duplicate
- FDA field duplicate available
- RL reporting limit
- RPD relative percent difference
- NA not applicable
- RED & Shaded Pink RPD > 30%

Table QA2: Summary of Water Analytical Results - Groundwater QA/QC - 2025

SAMPLING EVENT			Fall Event																	
DATE SAMPLED			26 Aug 2025	26 Aug 2025		27 Aug 2025	27 Aug 2025		28 Aug 2025	28 Aug 2025		29 Aug 2025	29 Aug 2025		02 Sep 2025	02 Sep 2025		09 Sep 2025	09 Sep 2025	
SAMPLE ID			GL 39-2	DUP 3	RPD	GL 29-2	DUP 4	RPD	GL 44-1	DUP 5	RPD	GL 2-1	DUP 6	RPD	GL 28-1	DUP 7	RPD	GL 2-2	DUP 8	RPD
MATRIX			Water	Water	(%)	Water	Water	(%)	Water	Water	(%)	Water	Water	(%)	Water	Water	(%)	Water	Water	(%)
FIELD DUPLICATE			FDA	FD of GL39-2		FDA	FD of GL29-2		FDA	FD of GL44-1		FDA	FD of GL2-1		FDA	FD of GL28-1		FDA	FD of GL2-2	
LAB ID			25H3772-02	25H3772-05		25H3964-04	25H3964-05		25H4198-01	25H4198-05		25H4267-01	25H4267-04		25I0165-01	25I0165-04		25I1149-01	25I1149-02	
Parameter	**Unit**	**RL**																		
Calculations																				
Hardness, Dissolved (as CaCO3)	mg/L	0.125	480	485	1.04	3,000	3,010	0.33	2,840	2,750	3.22	687	688	0.15	1,840	1,850	0.54	612	600	1.98
General																				
Alkalinity (total) as CaCO3	mg/L	1.0	297	301	1.34	317	315	0.63	703	698	0.71	169	168	0.59	521	521	0.00	211	213	0.94
Alkalinity (P)	mg/L	1.0	<1.0	<1.0	NA	<1.0	<1.0	NA	<1.0	<1.0	NA	<1.0	<1.0	NA	<1.0	<1.0	NA	<1.0	<1.0	NA
Alkalinity (Bicarbonate as CaCO3)	mg/L	1.0	297	301	1.34	317	315	0.63	703	698	0.71	169	168	0.59	521	521	0.00	211	213	0.94
Alkalinity (Carbonate as CaCO3)	mg/L	1.0	<1.0	<1.0	NA	<1.0	<1.0	NA	<1.0	<1.0	NA	<1.0	<1.0	NA	<1.0	<1.0	NA	<1.0	<1.0	NA
Alkalinity (Hydroxide) as CaCO3	mg/L	1.0	<1.0	<1.0	NA	<1.0	<1.0	NA	<1.0	<1.0	NA	<1.0	<1.0	NA	<1.0	<1.0	NA	<1.0	<1.0	NA
Ammonia as N	mg/L	0.050	<0.050	0.05	NA	<0.050	<0.050	NA	0.321	0.32	0.31	0.122	0.129	NA	0.146	0.147	NA	0.055	0.058	NA
Carbon, Dissolved Organic	mg/L	0.50	3.36	3.41	1.48	16.3	15.4	5.68	5.09	5.32	4.42	2.2	2.39	NA	14	14.3	2.12	1.44	1.51	NA
Chemical Oxygen Demand	mg/L	20	<20	<20	NA	39	36	NA	<20	<20	NA	<20	<20	NA	49	66	NA	<20	<20	NA
pH (Lab)	-	0.10	8.13	8.16	0.37	7.64	7.67	0.39	7.93	7.98	0.63	7.86	7.83	0.38	7.84	7.85	0.13	7.79	7.81	0.26
Phosphorus, Dissolved Reactive	mg/L	0.0050	0.0053	0.0053	NA	0.0167	0.0145	NA	<0.0050	<0.0050	NA	<0.0050	<0.0050	NA	<0.0050	<0.0050	NA	0.0072	0.0074	NA
Solids, Total Dissolved	mg/L	15	1,240	1,030	18.50	7,160	7,230	0.97	5,760	5,000	14.13	1,530	1,490	2.65	3,030	2,620	14.51	1,220	1,200	1.65
Anions																				
Bromide	mg/L	0.10	<0.10	<1.00	NA	<1.00	<1.00	NA	<1.00	<1.00	NA	0.84	0.85	1.18	<1.00	<1.00	NA	0.52	0.51	1.94
Chloride	mg/L	0.10	160	133	18.43	211	205	2.88	49.8	49	1.62	131	140	6.64	101	110	8.53	98.6	100	1.41
Fluoride	mg/L	0.10	<1.00	<1.00	NA	2.13	1.84	14.61	1.2	1.22	1.65	0.58	0.59	1.71	1.38	1.5	8.33	0.28	0.29	NA
Nitrate (as N)	mg/L	0.010	<0.100	<0.100	NA	<0.100	<0.100	NA	<0.100	<0.100	NA	<0.010	<0.010	NA	<0.100	<0.100	NA	<0.010	<0.010	NA
Nitrite (as N)	mg/L	0.010	<0.100	<0.100	NA	<0.100	<0.100	NA	<0.100	<0.100	NA	0.014	0.014	NA	<0.100	<0.100	NA	<0.010	<0.010	NA
Sulphate	mg/L	1.0	386	364	5.87	4,280	4,400	2.76	3,140	3,020	3.90	746	763	2.25	2,130	2,150	0.93	546	574	5.00
Metals, Dissolved																				
Aluminum	µg/L	1.0	1.1	1.4	NA	<2.0	2.1	NA	8.7	8.4	3.51	<1.0	<1.0	NA	2.4	1.2	NA	1	1.4	NA
Antimony	µg/L	0.050	0.056	0.062	NA	0.109	0.112	NA	<0.050	<0.050	NA	<0.050	<0.050	NA	<0.050	<0.050	NA	<0.050	<0.050	NA
Arsenic	µg/L	0.050	0.304	0.317	4.19	1.15	1.2	4.26	5.8	6.14	5.70	1.06	1.08	1.87	1.69	1.72	1.76	0.898	0.887	1.23
Barium	µg/L	0.10	18.7	19.3	3.16	21.9	21.7	0.92	26.3	28.7	8.73	53.1	54	1.68	10.8	10.7	0.93	66.3	63.1	4.95
Beryllium	µg/L	0.010	<0.010	<0.010	NA	<0.020	<0.020	NA	0.011	0.011	NA	<0.010	<0.010	NA	<0.010	<0.010	NA	<0.010	<0.010	NA
Bismuth	µg/L	0.010	<0.010	<0.010	NA	0.025	<0.020	NA	<0.010	0.011	NA	<0.010	<0.010	NA	<0.010	<0.010	NA	<0.010	<0.010	NA
Boron	µg/L	2.0	9.3	9.5	NA	52.2	53.4	2.27	26.1	24.7	5.51	11.3	11.3	0.00	19.1	19.5	2.07	12.2	12	1.65
Cadmium	µg/L	0.0020	0.0184	0.0223	19.16	0.0678	0.0659	2.84	<0.0040	<0.0040	NA	<0.0120	<0.0080	NA	<0.0120	<0.0120	NA	0.0386	0.0395	2.30
Calcium	mg/L	0.050	48.6	49.1	1.02	419	424	1.19	282	315	11.06	153	154	0.65	222	223	0.45	122	121	0.82
Chromium (III+VI)	µg/L	0.50	<0.50	<0.50	NA	<1.00	<1.00	NA	<0.50	<0.50	NA	<0.50	<0.50	NA	<0.50	<0.50	NA	<0.50	<0.50	NA
Cobalt	µg/L	0.0050	0.216	0.233	7.57	1.44	1.49	3.41	2.84	2.93	3.12	0.0437	0.0432	1.15	0.701	0.702	0.14	0.0278	0.0258	7.46
Copper	µg/L	0.10	0.66	0.67	1.50	0.47	0.45	NA	<0.10	0.13	NA	<0.10	<0.10	NA	<0.10	<0.10	NA	0.19	0.21	NA
Iron	µg/L	2.0	<2.0	<2.0	NA	137	153	11.03	2,140	2,280	6.33	1,270	1,270	0.00	1,260	1,260	0.00	25.5	24.9	2.38
Lead	µg/L	0.050	<0.050	<0.050	NA	<0.100	<0.100	NA	<0.050	<0.050	NA	<0.050	<0.050	NA	<0.050	<0.050	NA	<0.050	<0.050	NA
Lithium	µg/L	0.050	12.1	12.2	0.82	92.4	92.6	0.22	152	155	1.95	16.5	16.7	1.20	80.2	82.4	2.71	14.8	14.6	1.36
Magnesium	µg/L	5.0	87,100	87,900	0.91	473,000	473,000	0.00	519,000	476,000	8.64	74,300	73,500	1.08	311,000	315,000	1.28	74,300	72,000	3.14
Manganese	µg/L	0.050	27.8	28.7	3.19	783	798	1.90	952	1,050	9.79	204	204	0.00	374	388	3.67	112	106	5.50
Mercury	µg/L	0.010	<0.010	<0.010	NA	<0.010	<0.010	NA	<0.010	<0.010	NA	<0.010	<0.010	NA	<0.010	<0.010	NA	<0.010	<0.010	NA
Molybdenum	µg/L	0.010	39.1	38.8	0.77	69	69.5	0.72	15.9	16	0.63	20.8	20.6	0.97	14.4	14.3	0.70	16.5	15.9	3.70
Nickel	µg/L	0.040	0.96	1.03	7.04	13.4	13.4	0.00	5.68	6	5.48	0.072	0.091	NA	2.83	2.85	0.70	0.215	0.236	9.31
Phosphorus	µg/L	10	<10	<10	NA	25	25	NA	31	28	NA	<10	<10	NA	15	15	NA	<10	<10	NA
Potassium	µg/L	20	4,140	4,120	0.48	20,900	20,700	0.96	20,900	22,700	8.26	5,390	5,350	0.74	10,900	10,900	0.00	4,380	4,320	1.38
Selenium	µg/L	0.10	0.13	0.11	NA	0.21	<0.20	NA	<0.10	0.11	NA	<0.10	<0.10	NA	<0.10	<0.10	NA	<0.10	<0.10	NA
Silicon	µg/L	100	7,930	8,060	1.63	9,150	9,040	1.21	15,900	17,200	7.85	9,460	9,600	1.47	11,500	11,400	0.87	8,330	8,560	2.72
Silver	µg/L	0.010	<0.010	<0.010	NA	<0.020	<0.020	NA	<0.010	<0.010	NA	<0.010	<0.010	NA	<0.010	<0.010	NA	<0.010	<0.010	NA
Sodium	mg/L	0.020	176	180	2.25	1,010	975	3.53	747	846	12.43	210	209	0.48	394	398	1.01	151	149	1.33
Strontium	µg/L	0.10	1,110	1,170	5.26	7,490	7,480	0.13	8,360	9,690	14.74	4,620	4,580	0.87	6,210	6,270	0.96	4,230	4,120	2.63
Sulfur	µg/L	1,000	126,000	128,000	1.57	1,550,000	1,590,000	2.55	1,200,000	1,400,000	15.38	277,000	281,000	1.43	749,000	757,000	1.06	191,000	197,000	3.09
Tellurium	µg/L	0.050	<0.050	<0.050	NA	<0.100	<0.100	NA	<0.050	<0.050	NA	<0.050	<0.050	NA	<0.050	<0.050	NA	<0.050	<0.050	NA
Thallium	µg/L	0.0040	0.0049	0.0069	NA	<0.0080	<0.0080	NA	0.0069	0.0079	NA	<0.0040	<0.0040	NA	0.0085	0.0082	NA	<0.0040	0.0049	NA
Thorium	µg/L	0.010	<0.010	<0.010	NA	<0.020	<0.020	NA	<0.010	<0.010	NA	<0.010	<0.010	NA	<0.010	0.01	NA	<0.010	<0.010	NA
Tin	µg/L	0.100	<0.100	<0.100	NA	<0.200	<0.200	NA	0.108	<0.100	NA	<0.100	<0.100	NA	<0.100	<0.100	NA	<0.100	<0.100	NA
Titanium	µg/L	0.20	<0.20	<0.20	NA	<0.40	<0.40	NA	0.33	0.49	NA	<0.20	<0.20	NA	<0.20	<0.20	NA	<0.20	<0.20	NA
Tungsten	µg/L	0.20	<0.20	<0.20	NA	<0.40	<0.40	NA	<0.20	<0.20	NA	<0.20	<0.20	NA	<0.20	<0.20	NA	<0.20	<0.20	NA
Uranium	µg/L	0.0010	28.9	30	3.74	206	204	0.98	178	195	9.12	2.68	2.7	0.74	137	138	0.73	2.96	2.85	3.79
Vanadium	µg/L	1.00	<1.00	<1.00	NA	<2.00	<2.00	NA	<1.00	<1.00	NA	<1.00	<1.00	NA	<1.00	<1.00	NA	<1.00	<1.00	NA
Zinc	µg/L	1.0	<1.0	<1.0	NA	4	3.7	NA	1.3	1.3	NA	<1.0	<1.0	NA	1.3	1.2	NA	<1.0	<1.0	NA
Zirconium	µg/L	0.020	<0.020	<0.020	NA	0.061	0.053	NA	0.536	0.515	4.00	<0.020	<0.020	NA	0.151	0.141	6.85	<0.020	<0.020	NA

Analytical Reports: CARO 25C2620, 25C2966, 25D0598, 25E1808, 25E3008, 25E3100, 25E3308, 25E3424, 25E4018, 25F0108, 25H2860, 25H3114, 25H3772, 25H3964, 25H4198, 25H4267, 25I0165, 25I1149, 25J4101, 25J4396, 25K0306

- - not analyzed
- < less than laboratory detection limit
- FD Field Duplicate
- FDA field duplicate available
- RL reporting limit
- RPD relative percent difference
- NA not applicable
- RED & Shaded Pink RPD > 30%

TableQA4: Summary of Water Analytical Results - Groundwater Field & Trip Blanks - 2025

SAMPLING EVENT			Spring Event									
DATE SAMPLED			13 May 2025	13 May 2025	21 May 2025	21 May 2025	22 May 2025	22 May 2025	23 May 2025	23 May 2025	26 May 2025	26 May 2025
SAMPLE ID			FIELD BLANK	Trip Blank	FIELD BLANK	TRIP BLANK	FIELD BLANK	TRIP BLANK	FIELD BLANK	TRIP BLANK	FIELD BLANK	Trip Blank
LAB ID			25E1808-06	25E1808-07	25E3008-06	25E3008-05	25E3100-07	25E3100-06	25E3308-07	25E3308-06	25E3424-07	25E3424-06
Parameters	**Unit**	**RL**										
Calculations												
Hardness, Total (as CaCO3)	mg/L	0.125	-	<0.125	-	<0.125	-	<0.125	-	<0.125	-	<0.125
Hardness, Dissolved (as CaCO3)	mg/L	0.125	<0.125	-	<0.125	-	<0.125	-	<0.125	-	<0.125	-
General												
Alkalinity (total) as CaCO3	mg/L	1	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Alkalinity (P)	mg/L	1	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Alkalinity (Bicarbonate as CaCO3)	mg/L	1	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Alkalinity (Carbonate as CaCO3)	mg/L	1	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Alkalinity (Hydroxide) as CaCO3	mg/L	1	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Ammonia as N	mg/L	0.05	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050
Carbon, Total Organic	mg/L	0.5	-	<0.50	-	<0.50	-	<0.50	-	<0.50	-	<0.50
Carbon, Dissolved Organic	mg/L	0.5	<0.50	-	<0.50	-	<0.50	-	<0.50	-	<0.50	-
Chemical Oxygen Demand	mg/L	20	<20	<20	<20	<20	<20	<20	<20	<20	<20	<20
pH (Lab)	-	0.1	6.33	5.65	6.1	5.39	5.57	5.61	5.71	6.64	6.04	6.58
Phosphorus, Dissolved Reactive	mg/L	0.005	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050
Solids, Total Dissolved	mg/L	15	<15	<15	<15	<15	<15	<15	<15	<15	<15	<15
Anions												
Bromide	mg/L	0.1	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10
Chloride	mg/L	0.1	<0.10	<0.10	<0.10	<0.10	0.14	<0.10	<0.10	<0.10	<0.10	<0.10
Fluoride	mg/L	0.1	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10
Nitrate (as N)	mg/L	0.01	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010
Nitrite (as N)	mg/L	0.01	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010
Sulphate	mg/L	1	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Metals, Total												
Aluminum	µg/L	2	-	<2.0	-	<2.0	-	<2.0	-	<2.0	-	<2.0
Antimony	µg/L	0.05	-	<0.050	-	<0.050	-	<0.050	-	<0.050	-	<0.050
Arsenic	µg/L	0.05	-	<0.050	-	<0.050	-	<0.050	-	<0.050	-	<0.050
Barium	µg/L	0.1	-	<0.10	-	<0.10	-	<0.10	-	<0.10	-	<0.10
Beryllium	µg/L	0.01	-	<0.010	-	<0.010	-	<0.010	-	<0.010	-	<0.010
Bismuth	µg/L	0.01	-	<0.010	-	<0.010	-	<0.010	-	<0.010	-	<0.010
Boron	µg/L	2	-	<2.0	-	<2.0	-	<2.0	-	<2.0	-	<2.0
Cadmium	µg/L	0.002	-	<0.0020	-	<0.0020	-	<0.0020	-	<0.0020	-	<0.0020
Calcium	mg/L	0.05	-	<0.05	-	<0.05	-	<0.05	-	<0.05	-	<0.05
Chromium (III+VI)	µg/L	0.5	-	<0.50	-	<0.50	-	<0.50	-	<0.50	-	<0.50
Cobalt	µg/L	0.005	-	<0.0050	-	<0.0050	-	<0.0050	-	<0.0050	-	<0.0050
Copper	µg/L	0.2	-	<0.20	-	<0.20	-	<0.20	-	<0.20	-	<0.20
Iron	µg/L	2	-	<2.0	-	<2.0	-	<2.0	-	<2.0	-	<2.0
Lead	µg/L	0.05	-	<0.050	-	<0.050	-	<0.050	-	<0.050	-	<0.050
Lithium	µg/L	0.05	-	<0.050	-	<0.050	-	<0.050	-	<0.050	-	<0.050
Magnesium	µg/L	5	-	<5.0	-	<5.0	-	<5.0	-	<5.0	-	<5.0
Manganese	µg/L	0.05	-	<0.050	-	<0.050	-	<0.050	-	<0.050	-	<0.050
Mercury	µg/L	0.01	-	<0.010	-	<0.010	-	<0.010	-	<0.010	-	<0.010
Molybdenum	µg/L	0.01	-	<0.010	-	<0.010	-	<0.010	-	<0.010	-	<0.010
Nickel	µg/L	0.04	-	<0.040	-	<0.040	-	<0.040	-	<0.040	-	<0.040
Phosphorus	µg/L	10	-	<10	-	<10	-	<10	-	<10	-	<10
Potassium	µg/L	20	-	<20	-	<20	-	<20	-	<20	-	<20
Selenium	µg/L	0.1	-	<0.10	-	<0.10	-	<0.10	-	<0.10	-	<0.10
Silicon	µg/L	100	-	<100	-	<100	-	<100	-	<100	-	<100
Silver	µg/L	0.01	-	<0.010	-	<0.010	-	<0.010	-	<0.010	-	<0.010
Sulfur (As S)	µg/L	1,000	-	-	-	-	-	-	-	-	-	-
Sodium	mg/L	0.02	-	<0.02	-	<0.02	-	<0.02	-	<0.02	-	<0.02
Strontium	µg/L	0.1	-	<0.10	-	<0.10	-	<0.10	-	<0.10	-	<0.10
Sulfur	µg/L	1,000	-	<1,000	-	<1,000	-	<1,000	-	<1,000	-	<1,000
Tellurium	µg/L	0.05	-	<0.050	-	<0.050	-	<0.050	-	<0.050	-	<0.050
Thallium	µg/L	0.004	-	<0.0040	-	<0.0040	-	<0.0040	-	<0.0040	-	<0.0040
Thorium	µg/L	0.01	-	<0.010	-	<0.010	-	<0.010	-	<0.010	-	<0.010
Tin	µg/L	0.1	-	<0.100	-	<0.100	-	<0.100	-	<0.100	-	<0.100
Titanium	µg/L	0.2	-	<0.20	-	<0.20	-	<0.20	-	<0.20	-	<0.20
Tungsten	µg/L	0.2	-	<0.20	-	<0.20	-	<0.20	-	<0.20	-	<0.20
Uranium	µg/L	0.001	-	<0.0010	-	<0.0010	-	<0.0010	-	<0.0010	-	<0.0010
Vanadium	µg/L	1	-	<1.00	-	<1.00	-	<1.00	-	<1.00	-	<1.00
Zinc	µg/L	1	-	<1.0	-	<1.0	-	<1.0	-	<1.0	-	<1.0
Zirconium	µg/L	0.02	-	<0.020	-	<0.020	-	<0.020	-	<0.020	-	<0.020
Metals, Dissolved												
Aluminum	µg/L	1	<1.0	-	<1.0	-	<1.0	-	<1.0	-	<1.0	-
Antimony	µg/L	0.05	<0.050	-	<0.050	-	<0.050	-	<0.050	-	<0.050	-
Arsenic	µg/L	0.05	<0.050	-	<0.050	-	<0.050	-	<0.050	-	<0.050	-
Barium	µg/L	0.1	<0.10	-	<0.10	-	<0.10	-	<0.10	-	<0.10	-
Beryllium	µg/L	0.01	<0.010	-	<0.010	-	<0.010	-	<0.010	-	<0.010	-
Bismuth	µg/L	0.01	<0.010	-	<0.010	-	<0.010	-	<0.010	-	<0.010	-
Boron	µg/L	2	<2.0	-	<2.0	-	<2.0	-	<2.0	-	<2.0	-
Cadmium	µg/L	0.002	<0.0020	-	<0.0020	-	0.0026	-	<0.0020	-	<0.0020	-
Calcium	mg/L	0.05	<0.05	-	<0.05	-	<0.05	-	<0.05	-	<0.05	-
Chromium (III+VI)	µg/L	0.5	<0.50	-	<0.50	-	<0.50	-	<0.50	-	<0.50	-
Cobalt	µg/L	0.005	<0.0050	-	<0.0050	-	<0.0050	-	<0.0050	-	<0.0050	-
Copper	µg/L	0.1	<0.10	-	0.59	-	0.82	-	0.14	-	0.34	-
Iron	µg/L	2	<2.0	-	<2.0	-	<2.0	-	<2.0	-	<2.0	-
Lead	µg/L	0.05	<0.050	-	<0.050	-	<0.050	-	<0.050	-	<0.050	-
Lithium	µg/L	0.05	<0.050	-	<0.050	-	<0.050	-	<0.050	-	<0.050	-
Magnesium	µg/L	5	<5.0	-	15.1	-	6	-	<5.0	-	<5.0	-
Manganese	µg/L	0.05	<0.050	-	0.386	-	0.498	-	0.126	-	0.336	-
Mercury	µg/L	0.01	<0.010	-	<0.010	-	<0.010	-	<0.010	-	<0.010	-
Molybdenum	µg/L	0.01	<0.010	-	<0.010	-	0.015	-	<0.010	-	<0.010	-
Nickel	µg/L	0.04	<0.040	-	0.076	-	0.109	-	<0.040	-	<0.040	-
Phosphorus	µg/L	10	<10	-	<10	-	<10	-	<10	-	<10	-
Potassium	µg/L	20	<20	-	<20	-	<20	-	<20	-	<20	-
Selenium	µg/L	0.1	<0.10	-	<0.10	-	<0.10	-	<0.10	-	<0.10	-
Silicon	µg/L	100	<100	-	<100	-	<100	-	<100	-	<100	-
Silver	µg/L	0.01	<0.010	-	<0.010	-	<0.010	-	<0.010	-	<0.010	-
Sulfur (As S)	µg/L	1,000	-	-	-	-	-	-	-	-	-	-
Sodium	mg/L	0.02	<0.02	-	0.022	-	0.056	-	<0.02	-	<0.02	-
Strontium	µg/L	0.1	<0.10	-	0.31	-	0.11	-	<0.10	-	<0.10	-
Sulfur	µg/L	1,000	<1,000	-	<1,000	-	<1,000	-	<1,000	-	<1,000	-
Tellurium	µg/L	0.05	<0.050	-	<0.050	-	<0.050	-	<0.050	-	<0.050	-
Thallium	µg/L	0.004	<0.0040	-	<0.0040	-	<0.0040	-	<0.0040	-	<0.0040	-
Thorium	µg/L	0.01	<0.010	-	<0.010	-	<0.010	-	<0.010	-	<0.010	-
Tin	µg/L	0.1	0.194	-	<0.100	-	<0.100	-	<0.100	-	<0.100	-
Titanium	µg/L	0.2	<0.20	-	<0.20	-	<0.20	-	<0.20	-	<0.20	-
Tungsten	µg/L	0.2	<0.20	-	<0.20	-	<0.20	-	<0.20	-	<0.20	-
Uranium	µg/L	0.001	<0.0010	-	0.0056	-	<0.0010	-	<0.0010	-	<0.0010	-
Vanadium	µg/L	1	<1.00	-	<1.00	-	<1.00	-	<1.00	-	<1.00	-
Zinc	µg/L	1	<1.0	-	<1.0	-	<1.0	-	<1.0	-	<1.0	-
Zirconium	µg/L	0.02	<0.020	-	<0.020	-	<0.020	-	<0.020	-	<0.020	-

Analytical Reports: CARO 25C2620, 25C2966, 25C3571, 25D0598, 25E1808, 25E3008, 25E3100, 25E3308, 25E3424, 25E4018, 25F0108, 25H2860, 25H3114, 25H3772, 25H3964, 25H4198, 25H4267, 25I0165, 25I1149, 25J4101, 25J4396, 25K0306

- not analyzed

< less than laboratory detection limit

RL reporting limit

RED and Shaded Pink detectable concentration

TableQA4: Summary of Water Analytical Results - Groundwater Field & Trip Blanks - 2025

SAMPLING EVENT			Spring Event				Fall Event					
DATE SAMPLED			28 May 2025	28 May 2025	02 Jun 2025	02 Jun 2025	20 Aug 2025	20 Aug 2025	21 Aug 2025	21 Aug 2025	26 Aug 2025	26 Aug 2025
SAMPLE ID			FIELD BLANK	TRIP BLANK	FIELD BLANK	TRIP BLANK	FIELD BLANK	Trip Blank	FIELD BLANK	TRIP BLANK	FIELD BLANK	TRIP BLANK
LAB ID			25E4018-06	25E4018-05	25F0108-07	25F0108-06	25H2860-06	25H2860-04	25H3114-03	25H3114-04	25H3772-06	25H3772-07
Parameters	**Unit**	**RL**										
Calculations												
Hardness, Total (as CaCO3)	mg/L	0.125	-	<0.125	-	<0.125	-	<0.125	-	<0.125	-	<0.125
Hardness, Dissolved (as CaCO3)	mg/L	0.125	<0.125	-	<0.125	-	<0.125	-	<0.125	-	<0.125	-
General												
Alkalinity (total) as CaCO3	mg/L	1	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Alkalinity (P)	mg/L	1	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Alkalinity (Bicarbonate as CaCO3)	mg/L	1	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Alkalinity (Carbonate as CaCO3)	mg/L	1	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Alkalinity (Hydroxide) as CaCO3	mg/L	1	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Ammonia as N	mg/L	0.05	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050
Carbon, Total Organic	mg/L	0.5	-	<0.50	-	-	-	<0.50	-	<0.50	-	<0.50
Carbon, Dissolved Organic	mg/L	0.5	<0.50	-	<0.50	-	<0.50	-	0.68	-	0.66	-
Chemical Oxygen Demand	mg/L	20	<20	<20	<20	<20	<20	<20	<20	<20	<20	<20
pH (Lab)	-	0.1	5.63	6.26	5.74	6.68	6.53	6.5	7.15	5.71	6.35	5.79
Phosphorus, Dissolved Reactive	mg/L	0.005	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050
Solids, Total Dissolved	mg/L	15	<15	<15	<15	<15	<15	<15	<15	<15	<15	<15
Anions												
Bromide	mg/L	0.1	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10
Chloride	mg/L	0.1	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10
Fluoride	mg/L	0.1	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10
Nitrate (as N)	mg/L	0.01	<0.010	<0.010	<0.010	<0.010	<0.010	0.012	<0.010	<0.010	<0.010	<0.010
Nitrite (as N)	mg/L	0.01	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010
Sulphate	mg/L	1	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Metals, Total												
Aluminum	µg/L	2	-	<2.0	-	<2.0	-	<2.0	-	<2.0	-	<2.0
Antimony	µg/L	0.05	-	<0.050	-	<0.050	-	<0.050	-	<0.050	-	<0.050
Arsenic	µg/L	0.05	-	<0.050	-	<0.050	-	<0.050	-	<0.050	-	<0.050
Barium	µg/L	0.1	-	<0.10	-	<0.10	-	<0.10	-	<0.10	-	<0.10
Beryllium	µg/L	0.01	-	<0.010	-	<0.010	-	<0.010	-	<0.010	-	<0.010
Bismuth	µg/L	0.01	-	<0.010	-	<0.010	-	<0.010	-	<0.010	-	<0.010
Boron	µg/L	2	-	<2.0	-	<2.0	-	<2.0	-	<2.0	-	<2.0
Cadmium	µg/L	0.002	-	<0.0020	-	<0.0020	-	<0.0020	-	<0.0020	-	<0.0020
Calcium	mg/L	0.05	-	<0.05	-	<0.05	-	<0.05	-	<0.05	-	<0.05
Chromium (III+VI)	µg/L	0.5	-	<0.50	-	<0.50	-	<0.50	-	<0.50	-	<0.50
Cobalt	µg/L	0.005	-	<0.0050	-	<0.0050	-	<0.0050	-	<0.0050	-	<0.0050
Copper	µg/L	0.2	-	<0.20	-	<0.20	-	<0.20	-	<0.20	-	<0.20
Iron	µg/L	2	-	<2.0	-	<2.0	-	<2.0	-	<2.0	-	<2.0
Lead	µg/L	0.05	-	<0.050	-	<0.050	-	<0.050	-	<0.050	-	<0.050
Lithium	µg/L	0.05	-	<0.050	-	<0.050	-	<0.050	-	<0.050	-	<0.050
Magnesium	µg/L	5	-	<5.0	-	<5.0	-	<5.0	-	<5.0	-	<5.0
Manganese	µg/L	0.05	-	<0.050	-	<0.050	-	<0.050	-	<0.050	-	<0.050
Mercury	µg/L	0.01	-	<0.010	-	<0.010	-	<0.010	-	<0.010	-	<0.010
Molybdenum	µg/L	0.01	-	<0.010	-	<0.010	-	<0.010	-	<0.010	-	<0.010
Nickel	µg/L	0.04	-	<0.040	-	<0.040	-	<0.040	-	<0.040	-	<0.040
Phosphorus	µg/L	10	-	<10	-	<10	-	<10	-	<10	-	<10
Potassium	µg/L	20	-	<20	-	<20	-	<20	-	<20	-	<20
Selenium	µg/L	0.1	-	<0.10	-	<0.10	-	<0.10	-	<0.10	-	<0.10
Silicon	µg/L	100	-	<100	-	<100	-	<100	-	<100	-	<100
Silver	µg/L	0.01	-	<0.010	-	<0.010	-	<0.010	-	<0.010	-	<0.010
Sulfur (As S)	µg/L	1,000	-	-	-	-	-	-	-	-	-	-
Sodium	mg/L	0.02	-	<0.02	-	<0.02	-	<0.02	-	<0.02	-	<0.02
Strontium	µg/L	0.1	-	<0.10	-	<0.10	-	0.19	-	<0.10	-	<0.10
Sulfur	µg/L	1,000	-	<1,000	-	<1,000	-	<1,000	-	<1,000	-	<1,000
Tellurium	µg/L	0.05	-	<0.050	-	<0.050	-	<0.050	-	<0.050	-	<0.050
Thallium	µg/L	0.004	-	<0.0040	-	<0.0040	-	<0.0040	-	<0.0040	-	<0.0040
Thorium	µg/L	0.01	-	<0.010	-	<0.010	-	<0.010	-	<0.010	-	<0.010
Tin	µg/L	0.1	-	<0.100	-	<0.100	-	<0.100	-	<0.100	-	<0.100
Titanium	µg/L	0.2	-	<0.20	-	<0.20	-	<0.20	-	<0.20	-	<0.20
Tungsten	µg/L	0.2	-	<0.20	-	<0.20	-	<0.20	-	<0.20	-	<0.20
Uranium	µg/L	0.001	-	<0.0010	-	<0.0010	-	<0.0010	-	<0.0010	-	<0.0010
Vanadium	µg/L	1	-	<1.00	-	<1.00	-	<1.00	-	<1.00	-	<1.00
Zinc	µg/L	1	-	<1.0	-	<1.0	-	<1.0	-	<1.0	-	<1.0
Zirconium	µg/L	0.02	-	<0.020	-	<0.020	-	<0.020	-	<0.020	-	<0.020
Metals, Dissolved												
Aluminum	µg/L	1	<1.0	-	<1.0	-	<1.0	-	1.2	-	<1.0	-
Antimony	µg/L	0.05	<0.050	-	<0.050	-	<0.050	-	<0.050	-	<0.050	-
Arsenic	µg/L	0.05	<0.050	-	<0.050	-	<0.050	-	<0.050	-	<0.050	-
Barium	µg/L	0.1	<0.10	-	<0.10	-	<0.10	-	<0.10	-	<0.10	-
Beryllium	µg/L	0.01	<0.010	-	<0.010	-	<0.010	-	<0.010	-	<0.010	-
Bismuth	µg/L	0.01	<0.010	-	<0.010	-	<0.010	-	<0.010	-	<0.010	-
Boron	µg/L	2	<2.0	-	<2.0	-	<2.0	-	<2.0	-	<2.0	-
Cadmium	µg/L	0.002	<0.0020	-	<0.0020	-	0.033	-	<0.0020	-	0.0047	-
Calcium	mg/L	0.05	<0.05	-	<0.05	-	<0.05	-	<0.05	-	<0.05	-
Chromium (III+VI)	µg/L	0.5	<0.50	-	<0.50	-	<0.50	-	<0.50	-	<0.50	-
Cobalt	µg/L	0.005	<0.0050	-	<0.0050	-	<0.0050	-	<0.0050	-	<0.0050	-
Copper	µg/L	0.1	0.23	-	0.16	-	<0.10	-	<0.10	-	<0.10	-
Iron	µg/L	2	<2.0	-	<2.0	-	<2.0	-	<2.0	-	<2.0	-
Lead	µg/L	0.05	<0.050	-	<0.050	-	<0.050	-	<0.050	-	<0.050	-
Lithium	µg/L	0.05	<0.050	-	<0.050	-	<0.050	-	<0.050	-	<0.050	-
Magnesium	µg/L	5	<5.0	-	<5.0	-	<5.0	-	<5.0	-	<5.0	-
Manganese	µg/L	0.05	0.096	-	<0.050	-	<0.050	-	<0.050	-	<0.050	-
Mercury	µg/L	0.01	<0.010	-	<0.010	-	<0.010	-	<0.010	-	<0.010	-
Molybdenum	µg/L	0.01	<0.010	-	0.02	-	<0.010	-	<0.010	-	<0.010	-
Nickel	µg/L	0.04	<0.040	-	<0.040	-	<0.040	-	<0.040	-	<0.040	-
Phosphorus	µg/L	10	<10	-	<10	-	<10	-	<10	-	<10	-
Potassium	µg/L	20	<20	-	<20	-	<20	-	<20	-	<20	-
Selenium	µg/L	0.1	<0.10	-	<0.10	-	<0.10	-	<0.10	-	<0.10	-
Silicon	µg/L	100	<100	-	<100	-	<100	-	<100	-	<100	-
Silver	µg/L	0.01	<0.010	-	<0.010	-	<0.010	-	<0.010	-	<0.010	-
Sulfur (As S)	µg/L	1,000	-	-	-	-	-	-	-	-	-	-
Sodium	mg/L	0.02	<0.02	-	0.021	-	<0.02	-	<0.02	-	0.038	-
Strontium	µg/L	0.1	<0.10	-	<0.10	-	<0.10	-	<0.10	-	<0.10	-
Sulfur	µg/L	1,000	<1,000	-	<1,000	-	<1,000	-	<1,000	-	<1,000	-
Tellurium	µg/L	0.05	<0.050	-	<0.050	-	<0.050	-	<0.050	-	<0.050	-
Thallium	µg/L	0.004	<0.0040	-	<0.0040	-	<0.0040	-	<0.0040	-	<0.0040	-
Thorium	µg/L	0.01	<0.010	-	<0.010	-	<0.010	-	<0.010	-	<0.010	-
Tin	µg/L	0.1	<0.100	-	<0.100	-	0.121	-	0.133	-	<0.100	-
Titanium	µg/L	0.2	<0.20	-	<0.20	-	<0.20	-	<0.20	-	<0.20	-
Tungsten	µg/L	0.2	<0.20	-	<0.20	-	<0.20	-	<0.20	-	<0.20	-
Uranium	µg/L	0.001	<0.0010	-	<0.0010	-	<0.0010	-	<0.0010	-	0.0013	-
Vanadium	µg/L	1	<1.00	-	<1.00	-	<1.00	-	<1.00	-	<1.00	-
Zinc	µg/L	1	<1.0	-	<1.0	-	<1.0	-	<1.0	-	<1.0	-
Zirconium	µg/L	0.02	<0.020	-	<0.020	-	<0.020	-	<0.020	-	<0.020	-

Analytical Reports: CARO 25C2620, 25C2966, 25C3571, 25D0598, 25E1808, 25E3008, 25E3100, 25E3308, 25E3424, 25E4018, 25F0108, 25H2860, 25H3114, 25H3772, 25H3964, 25H4198, 25H4267, 25I0165, 25I1149, 25J4101, 25J4396, 25K0306

- not analyzed

< less than laboratory detection limit

RL reporting limit

RED and Shaded Pink detectable concentı

TableQA4: Summary of Water Analytical Results - Groundwater Field & Trip Blanks - 2025

SAMPLING EVENT			Fall Event									
DATE SAMPLED			27 Aug 2025	27 Aug 2025	28 Aug 2025	28 Aug 2025	29 Aug 2025	29 Aug 2025	02 Sep 2025	02 Sep 2025	09 Sep 2025	09 Sep 2025
SAMPLE ID			Field Blank	Trip Blank	FIELD BLANK	TRIP BLANK	FIELD BLANK	TRIP BLANK	FIELD BLANK	TRIP BLANK	Field Blank	Trip Blank
LAB ID			25H3964-06	25H3964-07	25H4198-06	25H4198-07	25H4267-05	25H4267-06	25I0165-06	25I0165-05	25I1149-03	25I1149-04
Parameters	**Unit**	**RL**										
Calculations												
Hardness, Total (as CaCO3)	mg/L	0.125	-	<0.125	-	<0.125	-	<0.125	-	<0.125	-	<0.125
Hardness, Dissolved (as CaCO3)	mg/L	0.125	<0.125	-	<0.125	-	<0.125	-	<0.125	-	<0.125	-
General												
Alkalinity (total) as CaCO3	mg/L	1	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Alkalinity (P)	mg/L	1	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Alkalinity (Bicarbonate as CaCO3)	mg/L	1	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Alkalinity (Carbonate as CaCO3)	mg/L	1	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Alkalinity (Hydroxide) as CaCO3	mg/L	1	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Ammonia as N	mg/L	0.05	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050
Carbon, Total Organic	mg/L	0.5	-	<0.50	-	<0.50	-	<0.50	-	<0.50	-	-
Carbon, Dissolved Organic	mg/L	0.5	0.65	-	<0.50	-	0.56	-	0.63	-	<0.50	-
Chemical Oxygen Demand	mg/L	20	<20	<20	<20	<20	<20	<20	<20	<20	<20	<20
pH (Lab)	-	0.1	5.89	5.53	5.61	5.62	6.22	5.65	5.55	6.63	6.19	5.49
Phosphorus, Dissolved Reactive	mg/L	0.005	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050
Solids, Total Dissolved	mg/L	15	<15	<15	<15	<15	<15	<15	<15	<15	<15	<15
Anions												
Bromide	mg/L	0.1	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10
Chloride	mg/L	0.1	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10
Fluoride	mg/L	0.1	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10
Nitrate (as N)	mg/L	0.01	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010
Nitrite (as N)	mg/L	0.01	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010
Sulphate	mg/L	1	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Metals, Total												
Aluminum	µg/L	2	-	<2.0	-	<2.0	-	<2.0	-	<2.0	-	<2.0
Antimony	µg/L	0.05	-	<0.050	-	<0.050	-	<0.050	-	<0.050	-	<0.050
Arsenic	µg/L	0.05	-	<0.050	-	<0.050	-	<0.050	-	<0.050	-	<0.050
Barium	µg/L	0.1	-	<0.10	-	<0.10	-	<0.10	-	<0.10	-	<0.10
Beryllium	µg/L	0.01	-	<0.010	-	<0.010	-	<0.010	-	<0.010	-	<0.010
Bismuth	µg/L	0.01	-	<0.010	-	<0.010	-	<0.010	-	<0.010	-	<0.010
Boron	µg/L	2	-	<2.0	-	<2.0	-	<2.0	-	<2.0	-	<2.0
Cadmium	µg/L	0.002	-	<0.0020	-	<0.0020	-	<0.0020	-	<0.0020	-	<0.0020
Calcium	mg/L	0.05	-	<0.05	-	<0.05	-	<0.05	-	<0.05	-	<0.05
Chromium (III+VI)	µg/L	0.5	-	<0.50	-	<0.50	-	<0.50	-	<0.50	-	<0.50
Cobalt	µg/L	0.005	-	<0.0050	-	<0.0050	-	<0.0050	-	<0.0050	-	<0.0050
Copper	µg/L	0.2	-	<0.20	-	<0.20	-	<0.20	-	<0.20	-	<0.20
Iron	µg/L	2	-	<2.0	-	<2.0	-	<2.0	-	<2.0	-	<2.0
Lead	µg/L	0.05	-	<0.050	-	<0.050	-	<0.050	-	<0.050	-	<0.050
Lithium	µg/L	0.05	-	<0.050	-	<0.050	-	<0.050	-	<0.050	-	<0.050
Magnesium	µg/L	5	-	<5.0	-	<5.0	-	<5.0	-	<5.0	-	<5.0
Manganese	µg/L	0.05	-	<0.050	-	<0.050	-	<0.050	-	<0.050	-	<0.050
Mercury	µg/L	0.01	-	<0.010	-	<0.010	-	<0.010	-	<0.010	-	<0.010
Molybdenum	µg/L	0.01	-	<0.010	-	<0.010	-	<0.010	-	<0.010	-	<0.010
Nickel	µg/L	0.04	-	<0.040	-	<0.040	-	<0.040	-	<0.040	-	<0.040
Phosphorus	µg/L	10	-	<10	-	<10	-	<10	-	<10	-	<10
Potassium	µg/L	20	-	<20	-	<20	-	<20	-	<20	-	<20
Selenium	µg/L	0.1	-	<0.10	-	<0.10	-	<0.10	-	<0.10	-	<0.10
Silicon	µg/L	100	-	<100	-	<100	-	<100	-	<100	-	<100
Silver	µg/L	0.01	-	<0.010	-	<0.010	-	<0.010	-	<0.010	-	<0.010
Sulfur (As S)	µg/L	1,000	-	-	-	-	-	-	-	-	-	-
Sodium	mg/L	0.02	-	<0.02	-	<0.02	-	<0.02	-	<0.02	-	<0.02
Strontium	µg/L	0.1	-	<0.10	-	<0.10	-	<0.10	-	<0.10	-	<0.10
Sulfur	µg/L	1,000	-	<1,000	-	<1,000	-	<1,000	-	<1,000	-	<1,000
Tellurium	µg/L	0.05	-	<0.050	-	<0.050	-	<0.050	-	<0.050	-	<0.050
Thallium	µg/L	0.004	-	<0.0040	-	<0.0040	-	<0.0040	-	<0.0040	-	<0.0040
Thorium	µg/L	0.01	-	<0.010	-	<0.010	-	<0.010	-	<0.010	-	<0.010
Tin	µg/L	0.1	-	<0.100	-	<0.100	-	<0.100	-	<0.100	-	<0.100
Titanium	µg/L	0.2	-	<0.20	-	<0.20	-	<0.20	-	<0.20	-	<0.20
Tungsten	µg/L	0.2	-	<0.20	-	<0.20	-	<0.20	-	<0.20	-	<0.20
Uranium	µg/L	0.001	-	<0.0010	-	<0.0010	-	<0.0010	-	<0.0010	-	<0.0010
Vanadium	µg/L	1	-	<1.00	-	<1.00	-	<1.00	-	<1.00	-	<1.00
Zinc	µg/L	1	-	<1.0	-	<1.0	-	<1.0	-	<1.0	-	<1.0
Zirconium	µg/L	0.02	-	<0.020	-	<0.020	-	<0.020	-	<0.020	-	<0.020
Metals, Dissolved												
Aluminum	µg/L	1	<1.0	-	<1.0	-	<1.0	-	<1.0	-	<1.0	-
Antimony	µg/L	0.05	<0.050	-	<0.050	-	<0.050	-	<0.050	-	<0.050	-
Arsenic	µg/L	0.05	<0.050	-	<0.050	-	<0.050	-	<0.050	-	<0.050	-
Barium	µg/L	0.1	<0.10	-	<0.10	-	<0.10	-	<0.10	-	<0.10	-
Beryllium	µg/L	0.01	<0.010	-	<0.010	-	<0.010	-	<0.010	-	<0.010	-
Bismuth	µg/L	0.01	<0.010	-	<0.010	-	<0.010	-	<0.010	-	<0.010	-
Boron	µg/L	2	<2.0	-	<2.0	-	<2.0	-	<2.0	-	<2.0	-
Cadmium	µg/L	0.002	<0.0020	-	<0.0020	-	<0.0020	-	0.0123	-	<0.0020	-
Calcium	mg/L	0.05	<0.05	-	<0.05	-	<0.05	-	<0.05	-	<0.05	-
Chromium (III+VI)	µg/L	0.5	<0.50	-	<0.50	-	<0.50	-	<0.50	-	<0.50	-
Cobalt	µg/L	0.005	<0.0050	-	<0.0050	-	<0.0050	-	<0.0050	-	<0.0050	-
Copper	µg/L	0.1	<0.10	-	<0.10	-	<0.10	-	<0.10	-	<0.10	-
Iron	µg/L	2	<2.0	-	<2.0	-	<2.0	-	<2.0	-	<2.0	-
Lead	µg/L	0.05	<0.050	-	<0.050	-	<0.050	-	<0.050	-	<0.050	-
Lithium	µg/L	0.05	<0.050	-	<0.050	-	<0.050	-	<0.050	-	<0.050	-
Magnesium	µg/L	5	<5.0	-	<5.0	-	<5.0	-	<5.0	-	<5.0	-
Manganese	µg/L	0.05	<0.050	-	<0.050	-	<0.050	-	<0.050	-	<0.050	-
Mercury	µg/L	0.01	<0.010	-	<0.010	-	<0.010	-	<0.010	-	<0.010	-
Molybdenum	µg/L	0.01	<0.010	-	<0.010	-	<0.010	-	<0.010	-	<0.010	-
Nickel	µg/L	0.04	<0.040	-	<0.040	-	<0.040	-	<0.040	-	<0.040	-
Phosphorus	µg/L	10	<10	-	<10	-	<10	-	<10	-	<10	-
Potassium	µg/L	20	<20	-	25	-	<20	-	24	-	<20	-
Selenium	µg/L	0.1	<0.10	-	<0.10	-	<0.10	-	<0.10	-	<0.10	-
Silicon	µg/L	100	<100	-	<100	-	<100	-	<100	-	<100	-
Silver	µg/L	0.01	<0.010	-	<0.010	-	<0.010	-	<0.010	-	<0.010	-
Sulfur (As S)	µg/L	1,000	-	-	-	-	-	-	-	-	-	-
Sodium	mg/L	0.02	<0.02	-	<0.02	-	<0.02	-	<0.02	-	<0.02	-
Strontium	µg/L	0.1	<0.10	-	<0.10	-	<0.10	-	<0.10	-	<0.10	-
Sulfur	µg/L	1,000	<1,000	-	<1,000	-	<1,000	-	<1,000	-	<1,000	-
Tellurium	µg/L	0.05	<0.050	-	<0.050	-	<0.050	-	<0.050	-	<0.050	-
Thallium	µg/L	0.004	<0.0040	-	<0.0040	-	<0.0040	-	<0.0040	-	<0.0040	-
Thorium	µg/L	0.01	<0.010	-	<0.010	-	<0.010	-	<0.010	-	<0.010	-
Tin	µg/L	0.1	<0.100	-	<0.100	-	<0.100	-	<0.100	-	0.122	-
Titanium	µg/L	0.2	<0.20	-	<0.20	-	<0.20	-	<0.20	-	<0.20	-
Tungsten	µg/L	0.2	<0.20	-	<0.20	-	<0.20	-	<0.20	-	<0.20	-
Uranium	µg/L	0.001	<0.0010	-	<0.0010	-	<0.0010	-	<0.0010	-	<0.0010	-
Vanadium	µg/L	1	<1.00	-	<1.00	-	<1.00	-	<1.00	-	<1.00	-
Zinc	µg/L	1	<1.0	-	<1.0	-	<1.0	-	<1.0	-	<1.0	-
Zirconium	µg/L	0.02	<0.020	-	<0.020	-	<0.020	-	<0.020	-	<0.020	-

Analytical Reports: CARO 25C2620, 25C2966, 25C3571, 25D0598, 25E1808, 25E3008, 25E3100, 25E3308, 25E3424, 25E4018, 25F0108, 25H2860, 25H3114, 25H3772, 25H3964, 25H4198, 25H4267, 25I0165, 25I1149, 25J4101, 25J4396, 25K0306

- not analyzed

< less than laboratory detection limit

RL reporting limit

RED and Shaded Pink detectable concentr

Table QA3: Summary of Water Analytical Results - QA/QC Surface Water 2025

QUARTER			Q1									Q2		
SAMPLE ID			Bredin Pond	Dup A	RPD (%)	Little Robert Lake	DUP B	RPD (%)	Culvert 1002026	DUP C	RPD (%)	Tutt Pond	DUP 2	RPD (%)
DATE SAMPLED			11 Mar 2025	11 Mar 2025		12 Mar 2025	12 Mar 2025		13 Mar 2025	13 Mar 2025		15 May 2025	15 May 2025	
MATRIX			Water	Water		Water	Water		Water	Water		Water	Water	
FIELD DUPLICATE			FDA	FD of Bredin Pond		FDA	FD of Little Robert Lake		FDA	FD of Culvert 1002026		FDA	FD of Tutt Pond	
LAB ID			25C1300-02	25C1300-05		25C1509-02	25C1509-07		25C1660-02	25C1660-02		25E2222-03	25E2222-08	
Parameter	**Unit**	**RL**	**Analytical Results**											
Calculations														
Hardness, Total (as CaCO3)	mg/L	0.125	519	520	0.19	1,730	1,720	0.58	186	189	1.60	785	800	1.89
Hardness, Diss (as CaCO3)	mg/L	0.125	517	521	0.77	1,750	1,740	0.57	162	165	1.83	810	819	1.10
Nitrite + Nitrate as N	mg/L	0.0100	0.625	0.592	5.42	<0.500	<0.500	NA	2.01	2.16	7.19	<0.250	<0.250	NA
Nitrogen (Total)	µg/L	50	1,400	1,490	6.23	2,280	2,200	3.57	4,970	4,760	4.32	1,020	1,110	8.45
General														
Alkalinity (total) as CaCO3	mg/L	1.0	463	463	0.00	635	633	0.32	105	105	0.00	547	546	0.18
Alkalinity (P)	mg/L	1.0	8.4	7.6	10.00	13	14.1	8.12	<1.0	<1.0	NA	54.6	53.2	2.60
Alkalinity (Bicarb as CaCO3)	mg/L	1.0	446	448	0.45	609	605	0.66	105	105	0.00	438	439	0.23
Alkalinity (Carb as CaCO3)	mg/L	1.0	16.8	15.1	10.66	26	28.1	7.76	<1.0	<1.0	NA	109	106	2.79
Alkalinity (Hydrox as CaCO3)	mg/L	1.0	<1.0	<1.0	NA	<1.0	<1.0	NA	<1.0	<1.0	NA	<1.0	<1.0	NA
Ammonia as N	mg/L	0.050	0.233	0.246	NA	<0.050	0.07	NA	0.143	0.12	NA	0.132	0.162	NA
Carbon, Total Organic	mg/L	0.50	5.49	5.72	4.10	21.3	21	1.42	16.4	16.3	0.61	10.6	10.4	1.90
Carbon, Dissolved Organic	mg/L	0.5	5.33	5.7	6.71	19.4	19.5	0.51	16.1	15.9	1.25	10.1	10.4	2.93
Chemical Oxygen Demand	mg/L	20	<20	<20	NA	68	68	NA	114	181	45.42	33	42	NA
Conductivity (Lab)	µS/cm	2.0	1,420	1,420	0.00	5,450	5,450	0.00	1,090	1,090	0.00	2,430	2,310	5.06
Nitrogen, Total Kjeldahl	mg/L	0.50	0.775	0.902	NA	2.28	2.2	NA	2.96	2.6	12.95	1.02	1.11	NA
pH (Lab)	-	0.10	8.37	8.36	0.12	8.38	8.39	0.12	7.83	7.77	0.77	8.7	8.65	0.58
Phosphorus, Total (as P)	mg/L	0.0050	0.204	0.2	1.98	1.43	1.36	5.02	3.39	3.4	0.29	0.21	0.265	23.16
Phosphorus, Dissolved Reactive	mg/L	0.0050	0.154	0.153	0.65	1.13	1.08	4.52	2.17	2.39	9.65	0.166	0.17	2.38
Solids, Total Dissolved	mg/L	15	826	829	0.36	4,310	4,250	1.40	-	639	NA	1,510	1,620	7.03
Solids, Total Suspended	mg/L	2.0	-	-	NA	-	-	NA	-	-	NA	5.6	5	NA
Anions														
Bromide	mg/L	0.10	<1.00	<1.00	NA	<5.00	<5.00	NA	0.24	0.26	NA	0.31	0.31	NA
Chloride	mg/L	0.10	105	108	2.82	112	116	3.51	179	188	4.90	197	184	6.82
Fluoride	mg/L	0.10	<1.00	<1.00	NA	<5.00	<5.00	NA	<0.10	<0.10	NA	0.75	0.8	6.45
Nitrate (as N)	mg/L	0.010	0.625	0.592	5.42	<0.500	<0.500	NA	2.01	2.16	7.19	<0.250	<0.250	NA
Nitrite (as N)	mg/L	0.010	<0.100	<0.100	NA	<0.500	<0.500	NA	<0.010	<0.010	NA	<0.010	<0.010	NA
Sulphate	mg/L	1.0	118	123	4.15	2,540	2,600	2.33	15.7	17	7.95	474	443	6.76
Microbiological														
Coliforms, Fecal (Q-Tray)	MPN/100mL	1	46	45	2.20	5	3	NA	173	140	21.09	15	17	12.50
Coliforms, Total (Q-Tray)	MPN/100 mL	1	579	486	17.46	115	160	32.73	13,300	13,500	1.49	23	56	83.54
Metals, Total														
Aluminum	µg/L	1.0	47.7	55.5	15.12	350	348	0.57	10,100	10,700	5.77	85	72.1	16.42
Antimony	µg/L	0.050	0.084	0.08	NA	0.367	0.396	7.60	0.863	0.892	3.30	0.191	0.222	NA
Arsenic	µg/L	0.050	0.766	0.813	5.95	4.27	4.23	0.94	8.56	8.6	0.47	3	3.04	1.32
Barium	µg/L	0.10	85.8	85.8	0.00	50.1	52.7	5.06	99.8	106	6.03	60.3	62.1	2.94
Beryllium	µg/L	0.010	<0.010	<0.010	NA	0.013	0.014	NA	0.617	0.628	1.77	<0.010	<0.010	NA
Bismuth	µg/L	0.010	<0.010	<0.010	NA	<0.010	0.01	NA	0.213	0.23	7.67	<0.010	<0.010	NA
Boron	µg/L	2.0	21.4	21.7	1.39	24.5	24.9	1.62	38	39.7	4.38	42.7	42.7	0.00
Cadmium	µg/L	0.0020	<0.0060	<0.0080	NA	0.0079	0.0066	NA	0.161	0.167	3.66	<0.0060	<0.0060	NA
Calcium	mg/L	0.050	43.5	43.9	0.92	173	169	2.34	50.3	50.9	1.19	58.8	60.5	2.85
Chromium (III+VI)	µg/L	0.50	<0.50	<0.50	NA	0.66	0.67	NA	21.2	22	3.70	<0.50	<0.50	NA
Cobalt	µg/L	0.0050	0.0989	0.101	2.10	0.582	0.567	2.61	5.95	6.14	3.14	0.519	0.515	0.77
Copper	µg/L	0.10	0.61	0.61	0.00	1.12	1.08	3.64	25.7	26.3	2.31	1.03	1.01	1.96
Iron	µg/L	2.0	69.4	59.5	15.36	356	349	1.99	13,300	13,700	2.96	96.2	96.7	0.52
Lead	µg/L	0.050	0.066	0.064	NA	0.181	0.189	NA	7.77	8	2.92	0.071	0.07	NA
Lithium	µg/L	0.050	27.4	26.2	4.48	47.5	48.9	2.90	13.1	13.8	5.20	29	30.3	4.38
Magnesium	µg/L	5.0	99,500	99,500	0.00	316,000	314,000	0.63	14,700	15,100	2.68	155,000	158,000	1.92
Manganese	µg/L	0.050	19.8	20.1	1.50	960	958	0.21	327	336	2.71	37.9	37.6	0.79
Mercury	µg/L	0.010	<0.010	<0.010	NA	<0.010	<0.010	NA	<0.010	<0.010	NA	<0.010	<0.010	NA
Molybdenum	µg/L	0.010	10.6	10.4	1.90	7.13	7.05	1.13	8.29	8.52	2.74	11.7	12	2.53
Nickel	µg/L	0.040	0.707	0.778	9.56	1.79	1.8	0.56	17.9	18.4	2.75	2.66	2.63	1.13
Phosphorus	µg/L	10	215	219	1.84	1,570	1,570	0.00	3,230	3,290	1.84	279	247	12.17
Potassium	µg/L	20	11,000	11,100	0.90	29,100	29,200	0.34	20,000	20,200	1.00	13,400	13,600	1.48
Selenium	µg/L	0.10	0.82	0.83	1.21	0.36	0.28	NA	0.31	0.35	NA	0.47	0.51	NA
Silicon	µg/L	100	9,820	9,960	1.42	3,170	3,100	2.23	24,000	24,900	3.68	1,620	1,550	4.42
Silver	µg/L	0.010	<0.010	<0.010	NA	<0.010	<0.010	NA	0.115	0.121	5.08	0.01	0.011	NA
Sodium	mg/L	0.020	127	128	0.78	894	891	0.34	131	135	3.01	296	297	0.34
Strontium	µg/L	0.10	2,640	2,660	0.75	5,400	5,400	0.00	396	393	0.76	4,400	4,470	1.58
Sulfur	µg/L	1,000	47,300	48,200	1.88	1,070,000	1,060,000	0.94	7,800	7,600	2.60	216,000	224,000	3.64
Tellurium	µg/L	0.050	<0.050	<0.050	NA	<0.050	<0.050	NA	<0.050	<0.050	NA	<0.050	<0.050	NA
Thallium	µg/L	0.0040	<0.0040	<0.0040	NA	0.0055	0.0049	NA	0.153	0.17	10.53	<0.0040	<0.0040	NA
Thorium	µg/L	0.010	<0.010	0.01	NA	0.051	0.045	NA	0.977	0.986	0.92	0.014	0.011	NA
Tin	µg/L	0.100	<0.100	<0.100	NA	<0.100	<0.100	NA	0.366	0.405	NA	<0.100	<0.100	NA
Titanium	µg/L	0.20	2.58	2.49	3.55	18.5	20.5	10.26	319	329	3.09	4.43	3.68	18.50
Tungsten	µg/L	0.20	<0.20	<0.20	NA	<0.20	<0.20	NA	0.58	0.58	NA	0.27	0.29	NA
Uranium	µg/L	0.0010	18.8	18.7	0.53	44.3	44.4	0.23	1.5	1.48	1.34	29.3	30.6	4.34
Vanadium	µg/L	1.00	2.12	2.13	NA	3.07	2.95	NA	24.5	25.4	3.61	4.09	4.25	NA
Zinc	µg/L	1.0	2	2.3	NA	2.3	2.2	NA	115	123	6.72	1	<1.0	NA
Zirconium	µg/L	0.020	0.124	0.209	51.05	0.858	0.833	2.96	3.97	4.19	5.39	0.535	0.509	4.98
Metals, Dissolved														
Aluminum	µg/L	1.0	2.7	2.7	NA	1.9	2.3	NA	11.4	11.7	2.60	<1.0	1	NA
Antimony	µg/L	0.050	0.063	0.072	NA	0.395	0.368	7.08	0.677	0.681	0.59	0.197	0.229	NA
Arsenic	µg/L	0.050	0.827	0.821	0.73	4.39	4.38	0.23	4.82	4.87	1.03	3.11	3.22	3.48
Barium	µg/L	0.10	86.3	85.1	1.40	49.3	48.8	1.02	23.6	22.9	3.01	64	63.7	0.47
Beryllium	µg/L	0.010	<0.010	<0.010	NA	<0.010	<0.010	NA	<0.010	<0.010	NA	<0.010	<0.010	NA
Bismuth	µg/L	0.010	<0.010	<0.010	NA	<0.010	<0.010	NA	<0.010	<0.010	NA	<0.010	<0.010	NA
Boron	µg/L	2.0	20.1	20.1	0.00	24.4	24	1.65	38.1	38.9	2.08	39.1	36.3	7.43
Cadmium	µg/L	0.0020	<0.0060	<0.0060	NA	<0.0060	<0.0060	NA	0.0401	0.0391	2.53	<0.0040	<0.0040	NA
Calcium	mg/L	0.050	43.5	43.1	0.92	171	174	1.74	46.3	47.2	1.93	56.5	58.7	3.82
Chromium (III+VI)	µg/L	0.50	<0.50	<0.50	NA	<0.50	<0.50	NA	3.37	3.35	0.60	<0.50	<0.50	NA
Cobalt	µg/L	0.0050	0.0751	0.0784	4.30	0.428	0.444	3.67	0.267	0.275	2.95	0.428	0.448	4.57
Copper	µg/L	0.10	0.45	0.46	NA	0.56	0.59	5.22	9.86	9.68	1.84	0.84	0.68	21.05
Iron	µg/L	2.0	7.7	8.1	NA	13.9	13.7	1.45	25.4	24.1	5.25	4	3.8	NA
Lead	µg/L	0.050	<0.050	<0.050	NA	<0.050	<0.050	NA	<0.050	<0.050	NA	<0.050	<0.050	NA
Lithium	µg/L	0.050	25.5	25.4	0.39	58.1	56.8	2.26	3.8	4.03	5.87	31.3	27.7	12.20
Magnesium	µg/L	5.0	99,000	100,000	1.01	320,000	317,000	0.94	11,200	11,500	2.64	162,000	163,000	0.62
Manganese	µg/L	0.050	16.5	16.7	1.20	940	939	0.11	5.88	5.82	1.03	30.8	31.4	1.93
Molybdenum	µg/L	0.010	10.3	10.2	0.98	7.12	7.07	0.70	8.89	8.75	1.59	11	10.9	0.91
Nickel	µg/L	0.040	0.653	0.655	0.31	1.33	1.39	4.41	2.05	2.09	1.93	2.33	2.5	7.04
Phosphorus	µg/L	10	202	209	3.41	1,520	1,490	1.99	3,050	3,130	2.59	237	245	3.32
Potassium	µg/L	20	11,200	11,300	0.89	30,800	30,800	0.00	19,000	18,700	1.59	14,000	14,300	2.12
Selenium	µg/L	0.10	0.95	0.91	4.30	0.31	0.29	NA	0.25	0.26	NA	0.44	0.45	NA
Silicon	µg/L	100	10,100	9,890	2.10	2,410	2,350	2.52	6,310	6,540	3.58	1,460	1,420	2.78
Silver	µg/L	0.010	<0.010	<0.010	NA	<0.010	<0.010	NA	0.011	<0.010	NA	<0.010	<0.010	NA
Sodium	mg/L	0.020	128	130	1.55	902	899	0.33	140	142	1.42	289	299	3.40
Strontium	µg/L	0.10	2,610	2,630	0.76	5,570	5,630	1.07	385	381	1.04	4,500	4,620	2.63
Sulfur	µg/L	1,000	47,600	47,200	0.84	1,110,000	1,090,000	1.82	7,790	7,810	0.26	189,000	190,000	0.53
Tellurium	µg/L	0.050	<0.050	<0.050	NA	<0.050	<0.050	NA	<0.050	<0.050	NA	<0.050	<0.050	NA
Thallium	µg/L	0.0040	<0.0040	<0.0040	NA	<0.0040	<0.0040	NA	0.0136	0.0145	NA	<0.0040	<0.0040	NA
Thorium	µg/L	0.010	<0.010	<0.010	NA	<0.010	<0.010	NA	0.016	0.011	NA	<0.010	<0.010	NA
Tin	µg/L	0.100	<0.100	0.124	NA	<0.100	<0.100	NA	<0.100	<0.100	NA	<0.100	<0.100	NA
Titanium	µg/L	0.20	0.27	0.36	NA	1.05	1.06	0.95	1.1	0.91	NA	0.31	0.32	NA
Tungsten	µg/L	0.20	<0.20	<0.20	NA	<0.20	<0.20	NA	0.61	0.61	NA	0.25	0.25	NA
Uranium	µg/L	0.0010	18	18.2	1.10	46.7	46.6	0.21	0.916	0.911	0.55	27.7	27.8	0.36
Vanadium	µg/L	1.00	2.05	2.11	NA	2.49	2.43	NA	4	4.03	NA	3.87	3.91	1.03
Zinc	µg/L	1.0	1.1	<1.0	NA	<1.0	<1.0	NA	25.8	25	3.15	<1.0	<1.0	NA
Zirconium	µg/L	0.020	0.084	0.08	NA	0.686	0.671	2.21	0.58	0.548	5.67	0.525	0.541	NA

Analytical Reports: CARO 25C1300, 25C1509, 25C1660, 25E2222, 25E2377 25I3095, 25I3232, 25K0542, 25K0866

- - not analyzed
- < less than laboratory detection limit
- FD Field Duplicate
- FDA field duplicate available
- RL reporting limit
- RPD relative percent difference
- NA not applicable
- RED & Shaded Pink RPD > 30%

Table QA3: Summary of Water Analytical Results - QA/QC Surface Water 2025

QUARTER			Q2			Q3						Q4		
SAMPLE ID			Little Robert Lake	DUP 3	RPD (%)	Bredin Pond	DUP 10	RPD (%)	Little Roberts Lake	DUP 11	RPD (%)	Tutt Pond	DUP E	RPD (%)
DATE SAMPLED			16 May 2025	16 May 2025		22 Sep 2025	22 Sep 2025		23 Sep 2025	23 Sep 2025		05 Nov 2025	05 Nov 2025	
MATRIX			Water	Water		Water	Water		Water	Water		Water	Water	
FIELD DUPLICATE			FDA	FD of Little Robert Lake		FDA	FD of Bredin Pond		FDA	FD of Little Robert Lake		FDA	FD of Tutt Pond	
LAB ID			25E2377-03	25E2377-05		25I3095-02	25I3095-08		25I3232-03	25I3232-04		25K0542-03	25K0542-07	
Parameter	**Unit**	**RL**	**Analytical Results**											
Calculations														
Hardness, Total (as CaCO3)	mg/L	0.125	1,930	1,900	1.57	550	550	0.00	2,450	2,320	5.45	791	786	0.63
Hardness, Diss (as CaCO3)	mg/L	0.125	1,920	1,960	2.06	507	498	1.79	-	-	NA	853	807	5.54
Nitrite + Nitrate as N	mg/L	0.0100	<0.100	<0.100	NA	<0.01	<0.01	NA	<1.00	<1.00	NA	<0.100	<0.100	NA
Nitrogen (Total)	µg/L	50	2,180	2,380	8.77	3,030	3,200	5.46	2,610	2,560	1.93	1,560	1,460	6.62
General														
Alkalinity (total) as CaCO3	mg/L	1.0	724	718	0.83	491	484	1.44	777	783	0.77	634	631	0.47
Alkalinity (P)	mg/L	1.0	63.7	64.9	1.87	63.8	66.2	3.69	102	102	0.00	87.3	82.6	5.53
Alkalinity (Bicarb as CaCO3)	mg/L	1.0	597	588	1.52	364	351	3.64	573	578	0.87	460	466	1.30
Alkalinity (Carb as CaCO3)	mg/L	1.0	127	130	2.33	128	132	3.08	204	205	0.49	175	165	5.88
Alkalinity (Hydrox as CaCO3)	mg/L	1.0	<1.0	<1.0	NA	<1	<1	NA	<1.0	<1.0	NA	<1.0	<1.0	NA
Ammonia as N	mg/L	0.050	0.089	0.096	NA	0.23	0.228	NA	0.076	0.078	NA	0.376	0.386	2.62
Carbon, Total Organic	mg/L	0.50	23.2	26.2	12.15	9.36	8.77	6.51	27.5	28.3	2.87	12.6	13	3.13
Carbon, Dissolved Organic	mg/L	0.5	22.9	21.2	7.71	8.48	8.2	3.36	26.5	27.8	4.79	12.5	12.2	2.43
Chemical Oxygen Demand	mg/L	20	79	85	NA	59	64	NA	81	82	NA	38	50	NA
Conductivity (Lab)	µS/cm	2.0	5,740	5,760	0.35	1,420	1,430	0.70	7,110	7,120	0.14	2,550	2,550	0.00
Nitrogen, Total Kjeldahl	mg/L	0.50	2.18	2.38	NA	3.03	3.2	5.46	2.61	2.56	1.93	1.56	1.46	NA
pH (Lab)	-	0.10	8.61	8.63	0.23	8.83	8.83	0.00	8.8	8.81	0.11	8.82	8.79	0.34
Phosphorus, Total (as P)	mg/L	0.0050	2.74	2.56	6.79	0.217	0.176	20.87	1.36	1.46	7.09	0.452	0.419	7.58
Phosphorus, Dissolved Reactive	mg/L	0.0050	1.98	1.93	2.56	<0.005	0.0056	NA	1.19	1.21	1.67	0.335	0.353	5.23
Solids, Total Dissolved	mg/L	15	4,900	4,820	1.65	892	883	1.01	6,040	6,010	0.50	1,550	1,610	3.80
Solids, Total Suspended	mg/L	2.0	24	31.6	27.34	-	-	NA	51.8	38	30.73	3.8	3.2	NA
Anions														
Bromide	mg/L	0.10	<1.00	<1.00	NA	0.13	0.13	NA	<10.0	<10.0	NA	<1.00	<1.00	NA
Chloride	mg/L	0.10	110	108	1.83	131	133	1.52	158	197	21.97	175	266	41.27
Fluoride	mg/L	0.10	<1.00	<1.00	NA	0.9	0.91	1.10	<10.0	<10.0	NA	<1.00	<1.00	NA
Nitrate (as N)	mg/L	0.010	<0.100	<0.100	NA	<0.01	<0.01	NA	<1.00	<1.00	NA	<0.100	<0.100	NA
Nitrite (as N)	mg/L	0.010	<0.100	<0.100	NA	<0.01	<0.01	NA	<1.00	<1.00	NA	<0.100	<0.100	NA
Sulphate	mg/L	1.0	2,420	2,360	2.51	140	145	3.51	3,440	3,640	5.65	396	580	37.70
Microbiological														
Coliforms, Fecal (Q-Tray)	MPN/100mL	1	161	343	72.22	162	138	16.00	317	396	22.16	2	3	NA
Coliforms, Total (Q-Tray)	MPN/100 mL	1	2,420	2,810	14.91	1,550	1,410	9.46	98,000	112,000	13.33	387	260	39.26
Metals, Total														
Aluminum	µg/L	1.0	350	368	5.01	28.6	36.3	23.73	325	340	4.51	65.5	66.1	0.91
Antimony	µg/L	0.050	0.464	0.408	12.84	0.105	0.107	NA	0.735	0.671	9.10	0.304	0.326	6.98
Arsenic	µg/L	0.050	5.09	5.23	2.71	1.04	1.07	2.84	8.5	7.94	6.81	5.34	5.37	0.56
Barium	µg/L	0.10	54.8	54.3	0.92	104	104	0.00	72.6	67.7	6.99	68.4	68.6	0.29
Beryllium	µg/L	0.010	0.012	0.012	NA	<0.01	<0.01	NA	<0.020	<0.020	NA	<0.010	<0.010	NA
Bismuth	µg/L	0.010	<0.010	<0.010	NA	<0.01	<0.01	NA	<0.020	<0.020	NA	<0.010	<0.010	NA
Boron	µg/L	2.0	34.5	38.2	10.18	40.3	39.5	2.01	27.4	27.1	1.10	44.6	44.1	1.13
Cadmium	µg/L	0.0020	<0.0080	<0.0100	NA	<0.0066	<0.01	NA	<0.0120	<0.0120	NA	0.0085	<0.0040	NA
Calcium	mg/L	0.050	222	220	0.90	24	23.7	1.26	172	166	3.55	44.6	44.3	0.67
Chromium (III+VI)	µg/L	0.50	0.76	0.79	NA	<0.5	<0.5	NA	<1.00	<1.00	NA	<0.50	<0.50	NA
Cobalt	µg/L	0.0050	0.722	0.738	2.19	0.111	0.115	3.54	0.45	0.412	8.82	0.368	0.371	0.81
Copper	µg/L	0.10	1.16	1.26	8.26	1.21	1.44	17.36	0.79	0.83	4.94	0.56	0.56	0.00
Iron	µg/L	2.0	425	453	6.38	40.9	41	0.24	361	319	12.35	92.4	91.1	1.42
Lead	µg/L	0.050	0.241	0.265	NA	<0.05	0.051	NA	0.23	0.216	NA	0.081	0.082	NA
Lithium	µg/L	0.050	42.8	47.7	10.83	33.2	32.4	2.44	57.5	57	0.87	29.1	28.9	0.69
Magnesium	µg/L	5.0	333,000	328,000	1.51	119,000	119,000	0.00	490,000	464,000	5.45	165,000	164,000	0.61
Manganese	µg/L	0.050	1,820	1,810	0.55	52.1	51.9	0.38	188	177	6.03	42	42.3	0.71
Mercury	µg/L	0.010	<0.010	<0.010	NA	<0.01	<0.01	NA	<0.010	<0.010	NA	<0.010	<0.010	NA
Molybdenum	µg/L	0.010	9.95	9.92	0.30	11.5	11.6	0.87	11.1	9.96	10.83	10.3	10.2	0.98
Nickel	µg/L	0.040	2.28	2.19	4.03	0.657	0.847	25.27	1.89	1.71	10.00	2.08	2.04	1.94
Phosphorus	µg/L	10	2,790	2,850	2.13	210	188	11.06	1,750	1,640	6.49	451	462	2.41
Potassium	µg/L	20	30,700	31,100	1.29	14,100	14,200	0.71	46,500	44,200	5.07	14,600	14,900	2.03
Selenium	µg/L	0.10	0.44	0.41	NA	0.92	0.95	3.21	0.34	0.31	NA	0.5	0.51	NA
Silicon	µg/L	100	1,400	1,460	4.20	18,900	18,700	1.06	6,970	6,390	8.68	6,550	6,500	0.77
Silver	µg/L	0.010	<0.010	<0.010	NA	<0.01	<0.01	NA	<0.020	<0.020	NA	0.014	<0.010	NA
Sodium	mg/L	0.020	990	991	0.10	149	148	0.67	1,440	1,350	6.45	318	317	0.31
Strontium	µg/L	0.10	6,020	6,020	0.00	2,850	2,850	0.00	7,570	7,210	4.87	4,550	4,550	0.00
Sulfur	µg/L	1,000	1,160,000	1,180,000	1.71	51,400	50,500	1.77	1,530,000	1,480,000	3.32	195,000	194,000	0.51
Tellurium	µg/L	0.050	0.065	<0.050	NA	<0.05	<0.05	NA	<0.100	<0.100	NA	<0.050	<0.050	NA
Thallium	µg/L	0.0040	<0.0040	0.0048	NA	<0.004	<0.004	NA	<0.0080	<0.0080	NA	<0.0040	<0.0040	NA
Thorium	µg/L	0.010	0.046	0.045	NA	<0.01	<0.01	NA	0.054	0.035	NA	0.011	0.012	NA
Tin	µg/L	0.100	<0.100	<0.100	NA	<0.1	<0.1	NA	<0.200	<0.200	NA	<0.100	<0.100	NA
Titanium	µg/L	0.20	19.8	22.5	12.77	1.41	1.34	5.09	17.4	15.8	9.64	3.77	3.69	2.14
Tungsten	µg/L	0.20	<0.20	<0.20	NA	<0.2	<0.2	NA	<0.40	<0.40	NA	0.31	0.29	NA
Uranium	µg/L	0.0010	47.4	45.6	3.87	16	16.2	1.24	32.6	30.5	6.66	22.3	22.4	0.45
Vanadium	µg/L	1.00	4.18	4.03	NA	2.28	2.21	NA	3.78	3.47	NA	4.98	4.91	NA
Zinc	µg/L	1.0	2	2	NA	1.1	1.5	NA	2.2	<2.0	NA	1.5	<1.0	NA
Zirconium	µg/L	0.020	0.675	0.738	8.92	0.056	0.071	NA	0.515	0.571	10.31	0.346	0.35	1.15
Metals, Dissolved														
Aluminum	µg/L	1.0	9.3	8.5	8.99	1.8	2.1	NA	-	-	NA	2.3	2.2	NA
Antimony	µg/L	0.050	0.447	0.483	7.74	0.098	0.101	NA	-	-	NA	0.329	0.295	10.90
Arsenic	µg/L	0.050	5.09	5.26	3.29	1.01	0.972	3.83	-	-	NA	5.58	5.68	1.78
Barium	µg/L	0.10	50.1	49.8	0.60	105	104	0.96	-	-	NA	73.9	72.7	1.64
Beryllium	µg/L	0.010	<0.010	<0.010	NA	<0.01	<0.01	NA	-	-	NA	<0.010	<0.010	NA
Bismuth	µg/L	0.010	<0.010	<0.010	NA	<0.01	<0.01	NA	-	-	NA	<0.010	<0.010	NA
Boron	µg/L	2.0	38.2	36.8	3.73	34	33.5	1.48	-	-	NA	48.5	41.4	15.80
Cadmium	µg/L	0.0020	<0.0040	<0.0040	NA	0.0122	<0.007	NA	-	-	NA	<0.0090	0.0081	NA
Calcium	mg/L	0.050	216	220	1.83	23.8	23.6	0.84	-	-	NA	43.4	41.9	3.52
Chromium (III+VI)	µg/L	0.50	<0.50	<0.50	NA	<0.5	<0.5	NA	-	-	NA	<0.50	<0.50	NA
Cobalt	µg/L	0.0050	0.531	0.537	1.12	0.0755	0.0751	0.53	-	-	NA	0.321	0.317	1.25
Copper	µg/L	0.10	0.56	0.63	11.76	1.17	1.07	8.93	0.25	0.64	NA	0.63	0.59	6.56
Iron	µg/L	2.0	27.3	27.5	0.73	<2	<2	NA	-	-	NA	10.9	10.5	3.74
Lead	µg/L	0.050	0.054	0.058	NA	<0.05	<0.05	NA	-	-	NA	<0.050	<0.050	NA
Lithium	µg/L	0.050	48.7	47.2	3.13	29.4	29.6	0.68	-	-	NA	31	28.2	9.46
Magnesium	µg/L	5.0	334,000	341,000	2.07	109,000	107,000	1.85	-	-	NA	181,000	171,000	5.68
Manganese	µg/L	0.050	2,030	2,100	3.39	2.25	2.32	3.06	-	-	NA	38.8	37.4	3.67
Molybdenum	µg/L	0.010	9.83	9.83	0.00	10.8	10.6	1.87	-	-	NA	9.26	9.58	3.40
Nickel	µg/L	0.040	1.92	1.83	4.80	0.548	0.603	9.56	-	-	NA	2.04	1.89	7.63
Phosphorus	µg/L	10	2,790	2,920	4.55	17	14	NA	-	-	NA	486	427	12.92
Potassium	µg/L	20	32,000	33,400	4.28	12,600	12,500	0.80	-	-	NA	15,900	14,600	8.52
Selenium	µg/L	0.10	0.41	0.34	NA	0.99	1.04	4.93	-	-	NA	0.43	0.48	NA
Silicon	µg/L	100	590	630	6.56	21,200	21,200	0.00	-	-	NA	6,370	6,140	3.68
Silver	µg/L	0.010	0.014	0.013	NA	<0.01	<0.01	NA	-	-	NA	<0.010	<0.010	NA
Sodium	mg/L	0.020	1,020	1,040	1.94	142	140	1.42	-	-	NA	333	284	15.88
Strontium	µg/L	0.10	6,410	6,480	1.09	3,060	3,020	1.32	-	-	NA	4,860	4,520	7.25
Sulfur	µg/L	1,000	1,320,000	1,350,000	2.25	52,000	51,100	1.75	-	-	NA	190,000	179,000	5.96
Tellurium	µg/L	0.050	<0.050	<0.050	NA	<0.05	<0.05	NA	-	-	NA	<0.050	<0.050	NA
Thallium	µg/L	0.0040	<0.0040	<0.0040	NA	<0.004	<0.004	NA	-	-	NA	<0.0040	<0.0040	NA
Thorium	µg/L	0.010	<0.010	<0.010	NA	<0.01	<0.01	NA	-	-	NA	<0.010	<0.010	NA
Tin	µg/L	0.100	<0.100	<0.100	NA	<0.1	<0.1	NA	-	-	NA	<0.100	<0.100	NA
Titanium	µg/L	0.20	2.41	2.45	1.65	<0.2	<0.2	NA	-	-	NA	0.58	0.65	11.38
Tungsten	µg/L	0.20	<0.20	<0.20	NA	<0.2	<0.2	NA	-	-	NA	0.28	0.3	NA
Uranium	µg/L	0.0010	46.9	48	2.32	13.6	13.7	0.73	-	-	NA	20.3	22.7	11.16
Vanadium	µg/L	1.00	3.94	4.07	3.25	2.17	2.08	4.24	-	-	NA	4.93	4.66	5.63
Zinc	µg/L	1.0	<1.0	<1.0	NA	1.8	1.9	NA	-	-	NA	<1.0	<1.0	NA
Zirconium	µg/L	0.020	0.612	0.626	NA	0.051	0.045	NA	-	-	NA	0.406	0.37	NA

Analytical Reports: CARO 25C1300, 25C1509, 25C1660, 25E2222, 25E2377 25I3095, 25I3232, 25K0542, 25K0866

- - not analyzed
- < less than laboratory detection limit
- FD Field Duplicate
- FDA field duplicate available
- RL reporting limit
- RPD relative percent difference
- NA not applicable
- RED & Shaded Pink RPD > 30%

Table QA3: Summary of Water Analytical Results - QA/QC Surface Water 2025

QUARTER			Q4		
SAMPLE ID			Slough #2	DUP F	RPD (%)
DATE SAMPLED			06 Nov 2025	06 Nov 2025	
MATRIX			Water	Water	
FIELD DUPLICATE			FDA	FD of Slough#2	
LAB ID			25K0866-04	25K0866-07	
Parameter	**Unit**	**RL**	**Analytical Results**		
Calculations					
Hardness, Total (as CaCO3)	mg/L	0.125	969	967	0.21
Hardness, Diss (as CaCO3)	mg/L	0.125	1,070	1,090	1.85
Nitrite + Nitrate as N	mg/L	0.0100	<0.100	<0.100	NA
Nitrogen (Total)	µg/L	50	4,620	4,840	4.65
General					
Alkalinity (total) as CaCO3	mg/L	1.0	1,270	1,270	0.00
Alkalinity (P)	mg/L	1.0	148	146	1.36
Alkalinity (Bicarb as CaCO3)	mg/L	1.0	972	982	1.02
Alkalinity (Carb as CaCO3)	mg/L	1.0	296	293	1.02
Alkalinity (Hydrox as CaCO3)	mg/L	1.0	<1.0	<1.0	NA
Ammonia as N	mg/L	0.050	0.428	0.421	1.65
Carbon, Total Organic	mg/L	0.50	64	58.5	8.98
Carbon, Dissolved Organic	mg/L	0.5	64	56	13.33
Chemical Oxygen Demand	mg/L	20	164	167	1.81
Conductivity (Lab)	µS/cm	2.0	8,630	8,650	0.23
Nitrogen, Total Kjeldahl	mg/L	0.50	4.62	4.84	4.65
pH (Lab)	-	0.10	8.83	8.83	0.00
Phosphorus, Total (as P)	mg/L	0.0050	0.149	0.132	12.10
Phosphorus, Dissolved Reactive	mg/L	0.0050	0.0099	0.0083	NA
Solids, Total Dissolved	mg/L	15	6,560	6,580	0.30
Solids, Total Suspended	mg/L	2.0	13.9	13.5	2.92
Anions					
Bromide	mg/L	0.10	1.62	1.62	0.00
Chloride	mg/L	0.10	1,060	1,070	0.94
Fluoride	mg/L	0.10	1.03	1.03	0.00
Nitrate (as N)	mg/L	0.010	<0.100	<0.100	NA
Nitrite (as N)	mg/L	0.010	<0.100	<0.100	NA
Sulphate	mg/L	1.0	1,940	1,940	0.00
Microbiological					
Coliforms, Fecal (Q-Tray)	MPN/100mL	1	11	9	20.00
Coliforms, Total (Q-Tray)	MPN/100 mL	1	291	345	16.98
Metals, Total					
Aluminum	µg/L	1.0	50.8	59.3	15.44
Antimony	µg/L	0.050	0.45	0.416	7.85
Arsenic	µg/L	0.050	5.03	4.97	1.20
Barium	µg/L	0.10	18	17.8	1.12
Beryllium	µg/L	0.010	<0.020	<0.020	NA
Bismuth	µg/L	0.010	<0.020	<0.020	NA
Boron	µg/L	2.0	15	14.7	2.02
Cadmium	µg/L	0.0020	<0.0100	<0.0100	NA
Calcium	mg/L	0.050	16.9	16.9	0.00
Chromium (III+VI)	µg/L	0.50	<1.00	<1.00	NA
Cobalt	µg/L	0.0050	0.191	0.194	1.56
Copper	µg/L	0.10	0.5	0.48	NA
Iron	µg/L	2.0	84.6	90.8	7.07
Lead	µg/L	0.050	0.14	0.147	NA
Lithium	µg/L	0.050	166	161	3.06
Magnesium	µg/L	5.0	225,000	225,000	0.00
Manganese	µg/L	0.050	13.2	12.1	8.70
Mercury	µg/L	0.010	<0.010	<0.010	NA
Molybdenum	µg/L	0.010	16.1	16.1	0.00
Nickel	µg/L	0.040	1.37	1.34	2.21
Phosphorus	µg/L	10	118	157	28.36
Potassium	µg/L	20	146,000	145,000	0.69
Selenium	µg/L	0.10	0.23	0.25	NA
Silicon	µg/L	100	4,550	4,460	2.00
Silver	µg/L	0.010	<0.020	<0.020	NA
Sodium	mg/L	0.020	1,360	1,360	0.00
Strontium	µg/L	0.10	995	1,000	0.50
Sulfur	µg/L	1,000	723,000	725,000	0.28
Tellurium	µg/L	0.050	<0.100	<0.100	NA
Thallium	µg/L	0.0040	<0.0080	<0.0080	NA
Thorium	µg/L	0.010	<0.020	<0.020	NA
Tin	µg/L	0.100	<0.200	<0.200	NA
Titanium	µg/L	0.20	3.84	4.49	15.61
Tungsten	µg/L	0.20	0.61	0.62	NA
Uranium	µg/L	0.0010	58.1	57.8	0.52
Vanadium	µg/L	1.00	2.84	2.96	NA
Zinc	µg/L	1.0	<2.0	<2.0	NA
Zirconium	µg/L	0.020	0.979	0.895	8.96
Metals, Dissolved					
Aluminum	µg/L	1.0	2.6	3.2	NA
Antimony	µg/L	0.050	0.444	0.484	8.62
Arsenic	µg/L	0.050	4.98	5.32	6.60
Barium	µg/L	0.10	16.3	16.7	2.42
Beryllium	µg/L	0.010	<0.020	<0.020	NA
Bismuth	µg/L	0.010	<0.020	<0.020	NA
Boron	µg/L	2.0	15.9	17	6.69
Cadmium	µg/L	0.0020	<0.0640	<0.0044	NA
Calcium	mg/L	0.050	17.3	17.7	2.29
Chromium (III+VI)	µg/L	0.50	<1.00	<1.00	NA
Cobalt	µg/L	0.0050	0.167	0.171	2.37
Copper	µg/L	0.10	0.45	0.42	NA
Iron	µg/L	2.0	18.8	18.8	0.00
Lead	µg/L	0.050	<0.100	<0.100	NA
Lithium	µg/L	0.050	191	198	3.60
Magnesium	µg/L	5.0	250,000	253,000	1.19
Manganese	µg/L	0.050	7.4	7.46	0.81
Molybdenum	µg/L	0.010	16.2	16.5	1.83
Nickel	µg/L	0.040	1.17	1.37	15.75
Phosphorus	µg/L	10	46	55	NA
Potassium	µg/L	20	150,000	155,000	3.28
Selenium	µg/L	0.10	0.29	0.26	NA
Silicon	µg/L	100	4,740	4,820	1.67
Silver	µg/L	0.010	<0.020	0.029	NA
Sodium	mg/L	0.020	1,840	1,400	27.16
Strontium	µg/L	0.10	1,140	1,140	0.00
Sulfur	µg/L	1,000	807,000	847,000	4.84
Tellurium	µg/L	0.050	<0.100	<0.100	NA
Thallium	µg/L	0.0040	<0.0080	<0.0080	NA
Thorium	µg/L	0.010	<0.020	<0.020	NA
Tin	µg/L	0.100	<0.200	<0.200	NA
Titanium	µg/L	0.20	1.39	1.53	9.59
Tungsten	µg/L	0.20	0.63	0.59	NA
Uranium	µg/L	0.0010	58.5	57.5	1.72
Vanadium	µg/L	1.00	2.84	2.92	2.78
Zinc	µg/L	1.0	<2.0	<2.0	NA
Zirconium	µg/L	0.020	1.21	1.14	NA

Analytical Reports: CARO 25C1300, 25C1509, 25C1660, 25E2222, 25E2377 25I3095, 25I3232, 25K0542, 25K0866

- - not analyzed
- < less than laboratory detection limit
- FD Field Duplicate
- FDA field duplicate available
- RL reporting limit
- RPD relative percent difference
- NA not applicable
- RED & Shaded Pink RPD > 30%

Table QA4: Summary of Water Analytical Results -
Surface Water Field & Trip Blanks - 2025

QUARTER			Q1					
DATE SAMPLED			11 Mar 2025	11 Mar 2025	12 Mar 2025	12 Mar 2025	13 Mar 2025	13 Mar 2025
FIELD ID			FIELD BLANK	Trip Blank	Field Blank	Trip Blank	Field Blank	Trip Blank
LAB ID			25C1300-07	25C1300-06	25C1509-06	25C1509-08	25C1660-03	25C1660-04
Parameters	**Unit**	**RL**	**Analytical Results**					
Calculations								
Hardness, Total (as CaCO3)	mg/L	0.125	<0.125	<0.125	<0.125	<0.125	<0.125	<0.125
Hardness, Dissolved (as CaCO3)	mg/L	0.125	<0.125	-	<0.125	-	<0.125	-
Nitrite + Nitrate as N	mg/L	0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
Nitrogen (Total)	µg/L	50	<50.0	<50.0	<50.0	<50.0	<50.0	<50.0
General								
Alkalinity (total) as CaCO3	mg/L	1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Alkalinity (P)	mg/L	1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Alkalinity (Bicarbonate as CaCO3)	mg/L	1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Alkalinity (Carbonate as CaCO3)	mg/L	1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Alkalinity (Hydroxide) as CaCO3	mg/L	1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Ammonia as N	mg/L	0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050
Carbon, Total Organic	mg/L	0.50	<0.50	<0.50	<0.50	<0.50	<0.50	1.06
Carbon, Dissolved Organic	mg/L	0.5	<0.50	0.65	<0.50	<0.50	<0.50	-
Chemical Oxygen Demand	mg/L	20	<20	<20	<20	<20	<20	<20
Conductivity (Lab)	µS/cm	2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0
Nitrogen, Total Kjeldahl	mg/L	0.50	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050
pH (Lab)	-	0.10	5.54	5.83	5.68	5.65	5.73	5.62
Phosphorus, Total (as P)	mg/L	0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050
Phosphorus, Dissolved Reactive	mg/L	0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050
Solids, Total Dissolved	mg/L	15	<15	<15	<15	<15	<15	<15
Solids, Total Suspended	mg/L	2.0	-	-	-	-	-	-
Anions								
Bromide	mg/L	0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10
Chloride	mg/L	0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10
Fluoride	mg/L	0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10
Nitrate (as N)	mg/L	0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010
Nitrite (as N)	mg/L	0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010
Sulphate	mg/L	1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Microbiological								
Coliforms, Fecal (Q-Tray)	MPN/100mL	1	<1	<1	<1	<1	<1	<1
Coliforms, Total (Q-Tray)	MPN/100 mL	1	<1	<1	<1	<1	<1	<1
Metals, Total								
Aluminum	µg/L	1.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0
Antimony	µg/L	0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050
Arsenic	µg/L	0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050
Barium	µg/L	0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10
Beryllium	µg/L	0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010
Bismuth	µg/L	0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010
Boron	µg/L	2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0
Cadmium	µg/L	0.0020	0.0048	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020
Calcium	mg/L	0.050	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Chromium (III+VI)	µg/L	0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
Cobalt	µg/L	0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050
Copper	µg/L	0.10	0.4	<0.20	<0.20	<0.20	0.38	<0.20
Iron	µg/L	2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0
Lead	µg/L	0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050
Lithium	µg/L	0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050
Magnesium	µg/L	5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0
Manganese	µg/L	0.050	0.259	<0.050	<0.050	<0.050	0.101	<0.050
Mercury	µg/L	0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010
Molybdenum	µg/L	0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010
Nickel	µg/L	0.040	0.103	<0.040	<0.040	<0.040	0.047	<0.040
Phosphorus	µg/L	10	<10	<10	<10	<10	<10	<10
Potassium	µg/L	20	<20	<20	<20	<20	<20	<20
Selenium	µg/L	0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10
Silicon	µg/L	100	<100	<100	<100	<100	<100	<100
Silver	µg/L	0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010
Sodium	mg/L	0.020	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02
Strontium	µg/L	0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10
Sulfur	µg/L	1,000	<1,000	<1,000	<1,000	<1,000	<1,000	<1,000
Tellurium	µg/L	0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050
Thallium	µg/L	0.0040	<0.0040	<0.0040	<0.0040	<0.0040	<0.0040	<0.0040
Thorium	µg/L	0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010
Tin	µg/L	0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100
Titanium	µg/L	0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20
Tungsten	µg/L	0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20
Uranium	µg/L	0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
Vanadium	µg/L	1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00
Zinc	µg/L	1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Zirconium	µg/L	0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020
Metals, Dissolved								
Aluminum	µg/L	1.0	<1.0	-	<1.0	-	<1.0	-
Antimony	µg/L	0.050	<0.050	-	<0.050	-	<0.050	-
Arsenic	µg/L	0.050	<0.050	-	<0.050	-	<0.050	-
Barium	µg/L	0.10	<0.10	-	<0.10	-	<0.10	-
Beryllium	µg/L	0.010	<0.010	-	<0.010	-	<0.010	-
Bismuth	µg/L	0.010	<0.010	-	<0.010	-	<0.010	-
Boron	µg/L	2.0	<2.0	-	<2.0	-	<2.0	-
Cadmium	µg/L	0.0020	0.0052	-	0.0036	-	<0.0020	-
Calcium	mg/L	0.050	<0.05	-	<0.05	-	<0.05	-
Chromium (III+VI)	µg/L	0.50	<0.50	-	<0.50	-	<0.50	-
Cobalt	µg/L	0.0050	<0.0050	-	<0.0050	-	<0.0050	-
Copper	µg/L	0.10	0.35	-	<0.10	-	0.4	-
Iron	µg/L	2.0	<2.0	-	<2.0	-	<2.0	-
Lead	µg/L	0.050	<0.050	-	<0.050	-	<0.050	-
Lithium	µg/L	0.050	<0.050	-	<0.050	-	<0.050	-
Magnesium	µg/L	5.0	6.6	-	<5.0	-	<5.0	-
Manganese	µg/L	0.050	0.253	-	<0.050	-	<0.050	-
Molybdenum	µg/L	0.010	<0.010	-	<0.010	-	<0.010	-
Nickel	µg/L	0.040	0.07	-	<0.040	-	<0.040	-
Phosphorus	µg/L	10	<10	-	<10	-	<10	-
Potassium	µg/L	20	<20	-	<20	-	<20	-
Selenium	µg/L	0.10	<0.10	-	<0.10	-	<0.10	-
Silicon	µg/L	100	<100	-	<100	-	<100	-
Silver	µg/L	0.010	<0.010	-	<0.010	-	<0.010	-
Sodium	mg/L	0.020	<0.02	-	<0.02	-	<0.02	-
Strontium	µg/L	0.10	0.14	-	<0.10	-	<0.10	-
Sulfur	µg/L	1,000	<1,000	-	<1,000	-	<1,000	-
Tellurium	µg/L	0.050	<0.050	-	<0.050	-	<0.050	-
Thallium	µg/L	0.0040	<0.0040	-	<0.0040	-	<0.0040	-
Thorium	µg/L	0.010	<0.010	-	<0.010	-	<0.010	-
Tin	µg/L	0.100	<0.100	-	<0.100	-	<0.100	-
Titanium	µg/L	0.20	<0.20	-	<0.20	-	<0.20	-
Tungsten	µg/L	0.20	<0.20	-	<0.20	-	<0.20	-
Uranium	µg/L	0.0010	0.0026	-	<0.0010	-	<0.0010	-
Vanadium	µg/L	1.00	<1.00	-	<1.00	-	<1.00	-
Zinc	µg/L	1.0	<1.0	-	<1.0	-	<1.0	-
Zirconium	µg/L	0.020	<0.020	-	<0.020	-	<0.020	-

Analytical Reports: CARO 25C1300, 25C1509, 25C1660, 25E2222, 25I3095, 25I3232, 25K0542, 25K0866

- not analyzed

< less than laboratory detection limit

RL reporting limit

RED and Shaded Pink detectable concentration

Table QA4: Summary of Water Analytical Results -
Surface Water Field & Trip Blanks - 2025

QUARTER			Q2		Q3			
DATE SAMPLED			15 May 2025	15 May 2025	22 Sep 2025	22 Sep 2025	23 Sep 2025	23 Sep 2025
FIELD ID			FIELD BLANK	Trip Blank	FIELD BLANK	TRIP BLANK	Field Blank	Trip Blank
LAB ID			25E2222-07	25E2222-09	25I3095-07	25I3095-09	25I3232-05	25I3232-06
Parameters	**Unit**	**RL**	**Analytical Results**					
Calculations								
Hardness, Total (as CaCO3)	mg/L	0.125	<0.125	<0.125	<0.125	<0.125	<0.125	<0.125
Hardness, Dissolved (as CaCO3)	mg/L	0.125	<0.125	-	<0.125	-	-	-
Nitrite + Nitrate as N	mg/L	0.0100	<0.0100	<0.0100	<0.01	<0.01	<0.0100	<0.0100
Nitrogen (Total)	µg/L	50	<50.0	<50.0	<50	<50	<50.0	<50.0
General								
Alkalinity (total) as CaCO3	mg/L	1.0	<1.0	<1.0	<1	<1	<1.0	<1.0
Alkalinity (P)	mg/L	1.0	<1.0	<1.0	<1	<1	<1.0	<1.0
Alkalinity (Bicarbonate as CaCO3)	mg/L	1.0	<1.0	<1.0	<1	<1	<1.0	<1.0
Alkalinity (Carbonate as CaCO3)	mg/L	1.0	<1.0	<1.0	<1	<1	<1.0	<1.0
Alkalinity (Hydroxide) as CaCO3	mg/L	1.0	<1.0	<1.0	<1	<1	<1.0	<1.0
Ammonia as N	mg/L	0.050	<0.050	<0.050	<0.05	<0.05	<0.050	<0.050
Carbon, Total Organic	mg/L	0.50	<0.50	<0.50	<0.5	<0.5	<0.50	<0.50
Carbon, Dissolved Organic	mg/L	0.5	<0.50	-	<0.5	-	<0.50	-
Chemical Oxygen Demand	mg/L	20	<20	<20	<20	<20	<20	<20
Conductivity (Lab)	µS/cm	2.0	<2.0	<2.0	<2	<2	<2.0	<2.0
Nitrogen, Total Kjeldahl	mg/L	0.50	<0.050	<0.050	<0.05	<0.05	<0.050	<0.050
pH (Lab)	-	0.10	6.13	6.25	8.03	6.77	7.83	5.66
Phosphorus, Total (as P)	mg/L	0.0050	<0.0050	<0.0050	<0.005	<0.005	<0.0050	<0.0050
Phosphorus, Dissolved Reactive	mg/L	0.0050	<0.0050	-	<0.005	<0.005	<0.0050	<0.0050
Solids, Total Dissolved	mg/L	15	<15	<15	<15	<15	<15	<15
Solids, Total Suspended	mg/L	2.0	<2.0	<2.0	-	-	<1.8	<1.8
Anions								
Bromide	mg/L	0.10	<0.10	<0.10	<0.1	<0.1	<0.10	<0.10
Chloride	mg/L	0.10	0.14	<0.10	<0.1	<0.1	<0.10	<0.10
Fluoride	mg/L	0.10	<0.10	<0.10	<0.1	<0.1	<0.10	<0.10
Nitrate (as N)	mg/L	0.010	<0.010	<0.010	<0.01	<0.01	<0.010	<0.010
Nitrite (as N)	mg/L	0.010	<0.010	<0.010	<0.01	<0.01	<0.010	<0.010
Sulphate	mg/L	1.0	<1.0	<1.0	<1	<1	<1.0	<1.0
Microbiological								
Coliforms, Fecal (Q-Tray)	MPN/100mL	1	<1	<1	<1	<1	<1	<1
Coliforms, Total (Q-Tray)	MPN/100 mL	1	<1	<1	<1	<1	<1	<1
Metals, Total								
Aluminum	µg/L	1.0	<2.0	<2.0	<2	<2	<2.0	<2.0
Antimony	µg/L	0.050	<0.050	<0.050	<0.05	<0.05	<0.050	<0.050
Arsenic	µg/L	0.050	<0.050	<0.050	<0.05	<0.05	<0.050	<0.050
Barium	µg/L	0.10	<0.10	<0.10	<0.1	<0.1	<0.10	<0.10
Beryllium	µg/L	0.010	<0.010	<0.010	<0.01	<0.01	<0.010	<0.010
Bismuth	µg/L	0.010	<0.010	<0.010	<0.01	<0.01	<0.010	<0.010
Boron	µg/L	2.0	<2.0	<2.0	<2	<2	<2.0	<2.0
Cadmium	µg/L	0.0020	<0.0020	<0.0020	<0.002	<0.002	<0.0020	<0.0020
Calcium	mg/L	0.050	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Chromium (III+VI)	µg/L	0.50	<0.50	<0.50	<0.5	<0.5	<0.50	<0.50
Cobalt	µg/L	0.0050	<0.0050	<0.0050	<0.005	<0.005	<0.0050	<0.0050
Copper	µg/L	0.10	0.76	<0.20	<0.2	<0.2	<0.20	<0.20
Iron	µg/L	2.0	<2.0	<2.0	<2	<2	<2.0	<2.0
Lead	µg/L	0.050	<0.050	<0.050	<0.05	<0.05	<0.050	<0.050
Lithium	µg/L	0.050	<0.050	<0.050	<0.05	<0.05	<0.050	<0.050
Magnesium	µg/L	5.0	<5.0	<5.0	<5	<5	<5.0	<5.0
Manganese	µg/L	0.050	0.278	<0.050	<0.05	<0.05	<0.050	<0.050
Mercury	µg/L	0.010	<0.010	<0.010	<0.01	<0.01	<0.010	<0.010
Molybdenum	µg/L	0.010	<0.010	<0.010	<0.01	<0.01	<0.010	<0.010
Nickel	µg/L	0.040	0.173	<0.040	<0.04	<0.04	<0.040	<0.040
Phosphorus	µg/L	10	<10	<10	18	17	<10	<10
Potassium	µg/L	20	<20	<20	<20	<20	<20	<20
Selenium	µg/L	0.10	<0.10	<0.10	<0.1	<0.1	<0.10	<0.10
Silicon	µg/L	100	<100	<100	<100	<100	<100	<100
Silver	µg/L	0.010	<0.010	<0.010	<0.01	<0.01	<0.010	<0.010
Sodium	mg/L	0.020	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02
Strontium	µg/L	0.10	0.13	<0.10	<0.1	<0.1	<0.10	<0.10
Sulfur	µg/L	1,000	<1,000	<1,000	<1,000	<1,000	<1,000	<1,000
Tellurium	µg/L	0.050	<0.050	<0.050	<0.05	<0.05	<0.050	<0.050
Thallium	µg/L	0.0040	<0.0040	<0.0040	<0.004	<0.004	<0.0040	<0.0040
Thorium	µg/L	0.010	<0.010	<0.010	<0.01	<0.01	<0.010	<0.010
Tin	µg/L	0.100	<0.100	<0.100	<0.1	<0.1	<0.100	<0.100
Titanium	µg/L	0.20	<0.20	<0.20	<0.2	<0.2	<0.20	<0.20
Tungsten	µg/L	0.20	<0.20	<0.20	<0.2	<0.2	<0.20	<0.20
Uranium	µg/L	0.0010	<0.0010	<0.0010	<0.001	<0.001	<0.0010	<0.0010
Vanadium	µg/L	1.00	<1.00	<1.00	<1	<1	<1.00	<1.00
Zinc	µg/L	1.0	<1.0	<1.0	<1	<1	<1.0	<1.0
Zirconium	µg/L	0.020	<0.020	<0.020	<0.02	<0.02	<0.020	<0.020
Metals, Dissolved								
Aluminum	µg/L	1.0	<1.0	-	<1	-	-	-
Antimony	µg/L	0.050	<0.050	-	<0.05	-	-	-
Arsenic	µg/L	0.050	<0.050	-	<0.05	-	-	-
Barium	µg/L	0.10	<0.10	-	<0.1	-	-	-
Beryllium	µg/L	0.010	<0.010	-	<0.01	-	-	-
Bismuth	µg/L	0.010	<0.010	-	<0.01	-	-	-
Boron	µg/L	2.0	<2.0	-	<2	-	-	-
Cadmium	µg/L	0.0020	<0.0020	-	<0.002	-	-	-
Calcium	mg/L	0.050	<0.05	-	<0.05	-	-	-
Chromium (III+VI)	µg/L	0.50	<0.50	-	<0.5	-	-	-
Cobalt	µg/L	0.0050	<0.0050	-	<0.005	-	-	-
Copper	µg/L	0.10	0.42	-	<0.1	-	<0.10	-
Iron	µg/L	2.0	<2.0	-	<2	-	-	-
Lead	µg/L	0.050	<0.050	-	<0.05	-	-	-
Lithium	µg/L	0.050	<0.050	-	<0.05	-	-	-
Magnesium	µg/L	5.0	<5.0	-	12	-	-	-
Manganese	µg/L	0.050	0.112	-	<0.05	-	-	-
Molybdenum	µg/L	0.010	<0.010	-	<0.01	-	-	-
Nickel	µg/L	0.040	0.075	-	<0.04	-	-	-
Phosphorus	µg/L	10	<10	-	<10	-	-	-
Potassium	µg/L	20	<20	-	<20	-	-	-
Selenium	µg/L	0.10	<0.10	-	<0.1	-	-	-
Silicon	µg/L	100	<100	-	<100	-	-	-
Silver	µg/L	0.010	<0.010	-	<0.01	-	-	-
Sodium	mg/L	0.020	<0.02	-	0.031	-	-	-
Strontium	µg/L	0.10	<0.10	-	0.2	-	-	-
Sulfur	µg/L	1,000	<1,000	-	<1,000	-	-	-
Tellurium	µg/L	0.050	<0.050	-	<0.05	-	-	-
Thallium	µg/L	0.0040	<0.0040	-	<0.004	-	-	-
Thorium	µg/L	0.010	<0.010	-	<0.01	-	-	-
Tin	µg/L	0.100	<0.100	-	<0.1	-	-	-
Titanium	µg/L	0.20	<0.20	-	<0.2	-	-	-
Tungsten	µg/L	0.20	<0.20	-	<0.2	-	-	-
Uranium	µg/L	0.0010	<0.0010	-	<0.001	-	-	-
Vanadium	µg/L	1.00	<1.00	-	<1	-	-	-
Zinc	µg/L	1.0	<1.0	-	<1	-	-	-
Zirconium	µg/L	0.020	<0.020	-	<0.02	-	-	-

Analytical Reports: CARO 25C1300, 25C1509, 25C1660, 25E2222, 25I3095, 25I3232, 25K0542, 25K0866

- - not analyzed
- < less than laboratory detection limit
- RL reporting limit
- RED and Shaded Pink detectable concentration

Table QA4: Summary of Water Analytical Results -
Surface Water Field & Trip Blanks - 2025

QUARTER			Q4			
DATE SAMPLED			05 Nov 2025	05 Nov 2025	06 Nov 2025	06 Nov 2025
FIELD ID			Field Blank	Trip Blank	Field Blank	Trip Blank
LAB ID			25K0542-06	25K0542-05	25K0866-06	25K0866-08
Parameters	**Unit**	**RL**	**Analytical Results**			
Calculations						
Hardness, Total (as CaCO3)	mg/L	0.125	<0.125	<0.125	<0.125	<0.125
Hardness, Dissolved (as CaCO3)	mg/L	0.125	<0.125	-	<0.125	-
Nitrite + Nitrate as N	mg/L	0.0100	<0.0100	<0.0100	<0.0100	<0.0100
Nitrogen (Total)	µg/L	50	<50.0	<50.0	<50.0	<50.0
General						
Alkalinity (total) as CaCO3	mg/L	1.0	<1.0	<1.0	1.3	<1.0
Alkalinity (P)	mg/L	1.0	<1.0	<1.0	<1.0	<1.0
Alkalinity (Bicarbonate as CaCO3)	mg/L	1.0	<1.0	<1.0	1.3	<1.0
Alkalinity (Carbonate as CaCO3)	mg/L	1.0	<1.0	<1.0	<1.0	<1.0
Alkalinity (Hydroxide) as CaCO3	mg/L	1.0	<1.0	<1.0	<1.0	<1.0
Ammonia as N	mg/L	0.050	<0.050	<0.050	<0.050	<0.050
Carbon, Total Organic	mg/L	0.50	<0.50	<0.50	<0.50	<0.50
Carbon, Dissolved Organic	mg/L	0.5	<0.50	-	<0.50	-
Chemical Oxygen Demand	mg/L	20	<20	<20	<20	<20
Conductivity (Lab)	µS/cm	2.0	<2.0	<2.0	<2.0	<2.0
Nitrogen, Total Kjeldahl	mg/L	0.50	<0.050	<0.050	<0.050	<0.050
pH (Lab)	-	0.10	5.62	5.72	5.96	5.66
Phosphorus, Total (as P)	mg/L	0.0050	<0.0050	<0.0050	<0.0050	<0.0050
Phosphorus, Dissolved Reactive	mg/L	0.0050	<0.0050	<0.0050	<0.0050	<0.0050
Solids, Total Dissolved	mg/L	15	<15	<15	<15	<15
Solids, Total Suspended	mg/L	2.0	<1.8	<1.8	<1.8	<1.8
Anions						
Bromide	mg/L	0.10	<0.10	<0.10	<0.10	<0.10
Chloride	mg/L	0.10	<0.10	<0.10	<0.10	<0.10
Fluoride	mg/L	0.10	<0.10	<0.10	<0.10	<0.10
Nitrate (as N)	mg/L	0.010	<0.010	<0.010	<0.010	<0.010
Nitrite (as N)	mg/L	0.010	<0.010	<0.010	<0.010	<0.010
Sulphate	mg/L	1.0	<1.0	<1.0	<1.0	<1.0
Microbiological						
Coliforms, Fecal (Q-Tray)	MPN/100mL	1	<1	<1	<1	<1
Coliforms, Total (Q-Tray)	MPN/100 mL	1	<1	<1	<1	<1
Metals, Total						
Aluminum	µg/L	1.0	<2.0	<2.0	<2.0	<2.0
Antimony	µg/L	0.050	<0.050	<0.050	<0.050	<0.050
Arsenic	µg/L	0.050	<0.050	<0.050	<0.050	<0.050
Barium	µg/L	0.10	<0.10	<0.10	<0.10	<0.10
Beryllium	µg/L	0.010	<0.010	<0.010	<0.010	<0.010
Bismuth	µg/L	0.010	<0.010	<0.010	<0.010	<0.010
Boron	µg/L	2.0	<2.0	<2.0	<2.0	<2.0
Cadmium	µg/L	0.0020	<0.0020	<0.0020	<0.0020	<0.0020
Calcium	mg/L	0.050	<0.05	<0.05	<0.05	<0.05
Chromium (III+VI)	µg/L	0.50	<0.50	<0.50	<0.50	<0.50
Cobalt	µg/L	0.0050	<0.0050	<0.0050	<0.0050	<0.0050
Copper	µg/L	0.10	<0.20	<0.20	<0.20	<0.20
Iron	µg/L	2.0	<2.0	<2.0	<2.0	<2.0
Lead	µg/L	0.050	<0.050	<0.050	<0.050	<0.050
Lithium	µg/L	0.050	<0.050	<0.050	<0.050	<0.050
Magnesium	µg/L	5.0	<5.0	<5.0	<5.0	<5.0
Manganese	µg/L	0.050	<0.050	<0.050	<0.050	<0.050
Mercury	µg/L	0.010	<0.010	<0.010	<0.010	<0.010
Molybdenum	µg/L	0.010	<0.010	<0.010	<0.010	<0.010
Nickel	µg/L	0.040	<0.040	<0.040	<0.040	<0.040
Phosphorus	µg/L	10	<10	<10	<10	<10
Potassium	µg/L	20	<20	<20	<20	<20
Selenium	µg/L	0.10	<0.10	<0.10	<0.10	<0.10
Silicon	µg/L	100	<100	<100	<100	<100
Silver	µg/L	0.010	<0.010	<0.010	<0.010	<0.010
Sodium	mg/L	0.020	<0.02	<0.02	<0.02	<0.02
Strontium	µg/L	0.10	<0.10	<0.10	<0.10	<0.10
Sulfur	µg/L	1,000	<1,000	<1,000	<1,000	<1,000
Tellurium	µg/L	0.050	<0.050	<0.050	<0.050	<0.050
Thallium	µg/L	0.0040	<0.0040	<0.0040	<0.0040	<0.0040
Thorium	µg/L	0.010	<0.010	<0.010	<0.010	<0.010
Tin	µg/L	0.100	<0.100	<0.100	<0.100	<0.100
Titanium	µg/L	0.20	<0.20	<0.20	<0.20	<0.20
Tungsten	µg/L	0.20	<0.20	<0.20	<0.20	<0.20
Uranium	µg/L	0.0010	<0.0010	<0.0010	<0.0010	<0.0010
Vanadium	µg/L	1.00	<1.00	<1.00	<1.00	<1.00
Zinc	µg/L	1.0	<1.0	<1.0	<1.0	<1.0
Zirconium	µg/L	0.020	0.029	<0.020	<0.020	<0.020
Metals, Dissolved						
Aluminum	µg/L	1.0	<1.0	-	<1.0	-
Antimony	µg/L	0.050	<0.050	-	<0.050	-
Arsenic	µg/L	0.050	<0.050	-	<0.050	-
Barium	µg/L	0.10	<0.10	-	<0.10	-
Beryllium	µg/L	0.010	<0.010	-	<0.010	-
Bismuth	µg/L	0.010	<0.010	-	<0.010	-
Boron	µg/L	2.0	<2.0	-	<2.0	-
Cadmium	µg/L	0.0020	0.0026	-	<0.0020	-
Calcium	mg/L	0.050	<0.05	-	<0.05	-
Chromium (III+VI)	µg/L	0.50	<0.50	-	<0.50	-
Cobalt	µg/L	0.0050	<0.0050	-	<0.0050	-
Copper	µg/L	0.10	<0.10	-	<0.10	-
Iron	µg/L	2.0	<2.0	-	<2.0	-
Lead	µg/L	0.050	<0.050	-	<0.050	-
Lithium	µg/L	0.050	<0.050	-	<0.050	-
Magnesium	µg/L	5.0	<5.0	-	<5.0	-
Manganese	µg/L	0.050	<0.050	-	<0.050	-
Molybdenum	µg/L	0.010	<0.010	-	<0.010	-
Nickel	µg/L	0.040	<0.040	-	<0.040	-
Phosphorus	µg/L	10	<10	-	<10	-
Potassium	µg/L	20	<20	-	<20	-
Selenium	µg/L	0.10	<0.10	-	<0.10	-
Silicon	µg/L	100	<100	-	<100	-
Silver	µg/L	0.010	<0.010	-	<0.010	-
Sodium	mg/L	0.020	<0.02	-	<0.02	-
Strontium	µg/L	0.10	<0.10	-	<0.10	-
Sulfur	µg/L	1,000	<1,000	-	<1,000	-
Tellurium	µg/L	0.050	<0.050	-	<0.050	-
Thallium	µg/L	0.0040	<0.0040	-	<0.0040	-
Thorium	µg/L	0.010	<0.010	-	<0.010	-
Tin	µg/L	0.100	<0.100	-	<0.100	-
Titanium	µg/L	0.20	<0.20	-	<0.20	-
Tungsten	µg/L	0.20	<0.20	-	<0.20	-
Uranium	µg/L	0.0010	<0.0010	-	<0.0010	-
Vanadium	µg/L	1.00	<1.00	-	<1.00	-
Zinc	µg/L	1.0	<1.0	-	<1.0	-
Zirconium	µg/L	0.020	<0.020	-	<0.020	-

Analytical Reports: CARO 25C1300, 25C1509, 25C1660, 25E2222, 25I3095, 25I3232, 25K0542, 25K0866

- not analyzed

< less than laboratory detection limit

RL reporting limit

RED and Shaded Pink detectable concentration

Table QA5: Summary of Water Analytical Results - Leachate QA/QC - 2025

QUARTER			Q1			Q2			Q3			Q4		
DATE SAMPLED			28 Mar 2025	28 Mar 2025		04 Jun 2025	04 Jun 2025		15 Sep 2025	15 Sep 2025		28 Oct 2025	28 Oct 2025	
FIELD ID			N Pumphouse MH	DUP G		South Leachate Wet Well (LS#2)	DUP 10		South Leachate Wet well (LS#2)	DUP 9		N Pumphouse MH	Dup A	
MATRIX			Water	Water	RPD (%)	Water	Water	RPD (%)	Water	Water	RPD (%)	Water	Water	RPD (%)
FIELD DUPLICATE			FDA	FD of N Pumphouse MH		FDA	FD of South Leachate Wet Well (LS#2)		FDA	FD of South Leachate Wet well (LS#2)		FDA	FD of N Pumphouse MH	
LAB ID			25C3485-02	25C3485-05		25F0833-01	25F0833-05		25I2111-01	25I2111-08		25J3984-02	25J3984-08	
Parameter	**Unit**	**RL**	**Analytical Results**											
Hardness, Dissolved (as CaCO3)	mg/L	0.125	1,520	1,560	2.60	1,680	1,660	1.20	1,460	1,500	2.70	1,490	1,460	2.03
Alkalinity (total) as CaCO3	mg/L	1.0	3,080	3,140	1.93	4,130	4,140	0.24	5,600	5,790	3.34	3,730	3,690	1.08
Alkalinity (P)	mg/L	1.0	<1.0	<1.0	NA	<1.0	<1.0	NA	<1.0	<1.0	NA	<1.0	<1.0	NA
Alkalinity (Bicarbonate as CaCO3)	mg/L	1.0	3,080	3,140	1.93	4,130	4,140	0.24	5,600	5,790	3.34	3,730	3,690	1.08
Alkalinity (Carbonate as CaCO3)	mg/L	1.0	<1.0	<1.0	NA	<1.0	<1.0	NA	<1.0	<1.0	NA	<1.0	<1.0	NA
Alkalinity (Hydroxide) as CaCO3	mg/L	1.0	<1.0	<1.0	NA	<1.0	<1.0	NA	<1.0	<1.0	NA	<1.0	<1.0	NA
Ammonia as N	mg/L	0.050	96.8	101	4.25	115	111	3.54	90.5	87.2	3.71	97.6	101	3.42
Biochemical Oxygen Demand	mg/L	8.0	23.8	22.7	NA	27	<2.0	NA	321	318	0.94	324	334	3.04
Carbon, Total Organic	mg/L	0.50	-	-	NA	-	-	NA	-	-	NA	170	146	15.19
Carbon, Dissolved Organic	mg/L	0.50	95.0	93.5	1.59	116	98.0	16.82	179	165	8.14	137	143	4.29
Chemical Oxygen Demand	mg/L	20	361	365	1.10	589	597	1.35	798	774	3.05	952	908	4.73
Conductivity (Lab)	µS/cm	2.0	7,990	7,970	0.25	10,300	10,200	0.98	12,500	13,100	4.69	9,260	9,140	1.30
Kjeldahl Nitrogen Total	mg/L	0.050	-	-	NA	-	-	NA	-	-	NA	126	123	2.41
pH (Lab)	-	0.10	7.91	7.99	1.01	7.98	8.00	0.25	8.05	8.22	2.09	8.05	8.08	0.37
Phosphorus, Total (as P)	mg/L	0.0050	2.82	2.98	5.52	3.73	3.77	1.07	5.91	5.58	5.74	6.05	5.94	1.83
Phosphorus, Dissolved Reactive	mg/L	0.0050	2.16	2.35	8.43	2.7	2.97	9.52	4.91	4.9	0.20	3.74	3.17	16.50
Solids, Total Dissolved	mg/L	15	5,660	5,620	0.71	8,210	7,610	7.59	9,220	7,700	17.97	6,540	6,280	4.06
Sulfide, Total	mg/L	0.020	11.2	11.1	0.90	25.8	25.3	1.96	214	158	30.11	58.7	55	6.51
Anions														
Bromide	mg/L	0.10	2.69	2.68	0.37	<1.00	<1.00	NA	3.91	4.85	21.46	2.8	2.81	0.36
Chloride	mg/L	0.10	368	372	1.08	589	563	4.51	714	793	10.48	609	592	2.83
Fluoride	mg/L	0.10	<1.00	<1.00	NA	<1.00	<1.00	NA	<1.00	<1.00	NA	<1.00	<1.00	NA
Nitrate (as N)	mg/L	0.010	17.5	18.5	5.56	56.3	58.1	3.15	<0.100	<0.100	NA	<0.100	<0.100	NA
Nitrite (as N)	mg/L	0.010	<0.100	<0.100	NA	<0.100	<0.100	NA	<0.100	<0.100	NA	<0.100	<0.100	NA
Sulphate	mg/L	1.0	1,050	1,060	0.95	1,200	1,240	3.28	1,500	1,530	1.98	1,440	1,320	8.70
Hydrocarbons														
VH (C6-C10)	µg/L	100	<100	<100	NA	115	115	NA	<1,000	<100	NA	717	814	12.67
VPH (VH C6-C10 - BTEXS)	µg/L	100	<100	<100	NA	<100	<100	NA	<1,000	<100	NA	150	177	NA
EPH C10-C19	µg/L	250	429	439	NA	483	947	NA	<250	380	NA	566	508	NA
EPH C19-C32	µg/L	250	<250	<250	NA	271	3,600	NA	554	<250	NA	1,940	1,560	21.71
LEPH	µg/L	250	426	436	NA	479	943	NA	<250	372	NA	560	503	NA
HEPH	µg/L	250	<250	<250	NA	271	3,600	NA	554	<250	NA	1,940	1,560	21.71
Benzene	µg/L	0.5	2.7	2.9	7.14	3.6	4.0	10.53	7.0	0.6	NA	2.7	2.5	NA
Toluene	µg/L	1.0	<1.0	1.1	NA	<1.0	1.0	NA	<10.0	<1.0	NA	533	608	13.15
Ethylbenzene	µg/L	1.0	8.5	8.9	4.60	18	19.7	9.02	54.1	4.3	NA	17.3	15.6	10.33
Xylene Total	µg/L	2.0	3.2	3.4	NA	18	19.7	9.02	50.9	3.2	NA	13.4	11.3	17.00
Styrene	µg/L	1.0	<1.0	<1.0	NA	<1.0	<1.0	NA	<10.0	<1.0	NA	<1.0	<1.0	NA
MTBE	µg/L	1.0	<1.0	<1.0	NA	<1.0	<1.0	NA	<10.0	<1.0	NA	<1.0	<1.0	NA
Metals, Dissolved														
Aluminum	µg/L	1.0	27.8	30.2	8.28	54.8	52.7	3.91	85.7	89.4	4.23	48.4	51.3	5.82
Antimony	µg/L	0.050	5.71	5.92	3.61	16.7	16.9	1.19	37.8	37.3	1.33	39.7	38.9	2.04
Arsenic	µg/L	0.050	14.7	15.0	2.02	47.7	46.7	2.12	95.2	95.3	0.10	80.2	79.9	0.37
Barium	µg/L	0.10	205	208	1.45	156	155	0.64	176	175	0.57	147	147	0.00
Beryllium	µg/L	0.010	0.022	0.025	NA	<0.050	<0.050	NA	<0.100	<0.100	NA	0.021	0.02	NA
Bismuth	µg/L	0.010	<0.020	<0.020	NA	<0.050	<0.050	NA	<0.100	<0.100	NA	<0.020	<0.020	NA
Boron	µg/L	2.0	1,680	1,720	2.35	2,270	2,350	3.46	2,210	2,420	9.07	1,850	1,830	1.09
Cadmium	µg/L	0.0020	0.0062	0.0104	NA	0.0284	0.0337	17.07	<0.0200	<0.0200	NA	0.178	0.162	9.41
Calcium	mg/L	0.050	150	150	0.00	275	274	0.36	95.7	97.8	2.17	146	143	2.08
Chromium (III+VI)	µg/L	0.50	12.2	13.0	6.35	16.6	15.7	5.57	26.9	28.2	4.72	23.3	23.5	0.85
Cobalt	µg/L	0.0050	6.90	7.13	3.28	6.51	6.43	1.24	6.58	6.77	2.85	6.45	6.45	0.00
Copper	µg/L	0.10	<0.20	<0.20	NA	<0.50	<0.50	NA	<1.00	<1.00	NA	<0.20	<0.20	NA
Iron	µg/L	2.0	123	127	3.20	30.0	29.1	3.05	34.2	36.0	5.13	61.8	66.9	7.93
Lead	µg/L	0.050	<0.100	<0.100	NA	<0.250	<0.250	NA	<0.500	<0.500	NA	<0.100	<0.100	NA
Lithium	µg/L	0.050	53.7	53.9	0.37	83.4	84.7	1.55	105	116	9.95	69.3	67.2	3.08
Magnesium	µg/L	5.0	279,000	287,000	2.83	240,000	237,000	1.26	298,000	305,000	2.32	272,000	268,000	1.48
Manganese	µg/L	0.050	369	376	1.88	356	352	1.13	230	238	3.42	415	412	0.73
Mercury	µg/L	0.010	<0.010	<0.010	NA	<0.010	<0.010	NA	<0.010	<0.010	NA	<0.010	<0.010	NA
Molybdenum	µg/L	0.010	3.46	3.49	0.86	2.49	2.51	0.80	5.38	5.57	3.47	4.72	4.91	3.95
Nickel	µg/L	0.040	13.9	17.8	24.61	16.7	17.0	1.78	21.3	21.5	0.93	24.5	24.6	0.41
Phosphorus	µg/L	10	2,890	2,950	2.05	3,940	3,940	0.00	5,580	5,580	0.00	5,120	5,050	1.38
Potassium	µg/L	20	143,000	144,000	0.70	216,000	214,000	0.93	266,000	275,000	3.33	201,000	197,000	2.01
Selenium	µg/L	0.10	0.90	0.81	10.53	0.96	1.00	4.08	1.12	1.03	8.37	1.03	1.12	8.37
Silicon	µg/L	100	15,600	15,500	0.64	13,500	13,800	2.20	15,100	15,900	5.16	15,400	15,000	2.63
Silver	µg/L	0.010	<0.020	<0.020	NA	<0.050	<0.050	NA	<0.100	<0.100	NA	<0.020	<0.020	NA
Sodium	mg/L	0.020	1,500	1,540	2.63	2,010	1,980	1.50	3,010	3,140	4.23	2,300	2,280	0.87
Strontium	µg/L	0.10	3,470	3,600	3.68	3,900	3,800	2.60	3,140	3,270	4.06	3,430	3,440	0.29
Sulfur	µg/L	1,000	367,000	359,000	2.20	402,000	410,000	1.97	753,000	791,000	4.92	635,000	605,000	4.84
Tellurium	µg/L	0.050	<0.100	<0.100	NA	<0.250	<0.250	NA	<0.500	<0.500	NA	0.202	0.183	NA
Thallium	µg/L	0.0040	<0.0080	<0.0080	NA	<0.0200	<0.0200	NA	<0.0400	<0.0400	NA	<0.0080	<0.0080	NA
Thorium	µg/L	0.010	<0.020	<0.020	NA	<0.050	<0.050	NA	<0.100	<0.100	NA	<0.020	<0.020	NA
Tin	µg/L	0.100	7.83	7.86	0.38	29.3	26.1	11.55	110	112	1.80	110	104	5.61
Titanium	µg/L	0.20	40.7	39.7	2.49	31.4	31.0	1.28	54.1	57.1	5.40	44.2	46.1	4.21
Tungsten	µg/L	0.20	2.11	2.15	1.88	3.25	3.46	6.26	4.95	4.9	1.02	3.95	3.89	1.53
Uranium	µg/L	0.0010	12.7	12.7	0.00	10.6	10.5	0.95	9.9	9.8	1.02	9.82	9.82	0.00
Vanadium	µg/L	1.00	12.0	12.4	3.28	8.81	8.96	1.69	12.5	12.6	0.80	11.4	11.7	2.60
Zinc	µg/L	1.0	<2.0	<2.0	NA	<5.0	<5.0	NA	<10.0	<10.0	NA	5.0	5.4	NA
Zirconium	µg/L	0.020	19.1	19.6	2.58	18.9	18.6	1.60	28.7	28.5	0.70	27.0	26.6	1.49
PAH														
Acenaphthene	µg/L	0.050	0.316	0.327	3.42	0.454	0.533	16.01	0.629	0.684	8.38	1.23	0.814	40.70
Acenaphthylene	µg/L	0.200	<0.200	<0.200	NA	<0.200	<0.200	NA	<0.200	<0.200	NA	<0.200	<0.200	NA
Acridine	µg/L	0.050	<0.050	<0.050	NA	<0.050	<0.050	NA	<0.050	<0.050	NA	0.081	<0.072	NA
Anthracene	µg/L	0.010	<0.010	<0.010	NA	0.033	<0.033	NA	0.073	0.064	13.14	0.101	<0.064	NA
Benz(a)anthracene	µg/L	0.010	<0.010	<0.010	NA	<0.010	<0.010	NA	<0.024	<0.016	NA	<0.010	<0.010	NA
Benzo(a) pyrene	µg/L	0.010	<0.010	<0.010	NA	<0.010	<0.010	NA	<0.010	<0.010	NA	<0.010	<0.010	NA
Benzo(b+j)fluoranthene	µg/L	0.050	<0.050	<0.050	NA	<0.050	<0.050	NA	<0.050	<0.050	NA	<0.050	<0.050	NA
Benzo(g,h,i)perylene	µg/L	0.050	<0.050	<0.050	NA	<0.050	<0.050	NA	<0.050	<0.050	NA	<0.050	<0.050	NA
Benzo(k)fluoranthene	µg/L	0.050	<0.050	<0.050	NA	<0.050	<0.050	NA	<0.050	<0.050	NA	<0.050	<0.050	NA
2-chloronaphthalene	µg/L	0.100	<0.100	<0.100	NA	<0.100	<0.100	NA	<0.100	<0.100	NA	<0.100	<0.100	NA
Chrysene	µg/L	0.050	<0.050	<0.050	NA	<0.050	<0.050	NA	<0.050	<0.050	NA	<0.050	<0.050	NA
Dibenz(a,h)anthracene	µg/L	0.010	<0.010	<0.010	NA	<0.010	<0.010	NA	<0.010	<0.010	NA	<0.010	<0.010	NA
Fluoranthene	µg/L	0.030	0.030	<0.030	NA	<0.030	<0.030	NA	0.125	0.104	NA	0.087	0.058	NA
Fluorene	µg/L	0.050	0.219	0.232	NA	0.306	0.354	14.55	0.427	0.406	5.04	0.485	0.32	40.99
Indeno(1,2,3-c,d)pyrene	µg/L	0.050	<0.050	<0.050	NA	<0.050	<0.050	NA	<0.050	<0.050	NA	<0.050	<0.050	NA
1-Methylnaphthalene	µg/L	0.100	0.534	0.515	3.62	0.691	0.767	10.43	1.24	1.38	10.69	0.933	0.65	35.75
2-methylnaphthalene	µg/L	0.100	0.130	0.123	NA	<0.100	0.120	NA	0.234	0.249	NA	0.247	0.217	NA
Naphthalene	µg/L	0.200	2.53	2.28	10.40	2.67	2.95	9.96	5.5	5.8	5.31	4.1	3.2	24.66
Phenanthrene	µg/L	0.100	0.101	0.102	NA	0.273	0.342	NA	0.427	0.353	NA	0.675	0.417	NA
Pyrene	µg/L	0.020	<0.020	<0.020	NA	<0.020	<0.020	NA	0.084	0.081	NA	<0.020	<0.020	NA
Quinoline	µg/L	0.050	<0.050	<0.050	NA	<0.050	<0.050	NA	<0.050	<0.050	NA	<0.050	<0.050	NA
VFAs														
Acetic Acid	mg/L	3.0	<3.0	<3.0	NA	<3.0	<3.0	NA	<3.0	<3.0	NA	<3.0	3.7	NA
Butyric Acid	mg/L	2.0	<2.0	<2.0	NA	<2.0	<2.0	NA	<2.0	<2.0	NA	3.2	2.9	NA
Caproic Acid	mg/L	2.0	<2.0	<2.0	NA	<2.0	<2.0	NA	<2.0	<2.0	NA	<2.0	<2.0	NA
Heptanoic Acid	mg/L	2.0	<2.0	<2.0	NA	<2.0	<2.0	NA	<2.0	<2.0	NA	<2.0	<2.0	NA
Isobutyric Acid	mg/L	2.0	<2.0	<2.0	NA	<2.0	<2.0	NA	<2.0	<2.0	NA	3	2.7	NA
Isocaproic Acid	mg/L	2.0	<2.0	<2.0	NA	<2.0	<2.0	NA	<2.0	<2.0	NA	<2.0	<2.0	NA
Isovaleric Acid	mg/L	2.0	<2.0	<2.0	NA	<2.0	<2.0	NA	<2.0	<2.0	NA	3.1	3.2	NA
Propanoic acid	mg/L	2.0	<2.0	<2.0	NA	<2.0	<2.0	NA	<2.0	<2.0	NA	6.7	4.3	NA
Valeric Acid	mg/L	2.0	<2.0	<2.0	NA	<2.0	<2.0	NA	<2.0	<2.0	NA	<2.0	<2.0	NA
VOCs														
Bromodichloromethane	µg/L	1.0	<1.0	<1.0	NA	<1.0	<1.0	NA	<10.0	<1.0	NA	<1.0	<1.0	NA
Bromoform	µg/L	1.0	<1.0	<1.0	NA	<1.0	<1.0	NA	<10.0	<1.0	NA	<1.0	<1.0	NA
Carbon tetrachloride	µg/L	0.5	<0.5	<0.5	NA	<0.5	<0.5	NA	<5.0	<0.5	NA	<0.5	<0.5	NA
Chlorobenzene	µg/L	1.0	1.3	1.4	NA	<1.0	<1.0	NA	<10.0	<1.0	NA	<1.0	<1.0	NA
Chloroethane	µg/L	2.0	2.4	2.3	NA	<2.0	<2.0	NA	<20.0	<2.0	NA	<2.0	<2.0	NA
Chloroform	µg/L	1.0	<1.0	<1.0	NA	<1.0	<1.0	NA	<10.0	<1.0	NA	<1.0	<1.0	NA
Dibromochloromethane	µg/L	1.0	<1.0	<1.0	NA	<1.0	<1.0	NA	<10.0	<1.0	NA	<1.0	<1.0	NA
1,2-dibromoethane	µg/L	0.3	<0.3	<0.3	NA	<0.3	<0.3	NA	<3.0	<0.3	NA	<0.3	<0.3	NA
Dibromomethane	µg/L	1.0	<1.0	<1.0	NA	<1.0	<1.0	NA	<10.0	<1.0	NA	<1.0	<1.0	NA
1,2-dichlorobenzene	µg/L	0.5	<0.5	<0.5	NA	<0.5	<0.5	NA	<5.0	<0.5	NA	<0.5	<0.5	NA
1,3-dichlorobenzene	µg/L	1.0	<1.0	<1.0	NA	<1.0	<1.0	NA	<10.0	<1.0	NA	<1.0	<1.0	NA
1,4-dichlorobenzene	µg/L	1.0	<1.0	<1.0	NA	<1.0	1.7	NA	<10.0	<1.0	NA	<1.3	<1.0	NA
1,1-dichloroethane	µg/L	1.0	1.6	1.6	NA	1	1.1	NA	<10.0	<1.0	NA	1.3	1.4	NA
1,2-dichloroethane	µg/L	1.0	<1.0	<1.0	NA	<1.0	<1.0	NA	<10.0	<1.0	NA	<1.0	<1.0	NA
1,1-dichloroethene	µg/L	1.0	<1.0	<1.0	NA	<1.0	<1.0	NA	<10.0	<1.0	NA	<1.0	<1.0	NA
cis-1,2-dichloroethene	µg/L	1.0	<1.0	<1.0	NA	<1.0	<1.0	NA	<10.0	<1.0	NA	<1.0	<1.0	NA
trans-1,2-dichloroethene	µg/L	1.0	<1.0	<1.0	NA	<1.0	<1.0	NA	<10.0	<1.0	NA	<1.0	<1.0	NA
Dichloromethane	µg/L	3.0	<3.0	<3.0	NA	<3.0	<3.0	NA	<30.0	<3.0	NA	<3.0	<3.0	NA
1,2-dichloropropane	µg/L	1.0	<1.0	<1.0	NA	<1.0	<1.0	NA	<10.0	<1.0	NA	<1.0	<1.0	NA
1,3-Dichloropropene	µg/L	1.0	<1.0	<1.0	NA	<1.0	<1.0	NA	<10.0	<1.0	NA	<1.0	<1.0	NA
1,1,2,2-tetrachloroethane	µg/L	0.5	<0.5	<0.5	NA	<0.5	<0.5	NA	<5.0	<0.5	NA	<0.5	<0.5	NA
Tetrachloroethene	µg/L	1.0	<1.0	<1.0	NA	<1.0	<1.0	NA	<10.0	<1.0	NA	<1.0	<1.0	NA
1,1,1-trichloroethane	µg/L	1.0	<1.0	<1.0	NA	<1.0	<1.0	NA	<10.0	<1.0	NA	<1.0	<1.0	NA
1,1,2-trichloroethane	µg/L	1.0	<1.0	<1.0	NA	<1.0	<1.0	NA	<10.0	<1.0	NA	<1.0	<1.0	NA
Trichloroethene	µg/L	1.0	<1.0	<1.0	NA	<1.0	<1.0	NA	<10.0	<1.0	NA	<1.0	<1.0	NA
Trichlorofluoromethane	µg/L	1.0	<1.0	<1.0	NA	<1.0	<1.0	NA	<10.0	<1.0	NA	<1.0	<1.0	NA
Vinyl chloride	µg/L	1.0	<1.0	<1.0	NA	<1.0	<1.0	NA	<10.0	<1.0	NA	<1.0	<1.0	NA

Analytical Reports: CARO 25C3485, 25F0833, 25I2111, 25J3984

- - not analyzed
- < less than laboratory detection limit
- FD Field Duplicate
- FDA field duplicate available
- RL reporting limit
- RPD relative percent difference
- NA not applicable

Table QA6: Summary of Water Analytical Results - Leachate Field & Trip Blanks - 2025

QUARTER			Q1		Q2		Q3		Q4	
DATE SAMPLED			28 Mar 2025	28 Mar 2025	04 Jun 2025	04 Jun 2025	15 Sep 2025	15 Sep 2025	28 Oct 2025	28 Oct 2025
FIELD ID			FIELD BLANK	TRIP BLANK	Field Blank	Trip Blank	FIELD BLANK	TRIP BLANK	Field Blank	Trip Blank
LAB ID			25C3485-07	25C3485-06	25F0833-07	25F0833-06	25I2111-07	25I2111-06	25J3984-07	25J3984-06
Parameter	Unit	RL	**Analytical Results**							
Hardness, Total (as CaCO3)	mg/L	0.125	-	<0.125	-	<0.125	-	<0.125	-	<0.125
Hardness, Dissolved (as CaCO3)	mg/L	0.125	<0.125	-	<0.125	-	<0.125	-	0.166	-
Alkalinity (total) as CaCO3	mg/L	1.0	<1.0	<1.0	<1.0	<1.0	<1.0	1.1	<1.0	<1.0
Alkalinity (P)	mg/L	1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Alkalinity (Bicarbonate as CaCO3)	mg/L	1.0	<1.0	<1.0	<1.0	<1.0	<1.0	1.1	<1.0	<1.0
Alkalinity (Carbonate as CaCO3)	mg/L	1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Alkalinity (Hydroxide) as CaCO3	mg/L	1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Ammonia as N	mg/L	0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050
Biochemical Oxygen Demand	mg/L	8.0	<8.0	<8.0	<8.0	<8.0	<8.0	<8.0	<8.0	<8.0
Carbon, Total Organic	mg/L	0.50	-	<0.50	-	<0.50	-	<0.50	<0.50	<0.50
Carbon, Dissolved Organic	mg/L	0.50	<0.50	-	<0.50	-	0.65	-	<0.50	-
Chemical Oxygen Demand	mg/L	20	<20	46	<20	<20	<20	<20	<20	<20
Conductivity (Lab)	µS/cm	2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0
Kjeldahl Nitrogen Total	mg/L	0.050	-	-	-	-	-	-	<0.050	<0.050
pH (Lab)	-	0.10	5.74	5.85	6.04	7.59	5.82	7.32	5.8	5.91
Phosphorus, Total (as P)	mg/L	0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050
Phosphorus, Dissolved Reactive	mg/L	0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050
Solids, Total Dissolved	mg/L	15	<15	<15	<15	<15	<15	<15	<15	<15
Sulfide, Total	mg/L	0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020
Anions										
Bromide	mg/L	0.10	<0.10	<0.10	<0.10	<0.10	<0.10	-	<0.10	<0.10
Chloride	mg/L	0.10	<0.10	<0.10	<0.10	<0.10	<0.10	-	<0.10	<0.10
Fluoride	mg/L	0.10	<0.10	<0.10	<0.10	<0.10	<0.10	-	<0.10	<0.10
Nitrate (as N)	mg/L	0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010
Nitrite (as N)	mg/L	0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010
Sulphate	mg/L	1.0	<1.0	<1.0	<1.0	<1.0	<1.0	-	<1.0	<1.0
Hydrocarbons										
VH (C6-C10)	µg/L	100	<100	<100	<100	<100	<100	<100	<100	<100
VPH (VH C6-C10 - BTEXS)	µg/L	100	<100	<100	<100	<100	<100	<100	<100	<100
EPH C10-C19	µg/L	250	<250	<250	<250	<250	<250	<250	<250	<250
EPH C19-C32	µg/L	250	<250	<250	<250	<250	<250	<250	<250	<250
LEPH	µg/L	250	<250	<250	<250	<250	<250	<250	<250	<250
HEPH	µg/L	250	<250	<250	<250	<250	<250	<250	<250	<250
Benzene	µg/L	0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Toluene	µg/L	1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Ethylbenzene	µg/L	1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Xylene Total	µg/L	2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0
Styrene	µg/L	1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
MTBE	µg/L	1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Metals, Total										
Aluminum	µg/L	1.0	-	<2.0	-	<2.0	-	<2.0	-	<2.0
Antimony	µg/L	0.050	-	<0.050	-	<0.050	-	<0.050	-	<0.050
Arsenic	µg/L	0.050	-	<0.050	-	<0.050	-	<0.050	-	<0.050
Barium	µg/L	0.10	-	<0.10	-	<0.10	-	<0.10	-	<0.10
Beryllium	µg/L	0.010	-	<0.010	-	<0.010	-	<0.010	-	<0.010
Bismuth	µg/L	0.010	-	<0.010	-	<0.010	-	<0.010	-	<0.010
Boron	µg/L	2.0	-	<2.0	-	<2.0	-	<2.0	-	<2.0
Cadmium	µg/L	0.0020	-	<0.0020	-	<0.0020	-	<0.0020	-	<0.0020
Calcium	mg/L	0.050	-	<0.05	-	<0.05	-	<0.05	-	<0.05
Chromium (III+VI)	µg/L	0.50	-	<0.50	-	<0.50	-	<0.50	-	<0.50
Cobalt	µg/L	0.0050	-	<0.0050	-	<0.0050	-	<0.0050	-	<0.0050
Copper	µg/L	0.10	-	<0.20	-	<0.20	-	<0.20	-	<0.20
Iron	µg/L	2.0	-	<2.0	-	<2.0	-	<2.0	-	<2.0
Lead	µg/L	0.050	-	<0.050	-	<0.050	-	<0.050	-	<0.050
Lithium	µg/L	0.050	-	<0.050	-	<0.050	-	<0.050	-	<0.050
Magnesium	µg/L	5.0	-	<5.0	-	<5.0	-	<5.0	-	<5.0
Manganese	µg/L	0.050	-	<0.050	-	<0.050	-	<0.050	-	<0.050
Mercury	µg/L	0.010	-	<0.0050	-	-	-	<0.0050	-	<0.0050
Molybdenum	µg/L	0.010	-	<0.010	-	<0.010	-	<0.010	-	<0.010
Nickel	µg/L	0.040	-	<0.040	-	<0.040	-	<0.040	-	<0.040
Phosphorus	µg/L	10	-	<10	-	<10	-	<10	-	<10
Potassium	µg/L	20	-	<20	-	<20	-	<20	-	<20
Selenium	µg/L	0.10	-	<0.10	-	<0.10	-	<0.10	-	<0.10
Silicon	µg/L	100	-	<100	-	<100	-	<100	-	<100
Silver	µg/L	0.010	-	<0.010	-	<0.010	-	<0.010	-	<0.010
Sodium	mg/L	0.020	-	<0.02	-	<0.02	-	<0.02	-	<0.02
Strontium	µg/L	0.10	-	<0.10	-	<0.10	-	<0.10	-	<0.10
Sulfur	µg/L	1,000	-	<1,000	-	<1,000	-	<1,000	-	<1,000
Tellurium	µg/L	0.050	-	<0.050	-	<0.050	-	<0.050	-	<0.050
Thallium	µg/L	0.0040	-	<0.0040	-	<0.0040	-	<0.0040	-	<0.0040
Thorium	µg/L	0.010	-	<0.010	-	<0.010	-	<0.010	-	<0.010
Tin	µg/L	0.100	-	<0.100	-	<0.100	-	<0.100	-	<0.100
Titanium	µg/L	0.20	-	<0.20	-	<0.20	-	<0.20	-	<0.20
Tungsten	µg/L	0.20	-	<0.20	-	<0.20	-	<0.20	-	<0.20
Uranium	µg/L	0.0010	-	<0.0010	-	<0.0010	-	<0.0010	-	<0.0010
Vanadium	µg/L	1.00	-	<1.00	-	<1.00	-	<1.00	-	<1.00
Zinc	µg/L	1.0	-	<1.0	-	<1.0	-	<1.0	-	<1.0
Zirconium	µg/L	0.020	-	<0.020	-	<0.020	-	<0.020	-	<0.020
Metals, Dissolved										
Aluminum	µg/L	1.0	<1.0	-	<1.0	-	<1.0	-	<1.0	-
Antimony	µg/L	0.050	<0.050	-	<0.050	-	<0.050	-	<0.050	-
Arsenic	µg/L	0.050	<0.050	-	<0.050	-	<0.050	-	<0.050	-
Barium	µg/L	0.10	<0.10	-	<0.10	-	<0.10	-	<0.10	-
Beryllium	µg/L	0.010	<0.010	-	<0.010	-	<0.010	-	<0.010	-
Bismuth	µg/L	0.010	<0.010	-	<0.010	-	<0.010	-	<0.010	-
Boron	µg/L	2.0	<2.0	-	<2.0	-	<2.0	-	<2.0	-
Cadmium	µg/L	0.0020	<0.0020	-	<0.0020	-	0.119	-	<0.0020	-
Calcium	mg/L	0.050	<0.05	-	<0.05	-	<0.05	-	<0.05	-
Chromium (III+VI)	µg/L	0.50	<0.50	-	<0.50	-	<0.50	-	<0.50	-
Cobalt	µg/L	0.0050	<0.0050	-	<0.0050	-	<0.0050	-	<0.0050	-
Copper	µg/L	0.10	<0.10	-	0.19	-	<0.10	-	<0.10	-
Iron	µg/L	2.0	<2.0	-	<2.0	-	<2.0	-	<2.0	-
Lead	µg/L	0.050	<0.050	-	<0.050	-	<0.050	-	<0.050	-
Lithium	µg/L	0.050	<0.050	-	<0.050	-	<0.050	-	<0.050	-
Magnesium	µg/L	5.0	<5.0	-	25.9	-	<5.0	-	40.3	-
Manganese	µg/L	0.050	<0.050	-	<0.050	-	<0.050	-	<0.050	-
Mercury	µg/L	0.010	<0.010	-	<0.010	-	<0.010	-	<0.010	-
Molybdenum	µg/L	0.010	<0.010	-	0.023	-	<0.010	-	<0.010	-
Nickel	µg/L	0.040	<0.040	-	<0.040	-	<0.040	-	<0.040	-
Phosphorus	µg/L	10	<10	-	<10	-	<10	-	<10	-
Potassium	µg/L	20	<20	-	<20	-	<20	-	<20	-
Selenium	µg/L	0.10	<0.10	-	<0.10	-	<0.10	-	<0.10	-
Silicon	µg/L	100	<100	-	<100	-	<100	-	<100	-
Silver	µg/L	0.010	<0.010	-	<0.010	-	<0.010	-	<0.010	-
Sodium	mg/L	0.020	<0.02	-	0.071	-	<0.02	-	0.161	-
Strontium	µg/L	0.10	<0.10	-	0.4	-	<0.10	-	0.62	-
Sulfur	µg/L	1,000	<1,000	-	<1,000	-	<1,000	-	<1,000	-
Tellurium	µg/L	0.050	<0.050	-	<0.050	-	<0.050	-	<0.050	-
Thallium	µg/L	0.0040	<0.0040	-	<0.0040	-	<0.0040	-	<0.0040	-
Thorium	µg/L	0.010	<0.010	-	<0.010	-	<0.010	-	<0.010	-
Tin	µg/L	0.100	<0.100	-	<0.100	-	<0.100	-	0.25	-
Titanium	µg/L	0.20	<0.20	-	<0.20	-	<0.20	-	<0.20	-
Tungsten	µg/L	0.20	<0.20	-	<0.20	-	<0.20	-	<0.20	-
Uranium	µg/L	0.0010	<0.0010	-	0.003	-	<0.0010	-	0.0169	-
Vanadium	µg/L	1.00	<1.00	-	<1.00	-	<1.00	-	<1.00	-
Zinc	µg/L	1.0	<1.0	-	<1.0	-	<1.0	-	<1.0	-
Zirconium	µg/L	0.020	<0.020	-	<0.020	-	<0.020	-	<0.020	-
PAH										
Acenaphthene	µg/L	0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050
Acenaphthylene	µg/L	0.200	<0.200	<0.200	<0.200	<0.200	<0.200	<0.200	<0.200	<0.200
Acridine	µg/L	0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050
Anthracene	µg/L	0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010
Benz(a)anthracene	µg/L	0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010
Benzo(a) pyrene	µg/L	0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010
Benzo(b+j)fluoranthene	µg/L	0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050
Benzo(g,h,i)perylene	µg/L	0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050
Benzo(k)fluoranthene	µg/L	0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050
2-chloronaphthalene	µg/L	0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100
Chrysene	µg/L	0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050
Dibenz(a,h)anthracene	µg/L	0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010
Fluoranthene	µg/L	0.030	<0.030	<0.030	<0.030	<0.030	<0.030	<0.030	<0.030	<0.030
Fluorene	µg/L	0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050
Indeno(1,2,3-c,d)pyrene	µg/L	0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050
1-Methylnaphthalene	µg/L	0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100
2-methylnaphthalene	µg/L	0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100
Naphthalene	µg/L	0.200	<0.200	<0.200	<0.200	<0.200	<0.200	<0.200	<0.200	<0.200
Phenanthrene	µg/L	0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100
Pyrene	µg/L	0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020
Quinoline	µg/L	0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050
VFAs										
Acetic Acid	mg/L	3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0
Butyric Acid	mg/L	2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0
Caproic Acid	mg/L	2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0
Heptanoic Acid	mg/L	2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0
Isobutyric Acid	mg/L	2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0
Isocaproic Acid	mg/L	2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0
Isovaleric Acid	mg/L	2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0
Propanoic acid	mg/L	2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0
Valeric Acid	mg/L	2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0
VOCs										
Bromodichloromethane	µg/L	1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Bromoform	µg/L	1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Carbon tetrachloride	µg/L	0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Chlorobenzene	µg/L	1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Chloroethane	µg/L	2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0
Chloroform	µg/L	1.0	<1.0	<1.0	<1.0	<1.0	<1.0	5.9	<1.0	<1.0
Dibromochloromethane	µg/L	1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
1,2-dibromoethane	µg/L	0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3
Dibromomethane	µg/L	1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
1,2-dichlorobenzene	µg/L	0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
1,3-dichlorobenzene	µg/L	1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
1,4-dichlorobenzene	µg/L	1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
1,1-dichloroethane	µg/L	1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
1,2-dichloroethane	µg/L	1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
1,1-dichloroethene	µg/L	1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
cis-1,2-dichloroethene	µg/L	1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
trans-1,2-dichloroethene	µg/L	1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Dichloromethane	µg/L	3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0
1,2-dichloropropane	µg/L	1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
1,3-Dichloropropene	µg/L	1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
1,1,2,2-tetrachloroethane	µg/L	0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Tetrachloroethene	µg/L	1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
1,1,1-trichloroethane	µg/L	1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
1,1,2-trichloroethane	µg/L	1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Trichloroethene	µg/L	1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Trichlorofluoromethane	µg/L	1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Vinyl chloride	µg/L	1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0

Analytical Reports: CARO 25C3485, 25F0833, 25I2111, 25J3984

- - not analyzed
- < less than laboratory detection limit
- RL reporting limit
- RED and Shaded Pink detectable concentration

Technical Memorandum

25 March 2026

To	Scott Hoekstra (City of Kelowna)	**Contact No.**	250-469-8588
Copy to	Roxy Hasior (GHD)	**Email**	shoekstra@kelowna.ca
From	David R. Barton (GHD) Deacon Liddy (GHD)	**Project No.**	12676030
Project Name	2025-2026 Glenmore		
Subject	Glenmore - 2025 Groundwater Elevation and Quality Data		

1. Introduction

GHD has prepared this technical memorandum (memo) for the City of Kelowna (City) to present 2025 groundwater elevation and quality data at the Glenmore Landfill (Site) and to address recommendations made in the 2023 Hydrogeology and Hydrology Characterization Report (HHCR) (GHD, December 19, 2023).

The purpose of this memo is to address the following recommendations made in the 2023 HHCR:

1. Assessments should incorporate the additional monitoring data from the recommended installed wells, and future reports should also include an assessment of groundwater quality compliance following Protocol 9.

The HHCR recommendation to include a more detailed assessment of surface water and potential landfill related impacts in Little Robert Lake and Robert Lake in future annual monitoring reports will be addressed under a separate assessment.

2. Limitations

This technical memorandum: has been prepared by GHD for City of Kelowna and may only be used and relied on by City of Kelowna for the purpose agreed between GHD and City of Kelowna as set out in section 1 of this technical memorandum.

GHD otherwise disclaims responsibility to any person other than City of Kelowna arising in connection with this technical memorandum. GHD also excludes implied warranties and conditions, to the extent legally permissible.

The services undertaken by GHD in connection with preparing this technical memorandum were limited to those specifically detailed in the technical memorandum and are subject to the scope limitations set out in the technical memorandum.

The opinions, conclusions and any recommendations in this technical memorandum are based on conditions encountered and information reviewed at the date of preparation of the technical memorandum. GHD has no responsibility or obligation to update this technical memorandum to account for events or changes occurring subsequent to the date that the technical memorandum was prepared.

The opinions, conclusions and any recommendations in this technical memorandum are based on assumptions made by GHD described in this technical memorandum (refer section(s) 1 of this technical memorandum). GHD disclaims liability arising from any of the assumptions being incorrect.

GHD has prepared this technical memorandum on the basis of information provided by City of Kelowna and others who provided information to GHD (including Government authorities)], which GHD has not independently verified or checked beyond the agreed scope of work. GHD does not accept liability in connection with such unverified information, including errors and omissions in the technical memorandum which were caused by errors or omissions in that information.

3. Background

GHD completed a drilling and groundwater monitoring well installation program at the Site on July 24 to August 2, 2024, August 19 to 24, 2024, and October 10 to 12, 2024 to implement the following recommendations made in the 2023 HHCR:

– Install a groundwater monitoring well in the bedrock unit along the southern, downgradient Site boundary to assess for potential landfill-derived groundwater impacts
– Install a groundwater monitoring well in the Clay Unit northeast (hydraulically upgradient) of the landfill to assess background groundwater quality representative of the Clay Unit
– Install replacement groundwater monitoring wells for nested well pair 09BH05S/D to the east of Little Robert Lake

Details regarding the 2024 drilling and monitoring well installation program are presented in the technical memorandum titled *2024 Groundwater Monitoring Well Drilling Program Summary*, dated December 6, 2024. The newly installed wells were added to the Environmental Monitoring Program (EMP). The locations of the groundwater monitoring wells installed in 2024 are presented on Figure 1.

4. Groundwater Elevation and Flow Directions

As part of the EMP, water levels at the Site monitoring wells were collected on a quarterly basis to estimate groundwater elevations and assess groundwater flow directions. Static groundwater elevations measured at the monitoring wells installed in 2024 are presented in Table 1. Hydrographs showing groundwater elevations at these monitoring wells from 2024 through 2025 are presented in Attachment 1.

Groundwater elevation contours representing groundwater elevations measured at monitoring wells screened in the Sand and Gravel, Till, and Bedrock units in March and August, 2025 are presented on Figures 2AB, 3AB, and 4AB respectively.

The 2025 groundwater elevation contours for the Sand and Gravel and Till units are generally consistent with the 2022 groundwater elevation contours presented in the HHCR. Groundwater flow direction in the Sand and Gravel and Till units is inferred to generally follow Site topography, with an overall flow direction directed to the south. The groundwater elevation contours for the Bedrock unit, which were not assessed in the HHCR, similarly indicate an overall flow direction toward the south.

Further data collection is needed before conclusions can be drawn about groundwater flow conditions in the area to the south of the Site. Additional slough-elevation measurements and groundwater elevation data around the slough, particularly, measurements collected concurrently with the newly installed wells would support a more accurate assessment. Reducing the water level in the slough below groundwater elevations at the southern boundary and in the offsite wells to the south may reduce the southward hydraulic gradient and reduce the potential for southward groundwater flow.

5. Groundwater Quality compared to Leachate

Groundwater samples were collected from the newly installed monitoring wells quarterly in 2025 as part of the EMP. The monitoring events occurred on March 21, 2025 (Q1), May 23, 2025 (Q2), August 21, 2025 (Q3), and November 29, 2025 (Q4). Groundwater analytical results for samples collected from the newly installed monitoring wells in 2024 and 2025 are presented in Attachment 2.

Groundwater quality results were assessed for evidence of landfill-derived impacts. Concentration versus time (C vs. T) plots of leachate indicator parameters, used to support a temporal assessment of groundwater quality, are presented in Attachment 3.

Based on the concentrations of leachate indicator parameters (Attachment 3, Figure 3-1), the following interpretations regarding groundwater quality at the newly installed monitoring wells have been developed:

– The C vs. T plots for leachate indicator parameters: chloride, nitrate, sulfate, dissolved lithium, dissolved uranium, and alkalinity have generally been consistent since the monitoring wells were installed in 2024.
– A slight increasing trend in dissolved lithium is apparent at GL44-1, which is located at the southern Site boundary and is screened in the Till unit.

Further groundwater sampling at the newly installed monitoring wells is needed to assess potential trends in concentrations of leachate indicator parameters.

5.1 Groundwater Geochemical Characteristics

Attachment 4 presents piper plots which show major ion chemistry of groundwater samples collected at the newly installed monitoring wells in 2024 and 2025 compared to samples of leachate collected at the Site.

The piper plots provide a means of comparing major ion proportions at each monitoring location. Major cations (calcium, magnesium, potassium, and sodium) and anions (chloride, sulphate, and bicarbonate) are plotted on trilinear (triangular) diagrams as percentages. The two triangles are then projected onto a central diamond. Major ion geochemical patterns can be discerned by comparing the relative locations of samples on the plot. Locations that plot close to one another are characterized by similar major ion geochemistry, which may indicate a similar water source or potential water quality alteration. This can be used as a line of evidence to support the interpretations of groundwater quality and potential leachate migration. groundwater samples that appear in proximity to leachate on the plot have similar major ion chemistry, which may be an indication of water quality alteration resulting from leachate migration. On a piper plot, leachate typically plots towards the right and bottom of the main diamond due to higher relative proportions of sodium and chloride.

As shown on Figure 1 in Attachment 4, major ion chemistry of the groundwater samples collected at GL-46, which is screened in the Bedrock unit, generally plot in close proximity to the 2024 leachate samples indicating overall geochemical similarity between groundwater at this monitoring well and Site leachate. As shown on the cation triangle, the groundwater samples from GL-46 have similar proportions of major cations to Site leachate, however, as shown on the anion triangle, the proportion of chloride (a common leachate indicator parameter) in groundwater at GL-46 is consistently lower than in leachate. Further assessment of groundwater quality in the bedrock unit is needed to determine if groundwater quality at GL-46 is representative of background conditions in the Bedrock unit, or if groundwater quality at this monitoring well may be affected by leachate migration.

As shown on Figures 2, 3, and 4 in Attachment 4, groundwater samples from the Clay Unit, Sand and Gravel, and Till Units plot as relatively clustered groups on the piper plots, indicating consistent major ion chemistry across monitoring locations and sampling events. For these units, groundwater samples plot closest to the leachate on the cation triangle; however, they remain clearly separated from the leachate samples on the anion triangle and central diamond due to low chloride proportions. This separation indicates that, while some similarities in cation proportions are observed, overall groundwater chemistry in these units is distinct from the 2024 leachate samples and does not indicate leachate influence based on major ion chemistry.

6. Conclusions

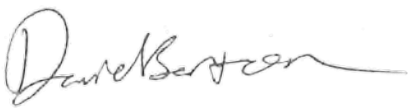
Groundwater elevation and quality data from the newly installed monitoring wells

- 2025 groundwater elevations and inferred flow directions for the Sand and Gravel and Till units are generally consistent with elevations and flow directions from 2022 as assessed in the HHCR. Groundwater flow direction in the Sand and Gravel and Till units is inferred to generally follow Site topography, with an overall flow direction to the south.
- 2025 groundwater elevations from monitoring wells screened in the Bedrock unit indicate an overall flow direction to the south, similar to the overlying Sand and Gravel and Till units.
- Groundwater quality at the newly installed monitoring wells was generally consistent for samples collected through 2024 and 2025, with a potential increasing trend of lithium concentrations at GL44-1 (screened in the Till unit).
- Major ion chemistry of groundwater samples collected at the newly installed monitoring wells does not indicate leachate influence at the wells screened in the Sand and Gravel or Till units.
- Major ion chemistry of groundwater samples collected at GL-46 (screened in the Bedrock unit) is characterized by generally similar cation proportions to leachate, with lower chloride proportions.

Regards



Deacon Liddy, P.Eng
Senior Engineer



David R. Barton, GIT
Hydrogeologist in Training

Table

Table 1

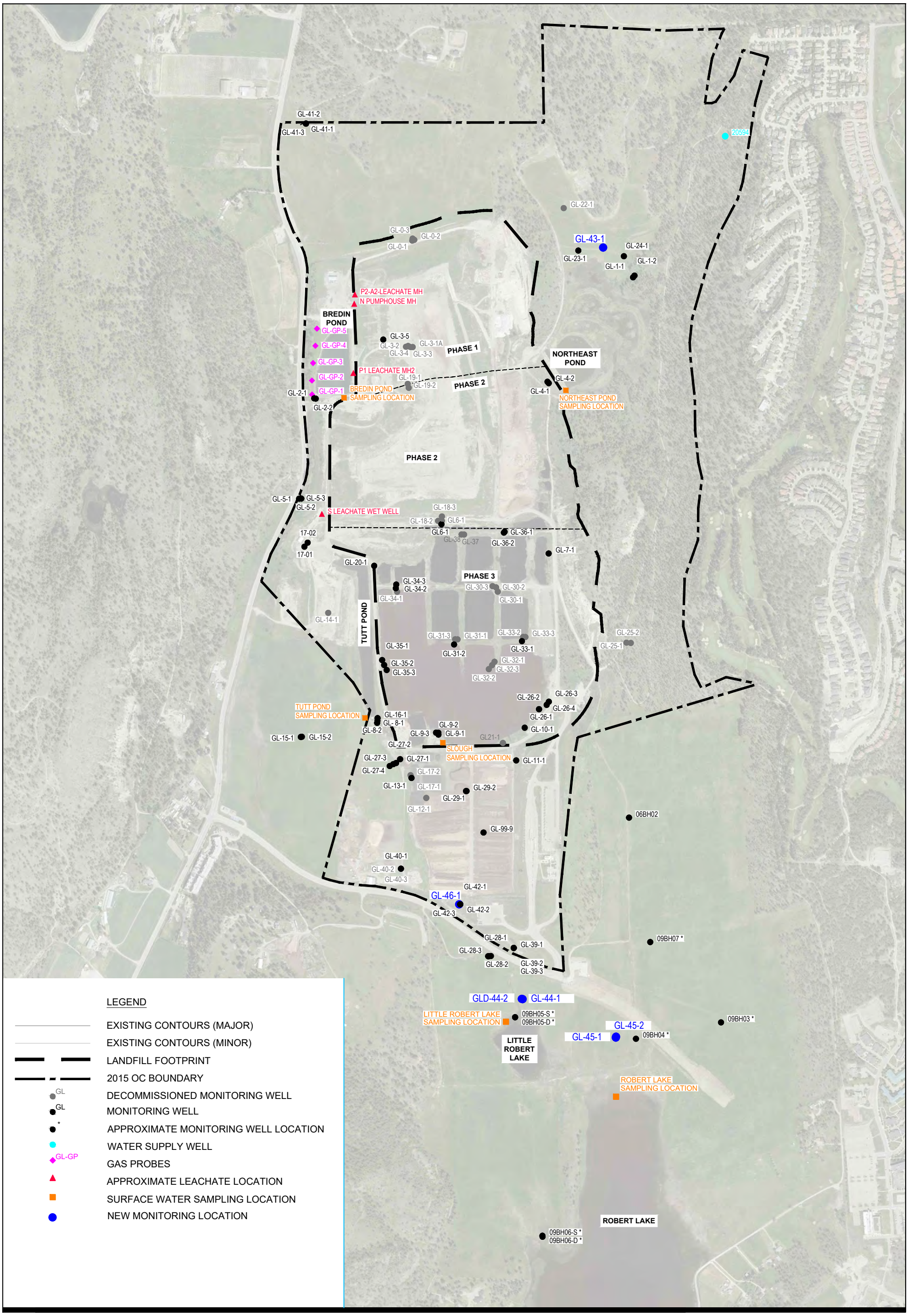
Groundwater Elevations
Glenmore Landfill
City of Kelowna

	Screen Details						Water Levels (mAMSL)					
Well ID	**Final Depth (m)**	**Top of Screen (m BGS)**	**Bottom of Screen (m BGS)**	**Screen Length (m)**	**Lithology**	**Hydrogeologic Classification**	**2024/09/09**	**2024/11/19**	**2025/03/24**	**2025/05/30**	**2025/09/10**	**2025/11/21**
GL43-1 (2024-04)	3.05	1.83	2.74	0.91	Clay, silty sand	Clay Unit	443.816	443.907	444.319	444.296	443.910	444.015
GL46-1 (2024-03)	23.93	20.57	22.1	1.52	Volcanic bedrock	Bedrock Unit		437.587	437.514	437.586	437.513	437.424
GL44-1 (2024-01D)	18.14	16.00	17.53	1.52	Silty sand, some gravel	Till Unit	436.591	436.379	436.386	436.386	436.644	436.366
GL44-2 (2024-01S)	16.76	13.41	14.94	1.52	Sand, some silt	Sand and Gravel Unit	436.614	436.423	436.403	436.293	436.632	436.378
GL45-1 (2024-02S)	21.34	8.53	10.06	1.52	Silty sand, clay	Sand and Gravel Unit	436.699	436.452	436.437	436.506	436.781	436.452
GL45-2 (2024-02D)	21.34	19.51	21.03	1.52	Sand, trace silt	Till Unit	436.528	436.391	436.450	436.335	436.587	436.312
2025 Average Elevation for GL26-2	-	-	-	-	-	-	-	-	438.164			
2025 Average Elevation for GL26-3	-	-	-	-	-	-	-	-	438.144			
2024/2025 Average Elevation for Slough	-	-	-	-	-	-	437.795					

Notes:

- - Not applicable

Figures



0 100 200 300

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N

GHD

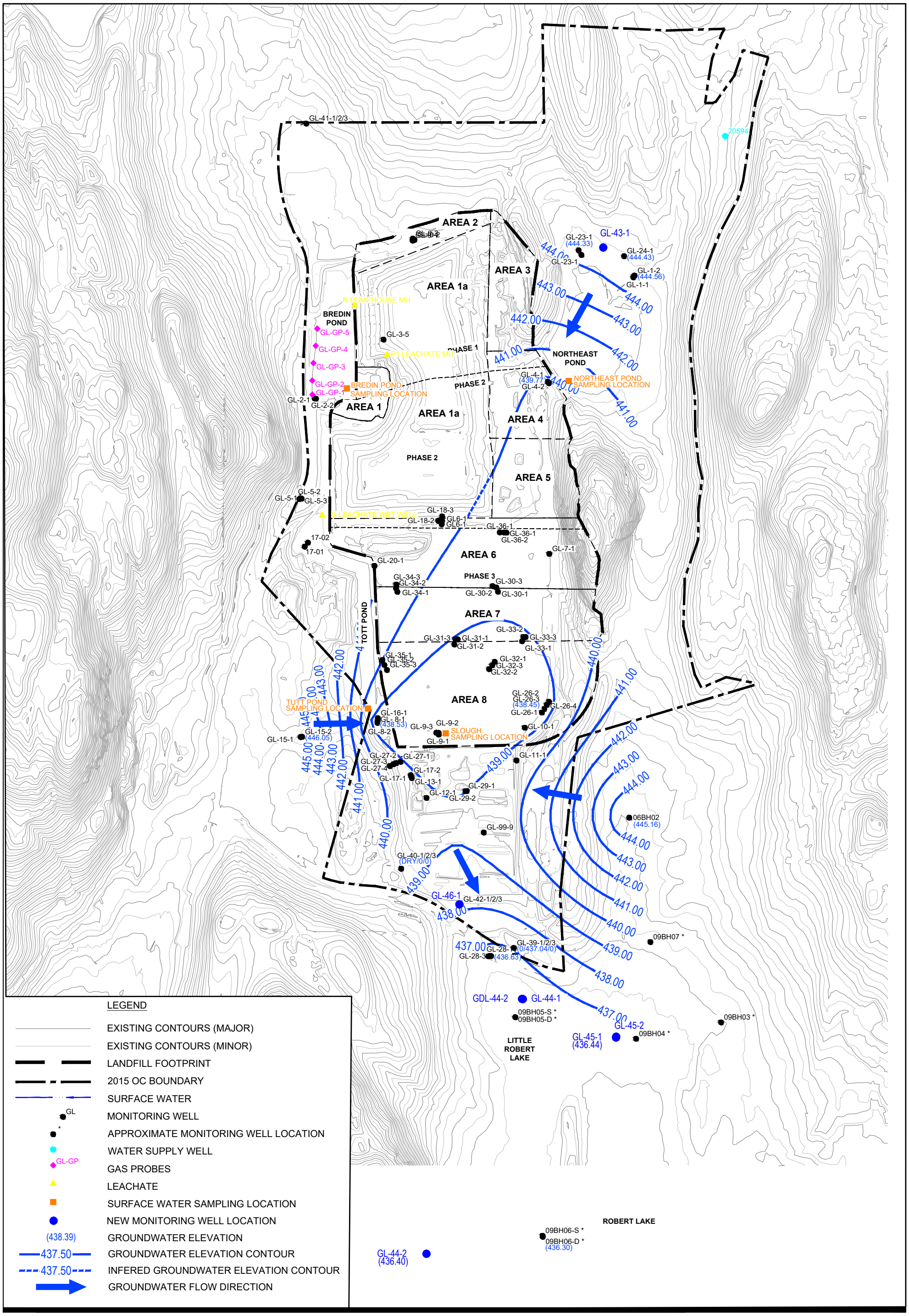
CITY OF KELOWNA
GLENMORE LANDFILL

MONITORING NETWORK

Project No. **12676030**
Date **March 2026**

FIGURE 1

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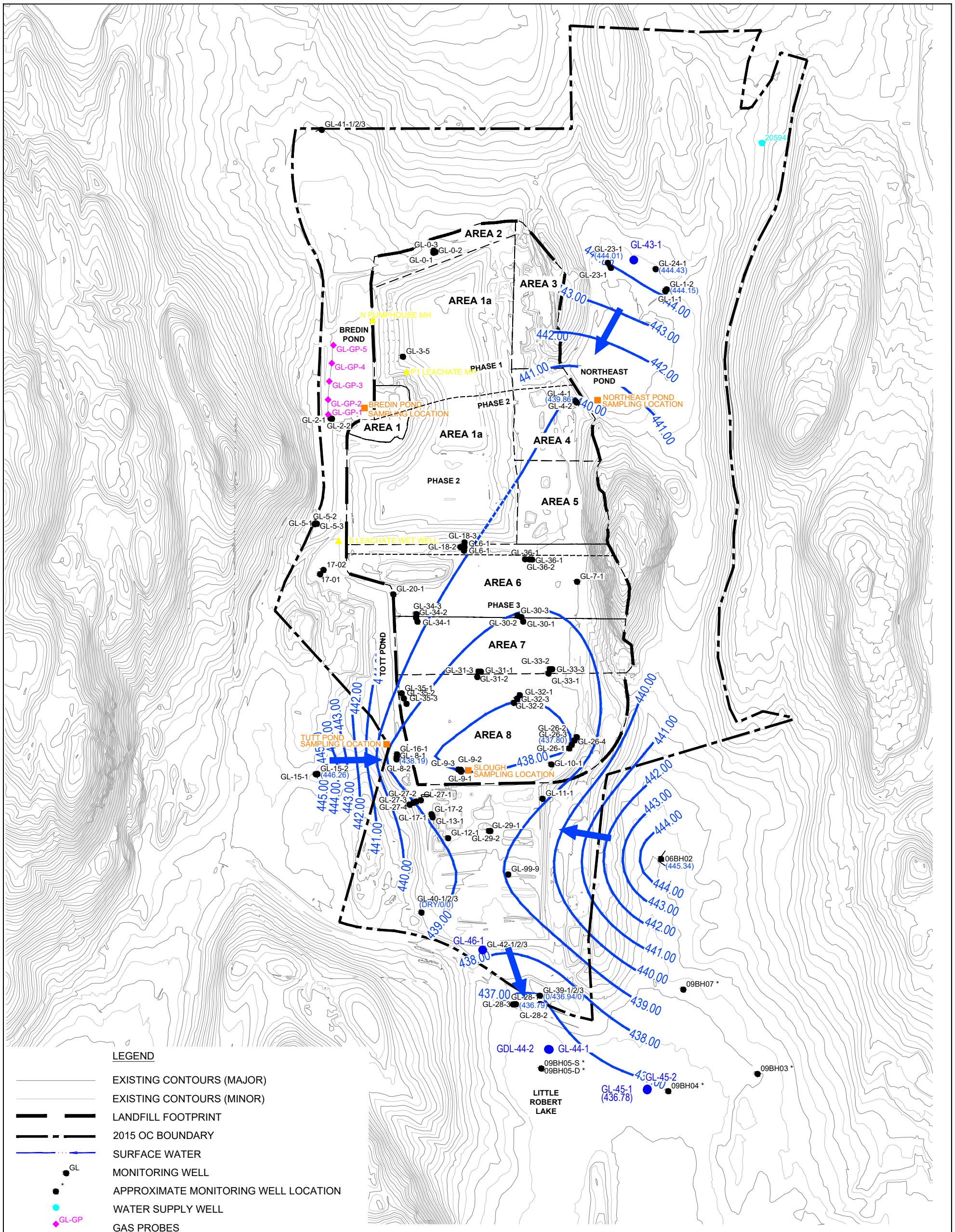
CITY OF KELOWNA
GLENMORE LANDFILL
HYDROGEOLOGY AND HYDROLOGY
CHARACTERIZATION REPORT

SAND AND GRAVEL UNIT GROUNDWATER ELEVATION CONTOURS (MARCH 2025)

Project No. **12676030**
Date **March 2026**

FIGURE 2A

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LEGEND

- EXISTING CONTOURS (MAJOR)
- EXISTING CONTOURS (MINOR)
- LANDFILL FOOTPRINT
- 2015 OC BOUNDARY
- SURFACE WATER
- GL — MONITORING WELL
- * — APPROXIMATE MONITORING WELL LOCATION
- WATER SUPPLY WELL
- GL-GP — GAS PROBES
- LEACHATE
- SURFACE WATER SAMPLING LOCATION
- NEW MONITORING WELL LOCATION
- (438.39) — GROUNDWATER ELEVATION
- 437.50 — GROUNDWATER ELEVATION CONTOUR
- 437.50 — INFERED GROUNDWATER ELEVATION CONTOUR
- GROUNDWATER FLOW DIRECTION

0 100 200 300

1:10000

N

GHD

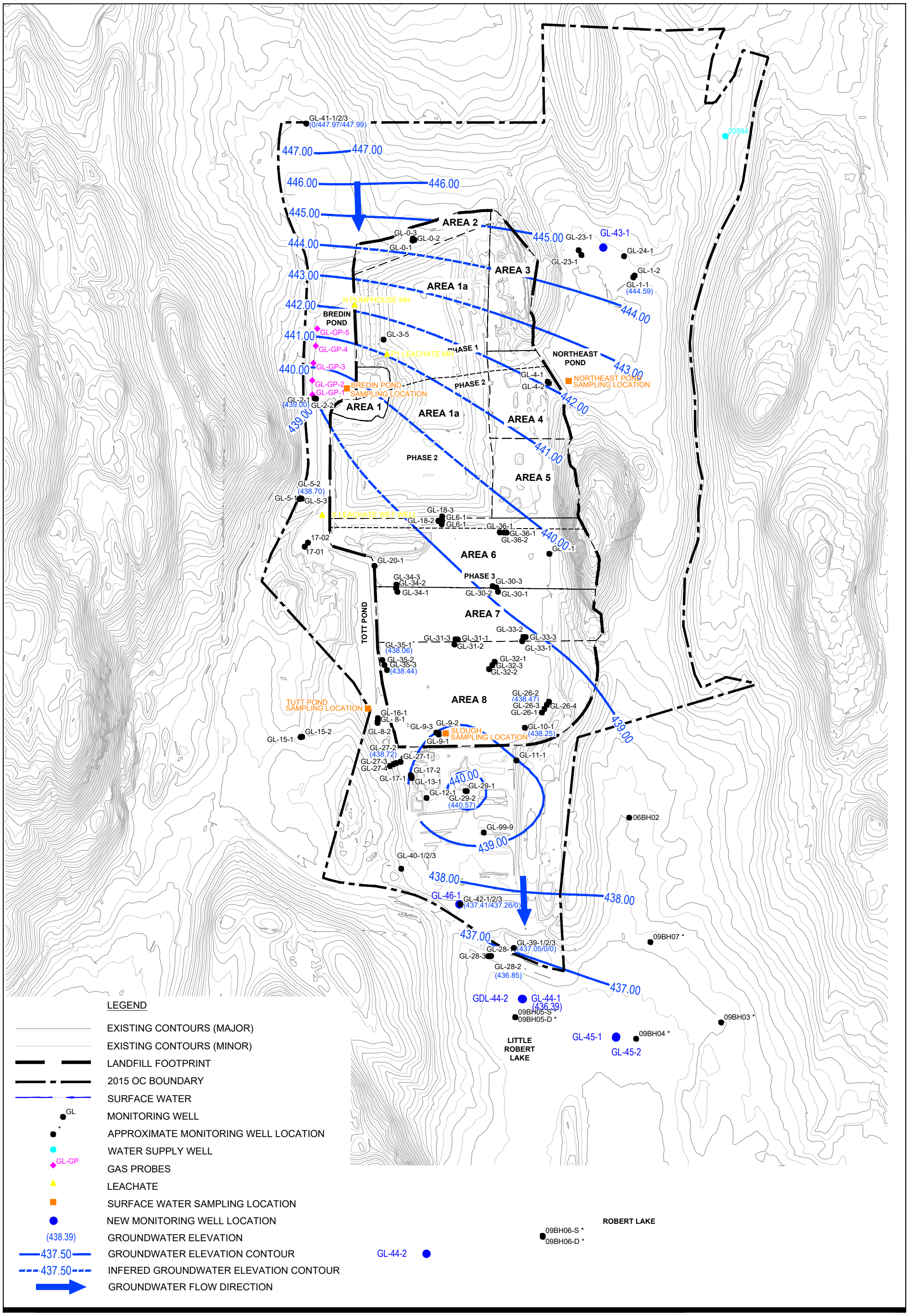
CITY OF KELOWNA
GLENMORE LANDFILL
HYDROGEOLOGY AND HYDROLOGY CHARACTERIZATION REPORT

SAND AND GRAVEL UNIT GROUNDWATER ELEVATION CONTOURS (AUGUST 2025)

Project No. **12676030**
Date **March 2026**

FIGURE 2B

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Plot Date: 25 March 2026 9:36 AM



LEGEND

- EXISTING CONTOURS (MAJOR)
- EXISTING CONTOURS (MINOR)
- LANDFILL FOOTPRINT
- 2015 OC BOUNDARY
- SURFACE WATER
- GL — MONITORING WELL
- * — APPROXIMATE MONITORING WELL LOCATION
- WATER SUPPLY WELL
- GL-GP — GAS PROBES
- LEACHATE
- SURFACE WATER SAMPLING LOCATION
- NEW MONITORING WELL LOCATION
- (438.39) — GROUNDWATER ELEVATION
- 437.50 — GROUNDWATER ELEVATION CONTOUR
- 437.50 — INFERED GROUNDWATER ELEVATION CONTOUR
- GROUNDWATER FLOW DIRECTION

0 100 200 300

1:10000

N

GHD

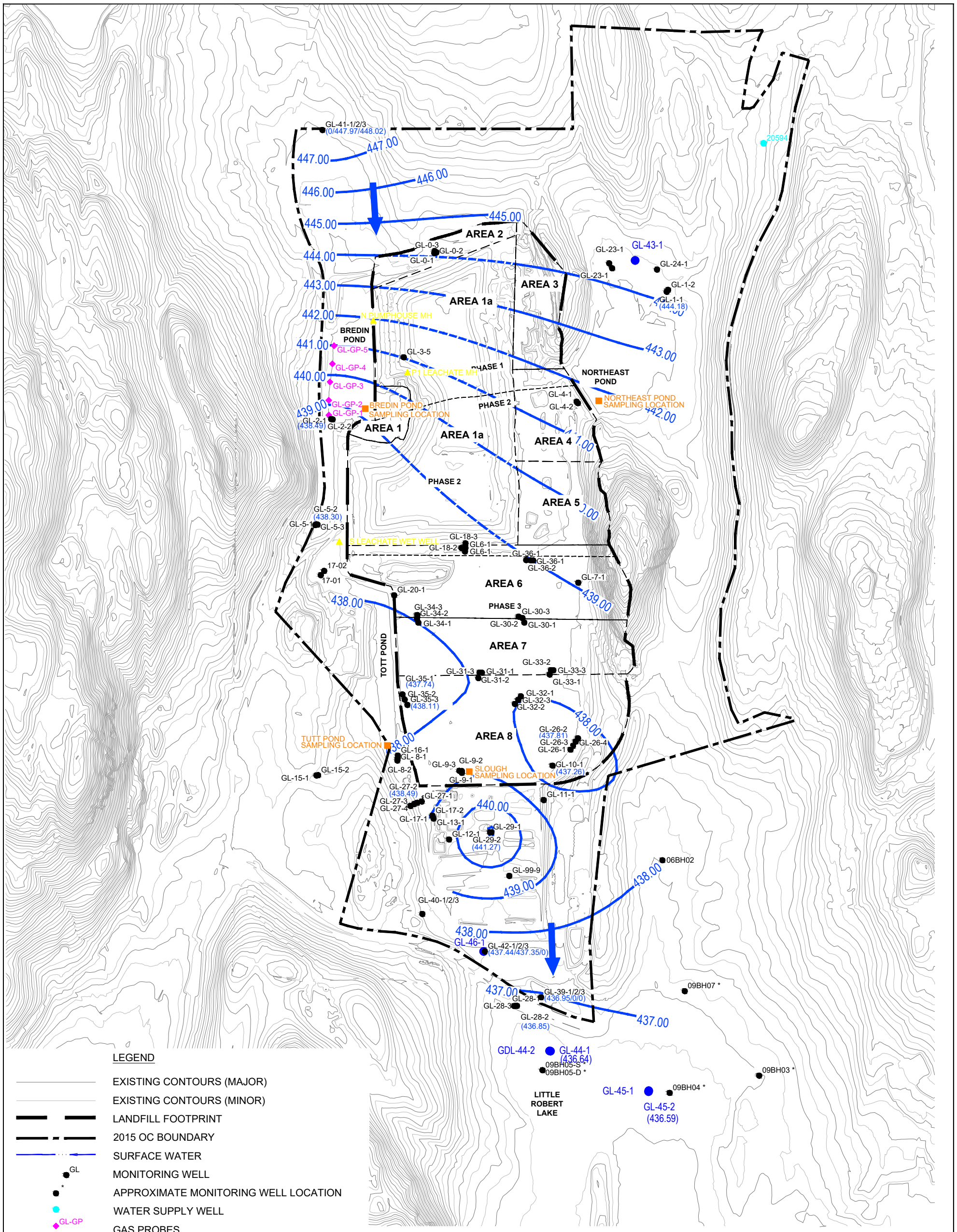
CITY OF KELOWNA
GLENMORE LANDFILL
HYDROGEOLOGY AND HYDROLOGY
CHARACTERIZATION REPORT

TILL UNIT GROUNDWATER ELEVATION CONTOURS (MARCH 2025)

Project No. **12676030**
Date **March 2026**

FIGURE 3A

Filename: N:\CA\Vancouver\Projects\663\12676030\Digital_Design\ACAD\Figures\MEM-01\12676030-GHD-00-00-MEM-EN-D103_WA-003.dwg
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LEGEND

- EXISTING CONTOURS (MAJOR)
- EXISTING CONTOURS (MINOR)
- LANDFILL FOOTPRINT
- 2015 OC BOUNDARY
- SURFACE WATER
- GL — MONITORING WELL
- * — APPROXIMATE MONITORING WELL LOCATION
- WATER SUPPLY WELL
- GL-GP — GAS PROBES
- LEACHATE
- SURFACE WATER SAMPLING LOCATION
- NEW MONITORING WELL LOCATION
- (438.39) — GROUNDWATER ELEVATION
- 437.50 — GROUNDWATER ELEVATION CONTOUR
- 437.50 — INFERED GROUNDWATER ELEVATION CONTOUR
- GROUNDWATER FLOW DIRECTION

GL-44-2

0 100 200 300

1:10000

N

GHD

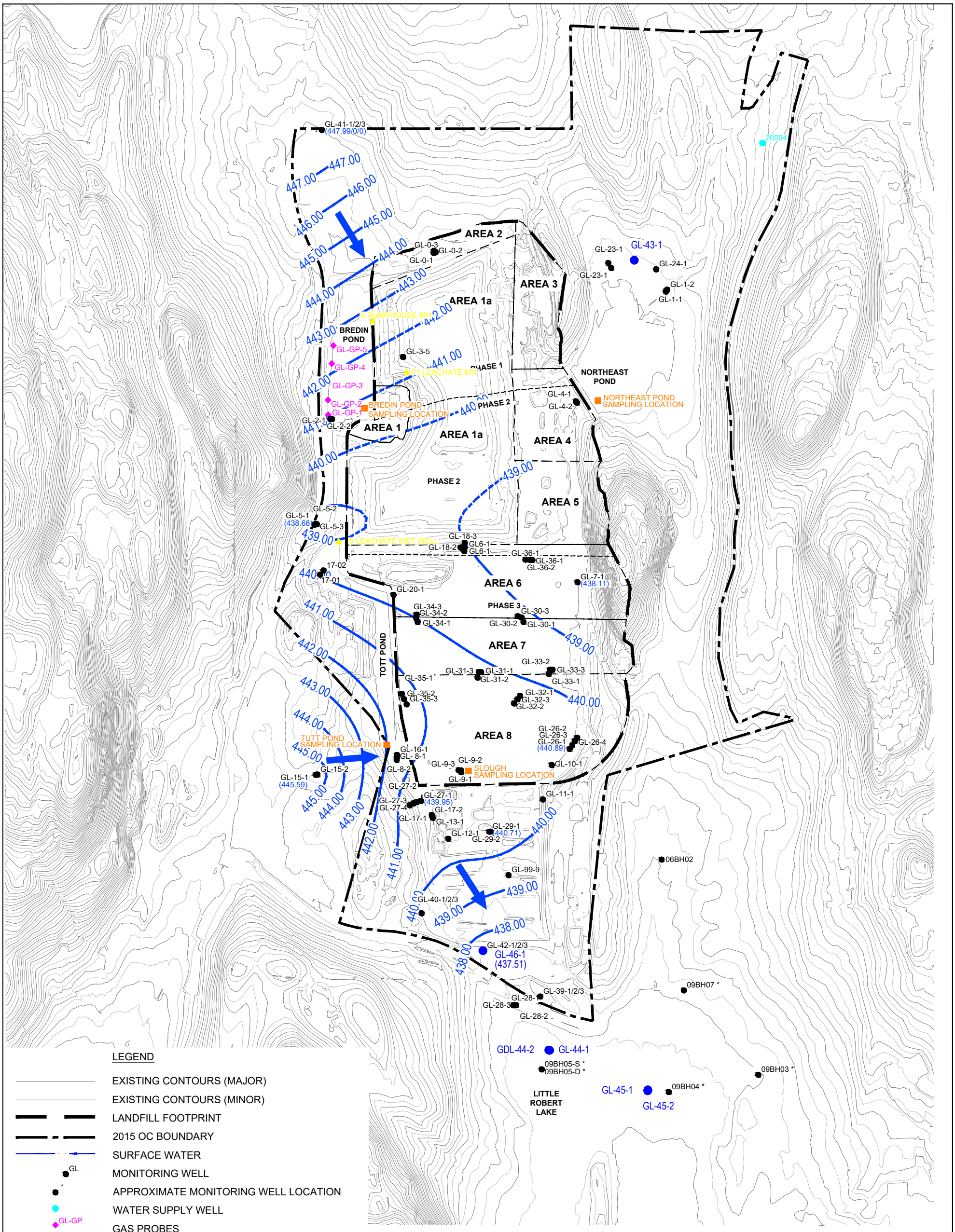
CITY OF KELOWNA
GLENMORE LANDFILL
HYDROGEOLOGY AND HYDROLOGY CHARACTERIZATION REPORT

TILL UNIT GROUNDWATER ELEVATION CONTOURS (AUGUST 2025)

Project No. **12676030**
Date **March 2026**

FIGURE 3B

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LEGEND

- EXISTING CONTOURS (MAJOR)
- EXISTING CONTOURS (MINOR)
- LANDFILL FOOTPRINT
- 2015 OC BOUNDARY
- SURFACE WATER
- GL — MONITORING WELL
- * — APPROXIMATE MONITORING WELL LOCATION
- WATER SUPPLY WELL
- GL-GP — GAS PROBES
- LEACHATE
- SURFACE WATER SAMPLING LOCATION
- NEW MONITORING WELL LOCATION
- (438.39) — GROUNDWATER ELEVATION
- 437.50 — GROUNDWATER ELEVATION CONTOUR
- 437.50 — INFERED GROUNDWATER ELEVATION CONTOUR
- GROUNDWATER FLOW DIRECTION

GL-44-2

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1:10000

N

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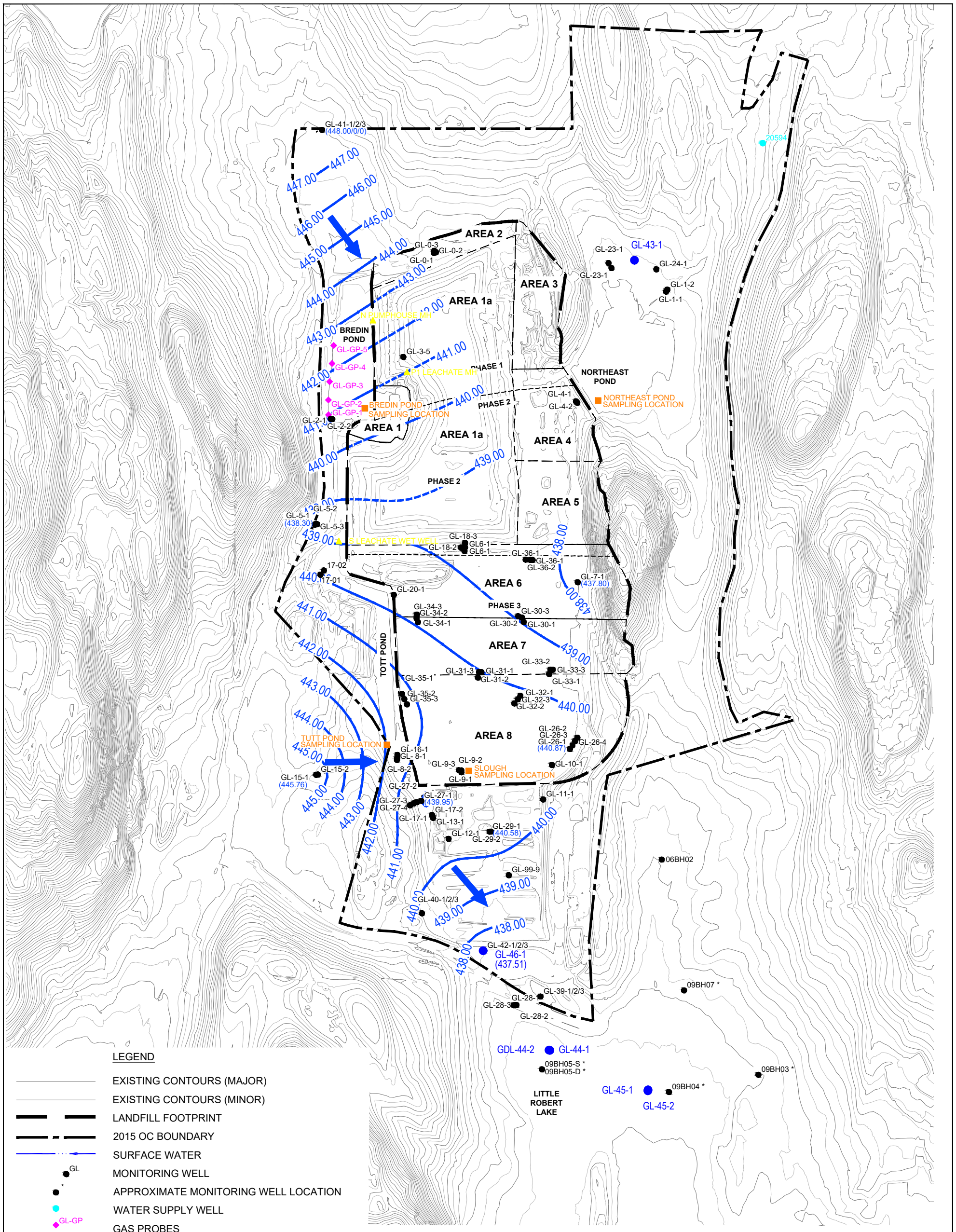
CITY OF KELOWNA
GLENMORE LANDFILL
HYDROGEOLOGY AND HYDROLOGY CHARACTERIZATION REPORT

BEDROCK UNIT GROUNDWATER ELEVATION CONTOURS (MARCH 2025)

Project No. **12676030**
Date **March 2026**

FIGURE 4A

Filename: N:\CA\Vancouver\Projects\663\12676030\Digital_Design\ACAD\Figures\MEM-01\12676030-GHD-00-00-MEM-EN-D105_WA-003.dwg
Plot Date: 24 March 2026 1:32 PM



LEGEND

- EXISTING CONTOURS (MAJOR)
- EXISTING CONTOURS (MINOR)
- LANDFILL FOOTPRINT
- 2015 OC BOUNDARY
- SURFACE WATER
- GL — MONITORING WELL
- * — APPROXIMATE MONITORING WELL LOCATION
- WATER SUPPLY WELL
- GL-GP — GAS PROBES
- LEACHATE
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- (438.39) — GROUNDWATER ELEVATION
- 437.50 — GROUNDWATER ELEVATION CONTOUR
- 437.50 — INFERED GROUNDWATER ELEVATION CONTOUR
- GROUNDWATER FLOW DIRECTION

0 100 200 300

1:10000

N

GHD

CITY OF KELOWNA
GLENMORE LANDFILL
HYDROGEOLOGY AND HYDROLOGY CHARACTERIZATION REPORT

BEDROCK UNIT GROUNDWATER ELEVATION CONTOURS (AUGUST 2025)

Project No. **12676030**
Date **March 2026**

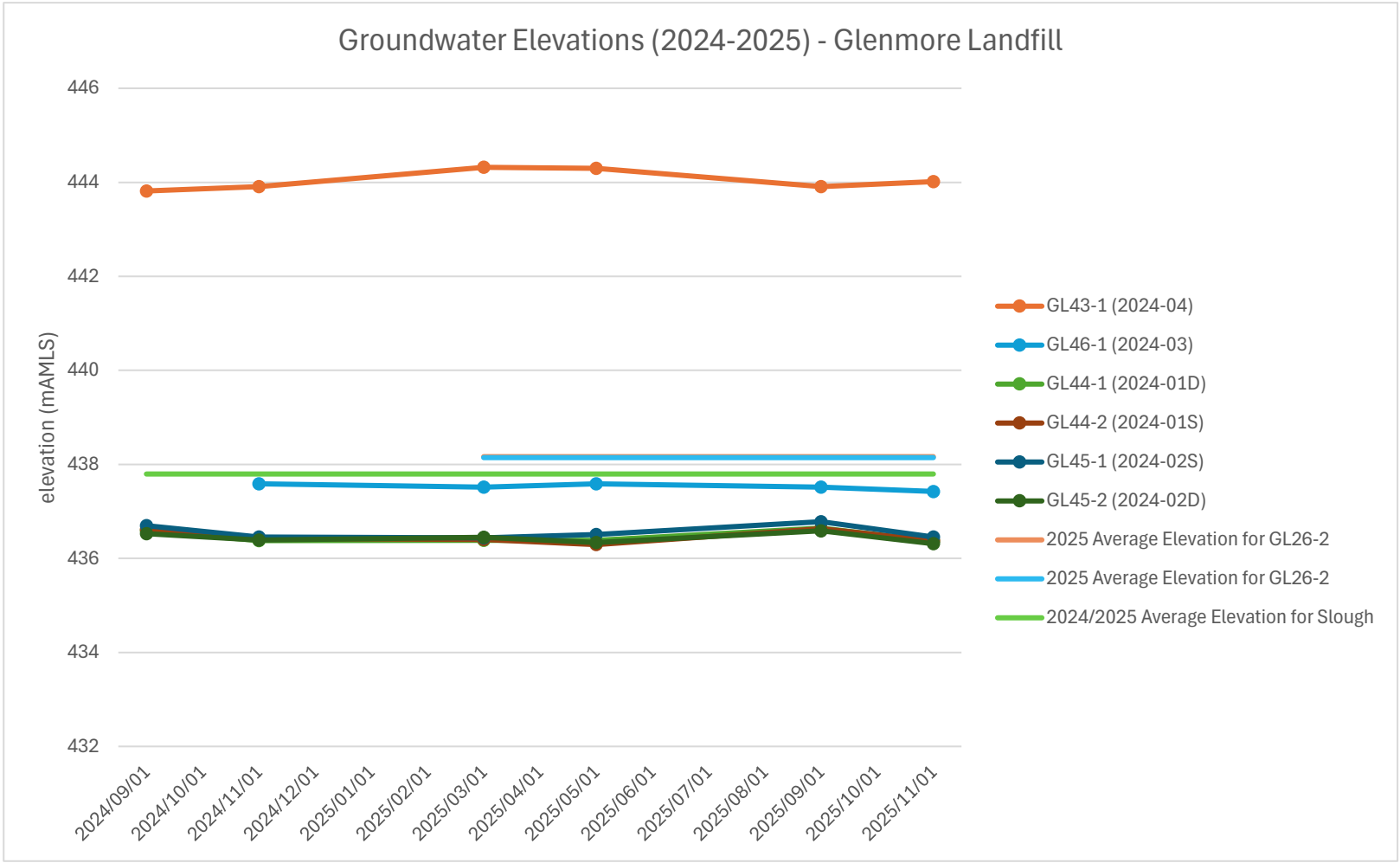
FIGURE 4B

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Attachments

Attachment 1

Hydrographs


Groundwater Elevations (2024-2025) - Glenmore Landfill
elevation (mAMLS)
446
444
442
440
438
436
434
432
2024/09/01
2024/10/01
2024/11/01
2024/12/01
2025/01/01
2025/02/01
2025/03/01
2025/04/01
2025/05/01
2025/06/01
2025/07/01
2025/08/01
2025/09/01
2025/10/01
2025/11/01
GL43-1 (2024-04)
GL46-1 (2024-03)
GL44-1 (2024-01D)
GL44-2 (2024-01S)
GL45-1 (2024-02S)
GL45-2 (2024-02D)
2025 Average Elevation for GL26-2
2025 Average Elevation for GL26-2
2024/2025 Average Elevation for Slough

Attachment 2

Groundwater Analytical Results

LAB ID				24I3421-01	24K1820-03	25C2620-06	25E3308-05	25H3114-01	25J4101-04
CLIENT ID				GL 43-1	GL 43-1	GL 43-1	GL 43-1	GL 43-1	GL 43-1
DATE SAMPLED				2024-09-25	2024-11-14	2025-03-21	2025-05-23	2025-08-21	2025-10-29
DATE RECEIVED				2024-09-25	2024-11-14	2025-03-21	2025-05-23	2025-08-21	2025-10-29
MATRIX				Water	Water	Water	Water	Water	Water
General Method	**Analyte**	**Units**	**MRL**						
Anions	Bromide	mg/L	0.1	<1.00	<1.00	<1.00	<1.00	<1.00	0.22
Anions	Chloride	mg/L	0.1	44.9	45.5	39.8	40.9	46.4	44.4
Anions	Fluoride	mg/L	0.1	1.12	1.96	1.18	1.32	1.92	1.73
Anions	Nitrate (as N)	mg/L	0.01	47.1	48.3	41.4	44	42.5	24.4
Anions	Nitrite (as N)	mg/L	0.01	<0.100	0.22	<0.100	<0.100	0.109	0.049
Anions	Sulfate	mg/L	1	1110	1140	1060	980	1170	1000
Calculated Parameters	Hardness, Dissolved (as CaCO3)	mg/L	0.125	1380	1340	1230	1600	1210	1230
Dissolved Metals	Mercury, dissolved	mg/L	0.00001	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010
Dissolved Metals	Aluminum, dissolved	ug/L	1	4.8	2.6	1.6	8.7	1.9	20.9
Dissolved Metals	Antimony, dissolved	ug/L	0.05	1.16	1.03	0.771	0.637	0.881	1
Dissolved Metals	Arsenic, dissolved	ug/L	0.05	20.9	18.9	16.4	15.9	16.1	17
Dissolved Metals	Barium, dissolved	ug/L	0.1	54.4	51.1	42.6	47.4	48.3	47.4
Dissolved Metals	Beryllium, dissolved	ug/L	0.01	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010
Dissolved Metals	Bismuth, dissolved	ug/L	0.01	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010
Dissolved Metals	Boron, dissolved	ug/L	2	117	98.3	73	79.5	93.5	105
Dissolved Metals	Cadmium, dissolved	ug/L	0.002	<0.180	<0.144	<0.134	0.105	0.117	0.151
Dissolved Metals	Calcium, dissolved	ug/L	50	115000	103000	90400	97000	92000	96100
Dissolved Metals	Chromium, dissolved	ug/L	0.5	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
Dissolved Metals	Cobalt, dissolved	ug/L	0.005	1.09	0.634	0.461	0.365	0.422	0.385
Dissolved Metals	Copper, dissolved	ug/L	0.1	10.1	8.73	6.76	5.47	6.54	6.95
Dissolved Metals	Iron, dissolved	ug/L	2	7.2	2.8	<2.0	9.3	<2.0	23.9
Dissolved Metals	Lead, dissolved	ug/L	0.05	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050
Dissolved Metals	Lithium, dissolved	ug/L	0.05	32.3	32.7	28.6	32.4	33.4	33.1
Dissolved Metals	Magnesium, dissolved	ug/L	5	265000	263000	244000	329000	238000	240000
Dissolved Metals	Manganese, dissolved	ug/L	0.05	400	293	173	182	342	226
Dissolved Metals	Molybdenum, dissolved	ug/L	0.01	187	152	137	136	131	135
Dissolved Metals	Nickel, dissolved	ug/L	0.04	10.6	9.64	7.68	7.57	8.16	8.97
Dissolved Metals	Phosphorus, dissolved	ug/L	10	6290	6180	5440	5930	5430	5730
Dissolved Metals	Potassium, dissolved	ug/L	20	21200	19000	13100	16900	14200	14400
Dissolved Metals	Selenium, dissolved	ug/L	0.1	5.26	4.98	4.15	4.52	3.24	2.7
Dissolved Metals	Silicon, dissolved	ug/L	100	13700	13900	11900	12100	13900	14000
Dissolved Metals	Silver, dissolved	ug/L	0.01	0.011	<0.010	<0.010	<0.010	<0.010	<0.010
Dissolved Metals	Sodium, dissolved	ug/L	20	500000	468000	432000	458000	441000	441000
Dissolved Metals	Strontium, dissolved	ug/L	0.1	3370	3300	3170	3720	3400	3340
Dissolved Metals	Sulfur, dissolved	ug/L	1000	423000	428000	387000	394000	425000	421000
Dissolved Metals	Tellurium, dissolved	ug/L	0.05	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050
Dissolved Metals	Thallium, dissolved	ug/L	0.004	0.0283	0.0188	0.0125	0.0164	0.018	0.015
Dissolved Metals	Thorium, dissolved	ug/L	0.01	<0.010	0.023	<0.010	<0.010	<0.010	0.011
Dissolved Metals	Tin, dissolved	ug/L	0.05	0.237	0.152	<0.100	<0.100	<0.100	<0.100
Dissolved Metals	Titanium, dissolved	ug/L	0.2	0.47	0.47	0.41	0.6	0.25	1.17
Dissolved Metals	Tungsten, dissolved	ug/L	0.2	0.36	0.29	<0.20	<0.20	0.22	0.2
Dissolved Metals	Uranium, dissolved	ug/L	0.001	180	143	162	168	151	148
Dissolved Metals	Vanadium, dissolved	ug/L	1	18.2	16.5	13.9	15.6	14.5	15.7
Dissolved Metals	Zinc, dissolved	ug/L	1	1.5	1.1	<1.0	<1.0	<1.0	<1.0
Dissolved Metals	Zirconium, dissolved	ug/L	0.02	1.09	1.02	0.728	0.704	0.759	0.694
General Parameters	Alkalinity, Total (as CaCO3)	mg/L	1	861	843	842	821	837	909
General Parameters	Alkalinity, Phenolphthalein (as CaCO3)	mg/L	1	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
General Parameters	Alkalinity, Bicarbonate (as CaCO3)	mg/L	1	861	843	842	821	837	909
General Parameters	Alkalinity, Carbonate (as CaCO3)	mg/L	1	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
General Parameters	Alkalinity, Hydroxide (as CaCO3)	mg/L	1	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
General Parameters	Ammonia, Total (as N)	mg/L	0.05	0.659	0.095	0.06	<0.050	<0.050	<0.050
General Parameters	Carbon, Dissolved Organic	mg/L	0.5	18.6	19.2	17.2	15.4	17.5	16.7
General Parameters	Chemical Oxygen Demand	mg/L	20	66	45	48	55	40	49
General Parameters	Phosphorus, Dissolved Reactive	mg/L	0.005	5.06	4.76	4.61	4.09	4.61	4.88
General Parameters	Solids, Total Dissolved	mg/L	15	2630	2540	2400	2520	2560	2440
General Parameters	pH	pH units	0.1	8.06	8.07	8.07	7.9	8.15	8

LAB ID				24I3421-02	24K0996-01	25C2966-01	25F0108-0	25H4198-01	25K0306-01
CLIENT ID				GL 44-1	GL44-1	GL 44-1	GL 44-1	GL 44-1	GL 44-1
DATE SAMPLED				2024-09-25	2024-11-07	2025-03-25	2025-06-02	2025-08-28	2025-11-04
DATE RECEIVED				2024-09-25	2024-11-07	2025-03-25	2025-06-02	2025-08-28	2025-11-04
MATRIX				Water	Water	Water	Water	Water	Water
General Method	**Analyte**	**Units**	**MRL**						
Anions	Bromide	mg/L	0.1	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00
Anions	Chloride	mg/L	0.1	43.9	45.6	43.7	48.5	49.8	47.2
Anions	Fluoride	mg/L	0.1	<1.00	1.56	<1.00	2.27	1.2	<1.00
Anions	Nitrate (as N)	mg/L	0.01	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100
Anions	Nitrite (as N)	mg/L	0.01	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100
Anions	Sulfate	mg/L	1	3250	3390	3030	3700	3140	3330
Calculated Parameters	Hardness, Dissolved (as CaCO3)	mg/L	0.125	2540	2280	2530	2960	2840	2560
Dissolved Metals	Mercury, dissolved	mg/L	0.00001	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010
Dissolved Metals	Aluminum, dissolved	ug/L	1	1.7	2.9	3.3	2	8.7	1.4
Dissolved Metals	Antimony, dissolved	ug/L	0.05	0.293	<0.050	0.076	<0.050	<0.050	<0.050
Dissolved Metals	Arsenic, dissolved	ug/L	0.05	1.61	5.73	4.65	5.53	5.8	4.52
Dissolved Metals	Barium, dissolved	ug/L	0.1	77.1	41.2	74.4	39.2	26.3	42.7
Dissolved Metals	Beryllium, dissolved	ug/L	0.01	<0.010	0.012	<0.010	<0.010	0.011	<0.010
Dissolved Metals	Bismuth, dissolved	ug/L	0.01	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010
Dissolved Metals	Boron, dissolved	ug/L	2	36.5	21.3	40.6	27.1	26.1	21.9
Dissolved Metals	Cadmium, dissolved	ug/L	0.002	0.125	<0.0080	<0.0040	<0.0040	<0.0040	<0.0020
Dissolved Metals	Calcium, dissolved	ug/L	50	300000	300000	276000	317000	282000	273000
Dissolved Metals	Chromium, dissolved	ug/L	0.5	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
Dissolved Metals	Cobalt, dissolved	ug/L	0.005	0.137	3.08	7.55	4.17	2.84	5.18
Dissolved Metals	Copper, dissolved	ug/L	0.1	0.53	<0.10	<0.10	<0.10	<0.10	<0.10
Dissolved Metals	Iron, dissolved	ug/L	2	2.4	1820	1120	2490	2140	1750
Dissolved Metals	Lead, dissolved	ug/L	0.05	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050
Dissolved Metals	Lithium, dissolved	ug/L	0.05	194	103	125	132	152	168
Dissolved Metals	Magnesium, dissolved	ug/L	5	436000	372000	447000	525000	519000	456000
Dissolved Metals	Manganese, dissolved	ug/L	0.05	275	1200	2410	1590	952	1750
Dissolved Metals	Molybdenum, dissolved	ug/L	0.01	18.1	16.2	12.9	15	15.9	14.2
Dissolved Metals	Nickel, dissolved	ug/L	0.04	7.26	4.9	10.5	7.43	5.68	8.2
Dissolved Metals	Phosphorus, dissolved	ug/L	10	<10	18	34	29	31	29
Dissolved Metals	Potassium, dissolved	ug/L	20	24400	21000	22900	26800	20900	23500
Dissolved Metals	Selenium, dissolved	ug/L	0.1	0.86	0.1	0.16	0.15	<0.10	0.16
Dissolved Metals	Silicon, dissolved	ug/L	100	14700	14300	10600	15400	15900	13600
Dissolved Metals	Silver, dissolved	ug/L	0.01	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010
Dissolved Metals	Sodium, dissolved	ug/L	20	792000	633000	717000	869000	747000	627000
Dissolved Metals	Strontium, dissolved	ug/L	0.1	7880	8890	7050	9140	8360	9600
Dissolved Metals	Sulfur, dissolved	ug/L	1000	1250000	1180000	1080000	1430000	1200000	1200000
Dissolved Metals	Tellurium, dissolved	ug/L	0.05	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050
Dissolved Metals	Thallium, dissolved	ug/L	0.004	0.0217	0.0083	0.0166	0.0075	0.0069	0.0098
Dissolved Metals	Thorium, dissolved	ug/L	0.01	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010
Dissolved Metals	Tin, dissolved	ug/L	0.05	0.272	0.236	0.677	<0.100	0.108	<0.100
Dissolved Metals	Titanium, dissolved	ug/L	0.2	<0.20	<0.20	<0.20	<0.20	0.33	0.29
Dissolved Metals	Tungsten, dissolved	ug/L	0.2	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20
Dissolved Metals	Uranium, dissolved	ug/L	0.001	130	163	74.3	172	178	188
Dissolved Metals	Vanadium, dissolved	ug/L	1	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00
Dissolved Metals	Zinc, dissolved	ug/L	1	3.4	1.2	2.5	1.2	1.3	1.2
Dissolved Metals	Zirconium, dissolved	ug/L	0.02	0.889	0.592	0.978	0.611	0.536	0.632
General Parameters	Alkalinity, Total (as CaCO3)	mg/L	1	655	651	655	675	703	727
General Parameters	Alkalinity, Phenolphthalein (as CaCO3)	mg/L	1	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
General Parameters	Alkalinity, Bicarbonate (as CaCO3)	mg/L	1	655	651	655	675	703	727
General Parameters	Alkalinity, Carbonate (as CaCO3)	mg/L	1	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
General Parameters	Alkalinity, Hydroxide (as CaCO3)	mg/L	1	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
General Parameters	Ammonia, Total (as N)	mg/L	0.05	0.197	0.323	0.283	0.313	0.321	0.325
General Parameters	Carbon, Dissolved Organic	mg/L	0.5	5.7	5.06	5.5	4.6	5.09	5.4
General Parameters	Chemical Oxygen Demand	mg/L	20	<20	<20	27	<20	<20	<20
General Parameters	Phosphorus, Dissolved Reactive	mg/L	0.005	<0.0050	<0.0050	0.007	<0.0050	<0.0050	<0.0050
General Parameters	Solids, Total Dissolved	mg/L	15	5210	5440	5160	5430	5760	5750
General Parameters	pH	pH units	0.1	7.96	7.74	7.83	7.86	7.93	7.74

LAB ID				24I3421-03	24K0996-02	25C2966-02	25F0108-02	25H4198-02	25K0306-02
CLIENT ID				GL 44-2	GL44-2	GL 44-2	GL 44-2	GL 44-2	GL 44-2
DATE SAMPLED				2024-09-25	2024-11-07	2025-03-25	2025-06-02	2025-08-28	2025-11-04
DATE RECEIVED				2024-09-25	2024-11-07	2025-03-25	2025-06-02	2025-08-28	2025-11-04
MATRIX				Water	Water	Water	Water	Water	Water
General Method	**Analyte**	**Units**	**MRL**						
Anions	Bromide	mg/L	0.1	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00
Anions	Chloride	mg/L	0.1	112	105	97.4	122	100	82.6
Anions	Fluoride	mg/L	0.1	<1.00	1.32	<1.00	1.28	<1.00	<1.00
Anions	Nitrate (as N)	mg/L	0.01	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100
Anions	Nitrite (as N)	mg/L	0.01	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100
Anions	Sulfate	mg/L	1	2850	2580	2440	3350	2830	2640
Calculated Parameters	Hardness, Dissolved (as CaCO3)	mg/L	0.125	2170	2000	1670	2190	2300	1950
Dissolved Metals	Mercury, dissolved	mg/L	0.00001	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010
Dissolved Metals	Aluminum, dissolved	ug/L	1	1.6	1.2	<1.0	1.7	<1.0	<1.0
Dissolved Metals	Antimony, dissolved	ug/L	0.05	<0.050	<0.050	0.057	<0.050	<0.050	<0.050
Dissolved Metals	Arsenic, dissolved	ug/L	0.05	2.3	2.39	1.9	3.37	3.68	1.51
Dissolved Metals	Barium, dissolved	ug/L	0.1	22.6	19.5	14.8	18.2	17.1	15.3
Dissolved Metals	Beryllium, dissolved	ug/L	0.01	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010
Dissolved Metals	Bismuth, dissolved	ug/L	0.01	<0.010	<0.010	0.01	<0.010	<0.010	<0.010
Dissolved Metals	Boron, dissolved	ug/L	2	39.9	31.1	36.4	26.6	28.5	20.5
Dissolved Metals	Cadmium, dissolved	ug/L	0.002	<0.0240	<0.0140	<0.0140	<0.0060	<0.0060	<0.0080
Dissolved Metals	Calcium, dissolved	ug/L	50	255000	231000	191000	247000	285000	224000
Dissolved Metals	Chromium, dissolved	ug/L	0.5	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
Dissolved Metals	Cobalt, dissolved	ug/L	0.005	1.87	1.42	0.703	1.77	2.06	2.02
Dissolved Metals	Copper, dissolved	ug/L	0.1	<0.10	0.15	0.19	0.1	<0.10	<0.10
Dissolved Metals	Iron, dissolved	ug/L	2	1810	1460	935	2740	3800	2260
Dissolved Metals	Lead, dissolved	ug/L	0.05	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050
Dissolved Metals	Lithium, dissolved	ug/L	0.05	77.5	76.7	50.6	52.7	70.1	54.7
Dissolved Metals	Magnesium, dissolved	ug/L	5	373000	346000	289000	381000	385000	337000
Dissolved Metals	Manganese, dissolved	ug/L	0.05	943	843	468	1300	1410	1260
Dissolved Metals	Molybdenum, dissolved	ug/L	0.01	30.5	27.3	35.7	27.6	25.9	28.8
Dissolved Metals	Nickel, dissolved	ug/L	0.04	3.94	4	2.76	3.94	4.44	4.01
Dissolved Metals	Phosphorus, dissolved	ug/L	10	15	16	<10	18	18	<10
Dissolved Metals	Potassium, dissolved	ug/L	20	15900	13700	11600	15100	14500	13800
Dissolved Metals	Selenium, dissolved	ug/L	0.1	0.21	0.17	0.17	0.41	0.12	0.15
Dissolved Metals	Silicon, dissolved	ug/L	100	13500	11700	10300	11300	12900	10700
Dissolved Metals	Silver, dissolved	ug/L	0.01	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010
Dissolved Metals	Sodium, dissolved	ug/L	20	809000	675000	618000	749000	776000	541000
Dissolved Metals	Strontium, dissolved	ug/L	0.1	5670	5370	4050	5360	5870	5470
Dissolved Metals	Sulfur, dissolved	ug/L	1000	1140000	976000	773000	997000	1230000	943000
Dissolved Metals	Tellurium, dissolved	ug/L	0.05	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050
Dissolved Metals	Thallium, dissolved	ug/L	0.004	<0.0040	<0.0040	<0.0040	<0.0040	<0.0040	<0.0040
Dissolved Metals	Thorium, dissolved	ug/L	0.01	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010
Dissolved Metals	Tin, dissolved	ug/L	0.05	0.248	0.136	0.479	0.258	0.225	<0.100
Dissolved Metals	Titanium, dissolved	ug/L	0.2	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20
Dissolved Metals	Tungsten, dissolved	ug/L	0.2	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20
Dissolved Metals	Uranium, dissolved	ug/L	0.001	75.7	60	61.2	66.4	89.3	100
Dissolved Metals	Vanadium, dissolved	ug/L	1	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00
Dissolved Metals	Zinc, dissolved	ug/L	1	2.6	1.8	2.3	1.5	1	1.2
Dissolved Metals	Zirconium, dissolved	ug/L	0.02	0.406	0.304	0.151	0.229	0.343	0.18
General Parameters	Alkalinity, Total (as CaCO3)	mg/L	1	586	561	505	583	624	553
General Parameters	Alkalinity, Phenolphthalein (as CaCO3)	mg/L	1	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
General Parameters	Alkalinity, Bicarbonate (as CaCO3)	mg/L	1	586	561	505	583	624	553
General Parameters	Alkalinity, Carbonate (as CaCO3)	mg/L	1	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
General Parameters	Alkalinity, Hydroxide (as CaCO3)	mg/L	1	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
General Parameters	Ammonia, Total (as N)	mg/L	0.05	0.356	0.298	0.226	0.399	0.405	0.361
General Parameters	Carbon, Dissolved Organic	mg/L	0.5	5.98	5.51	5.07	5.79	6.02	5.29
General Parameters	Chemical Oxygen Demand	mg/L	20	36	<20	21	<20	<20	<20
General Parameters	Phosphorus, Dissolved Reactive	mg/L	0.005	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050
General Parameters	Solids, Total Dissolved	mg/L	15	4680	4290	3940	4450	5250	4470
General Parameters	pH	pH units	0.1	7.91	7.92	7.84	7.92	7.92	7.7

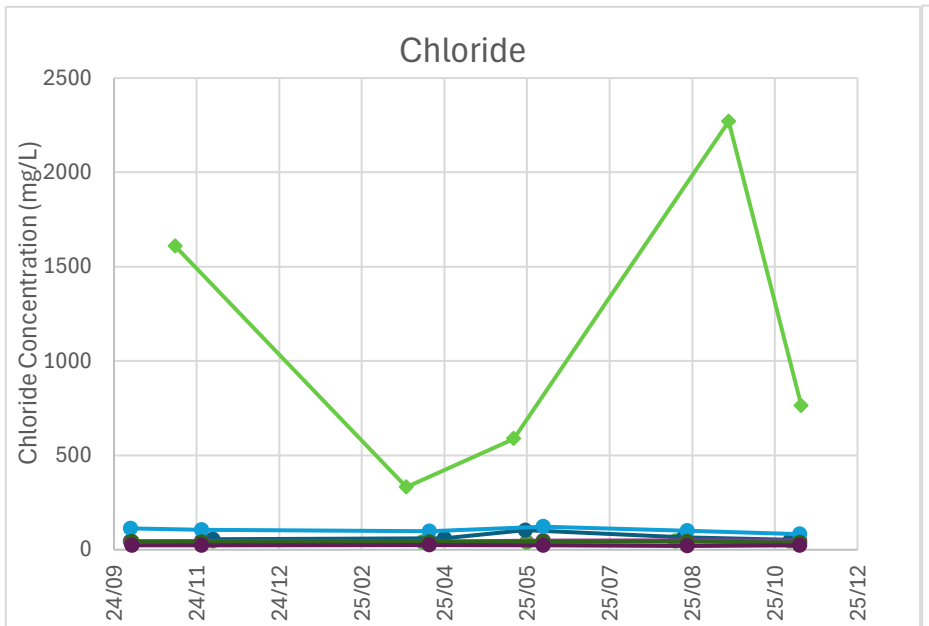
LAB ID				24I3440-01	24K0996-04	25C2966-03	25F0108-03	25H4198-03	25K0306-03
CLIENT ID				GL 45-1	GL45-1	GL 45-1	GL 45-1	GL 45-1	GL 45-1
DATE SAMPLED				2024-09-26	2024-11-07	2025-03-25	2025-06-02	2025-08-28	2025-11-04
DATE RECEIVED				2024-09-26	2024-11-07	2025-03-25	2025-06-02	2025-08-28	2025-11-04
MATRIX				Water	Water	Water	Water	Water	Water
General Method	**Analyte**	**Units**	**MRL**						
Anions	Bromide	mg/L	0.1	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00
Anions	Chloride	mg/L	0.1	42.9	41	40.1	42.9	42.1	38.1
Anions	Fluoride	mg/L	0.1	<1.00	1.72	<1.00	1.32	1.32	<1.00
Anions	Nitrate (as N)	mg/L	0.01	0.123	<0.100	<0.100	<0.100	<0.100	<0.100
Anions	Nitrite (as N)	mg/L	0.01	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100
Anions	Sulfate	mg/L	1	2660	2320	1720	2170	1940	2140
Calculated Parameters	Hardness, Dissolved (as CaCO3)	mg/L	0.125	2100	1880	1960	1750	2150	1930
Dissolved Metals	Mercury, dissolved	mg/L	0.00001	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010
Dissolved Metals	Aluminum, dissolved	ug/L	1	3	1.9	2.1	<2.0	1.9	1.1
Dissolved Metals	Antimony, dissolved	ug/L	0.05	0.082	<0.050	<0.050	<0.100	<0.050	<0.050
Dissolved Metals	Arsenic, dissolved	ug/L	0.05	2.6	3.3	3.01	2.38	3.47	3.74
Dissolved Metals	Barium, dissolved	ug/L	0.1	39.5	41.5	43.6	61.5	34.3	35.3
Dissolved Metals	Beryllium, dissolved	ug/L	0.01	0.034	0.03	0.031	0.036	0.035	0.039
Dissolved Metals	Bismuth, dissolved	ug/L	0.01	<0.010	<0.010	<0.010	<0.020	<0.010	<0.010
Dissolved Metals	Boron, dissolved	ug/L	2	37.8	37.9	39.6	52.1	40.4	39.1
Dissolved Metals	Cadmium, dissolved	ug/L	0.002	<0.0040	<0.0020	<0.0040	<0.0040	<0.0020	<0.0040
Dissolved Metals	Calcium, dissolved	ug/L	50	289000	240000	226000	225000	241000	231000
Dissolved Metals	Chromium, dissolved	ug/L	0.5	0.99	0.62	0.58	<1.00	<0.50	<0.50
Dissolved Metals	Cobalt, dissolved	ug/L	0.005	2.99	1.53	0.798	0.788	0.877	0.832
Dissolved Metals	Copper, dissolved	ug/L	0.1	<0.10	<0.10	<0.10	<0.20	<0.10	<0.10
Dissolved Metals	Iron, dissolved	ug/L	2	22400	19400	17400	19400	15000	14900
Dissolved Metals	Lead, dissolved	ug/L	0.05	<0.050	<0.050	<0.050	<0.100	<0.050	<0.050
Dissolved Metals	Lithium, dissolved	ug/L	0.05	365	476	452	604	480	677
Dissolved Metals	Magnesium, dissolved	ug/L	5	335000	312000	338000	289000	376000	328000
Dissolved Metals	Manganese, dissolved	ug/L	0.05	2130	1690	1290	1480	1020	1100
Dissolved Metals	Molybdenum, dissolved	ug/L	0.01	16.5	15.8	14.5	11.9	17.3	17.4
Dissolved Metals	Nickel, dissolved	ug/L	0.04	15	7.62	4.94	5.35	4.89	5.35
Dissolved Metals	Phosphorus, dissolved	ug/L	10	34	21	30	34	25	32
Dissolved Metals	Potassium, dissolved	ug/L	20	23000	21200	21600	24400	21000	23800
Dissolved Metals	Selenium, dissolved	ug/L	0.1	0.48	0.18	<0.10	0.25	0.13	<0.10
Dissolved Metals	Silicon, dissolved	ug/L	100	21600	19400	19400	23700	22100	20600
Dissolved Metals	Silver, dissolved	ug/L	0.01	<0.010	<0.010	<0.010	<0.020	<0.010	<0.010
Dissolved Metals	Sodium, dissolved	ug/L	20	917000	804000	891000	959000	883000	738000
Dissolved Metals	Strontium, dissolved	ug/L	0.1	7100	6870	6570	6830	6390	7380
Dissolved Metals	Sulfur, dissolved	ug/L	1000	1000000	836000	730000	816000	804000	790000
Dissolved Metals	Tellurium, dissolved	ug/L	0.05	<0.050	<0.050	<0.050	<0.100	<0.050	<0.050
Dissolved Metals	Thallium, dissolved	ug/L	0.004	<0.0040	<0.0040	<0.0040	<0.0080	<0.0040	<0.0040
Dissolved Metals	Thorium, dissolved	ug/L	0.01	<0.010	<0.010	<0.010	<0.020	<0.010	<0.010
Dissolved Metals	Tin, dissolved	ug/L	0.05	0.078	<0.050	<0.100	<0.200	<0.100	<0.100
Dissolved Metals	Titanium, dissolved	ug/L	0.2	0.38	0.23	0.44	0.46	<0.20	0.31
Dissolved Metals	Tungsten, dissolved	ug/L	0.2	<0.20	<0.20	<0.20	<0.40	<0.20	<0.20
Dissolved Metals	Uranium, dissolved	ug/L	0.001	98.2	62.8	100	89.6	68.2	80.5
Dissolved Metals	Vanadium, dissolved	ug/L	1	<1.00	<1.00	<1.00	<2.00	<1.00	<1.00
Dissolved Metals	Zinc, dissolved	ug/L	1	1.2	<1.0	<1.0	<2.0	<1.0	<1.0
Dissolved Metals	Zirconium, dissolved	ug/L	0.02	3.77	2.87	4.56	4.82	2.73	3.65
General Parameters	Alkalinity, Total (as CaCO3)	mg/L	1	1060	1220	1720	1840	1280	1440
General Parameters	Alkalinity, Phenolphthalein (as CaCO3)	mg/L	1	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
General Parameters	Alkalinity, Bicarbonate (as CaCO3)	mg/L	1	1060	1220	1720	1840	1280	1440
General Parameters	Alkalinity, Carbonate (as CaCO3)	mg/L	1	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
General Parameters	Alkalinity, Hydroxide (as CaCO3)	mg/L	1	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
General Parameters	Ammonia, Total (as N)	mg/L	0.05	0.459	0.483	0.434	0.414	0.479	0.517
General Parameters	Carbon, Dissolved Organic	mg/L	0.5	6.3	5.88	5.56	4.26	5.74	5.7
General Parameters	Chemical Oxygen Demand	mg/L	20	<20	<20	22	<20	<20	<20
General Parameters	Phosphorus, Dissolved Reactive	mg/L	0.005	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050
General Parameters	Solids, Total Dissolved	mg/L	15	4700	4330	4100	4400	4840	4720
General Parameters	pH	pH units	0.1	7.53	7.53	7.48	7.37	7.52	7.27

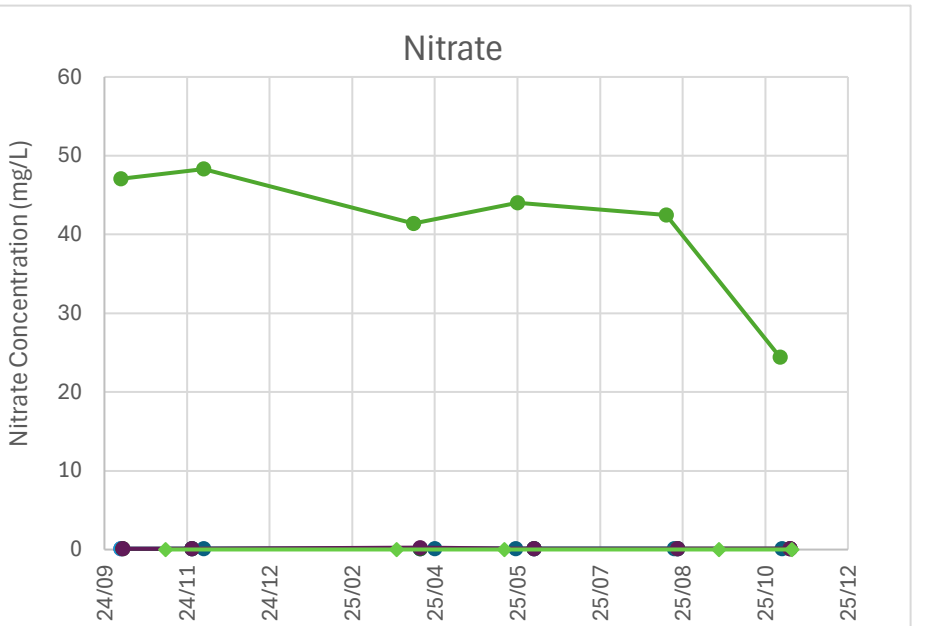
LAB ID				24I3440-02	24K0996-03	25C2966-04	25F0108-04	25H4198-04	25K0306-04
CLIENT ID				GL 45-2	GL45-2	GL 45-2	GL 45-2	GL 45-2	GL 45-2
DATE SAMPLED				2024-09-26	2024-11-07	2025-03-25	2025-06-02	2025-08-28	2025-11-04
DATE RECEIVED				2024-09-26	2024-11-07	2025-03-25	2025-06-02	2025-08-28	2025-11-04
MATRIX				Water	Water	Water	Water	Water	Water
General Method	**Analyte**	**Units**	**MRL**						
Anions	Bromide	mg/L	0.1	<1.00	<1.00	0.13	<1.00	<1.00	<1.00
Anions	Chloride	mg/L	0.1	23.9	23.3	24.4	23.4	20	23.3
Anions	Fluoride	mg/L	0.1	<1.00	<1.00	0.59	1.17	<1.00	<1.00
Anions	Nitrate (as N)	mg/L	0.01	<0.100	<0.100	<0.250	<0.100	<0.100	<0.100
Anions	Nitrite (as N)	mg/L	0.01	<0.100	<0.100	<0.010	<0.100	<0.100	<0.100
Anions	Sulfate	mg/L	1	1160	1150	1100	1190	904	1040
Calculated Parameters	Hardness, Dissolved (as CaCO3)	mg/L	0.125	1160	1120	1130	1180	1160	1070
Dissolved Metals	Mercury, dissolved	mg/L	0.00001	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010
Dissolved Metals	Aluminum, dissolved	ug/L	1	2.6	1.2	1.9	1.4	1.5	5.7
Dissolved Metals	Antimony, dissolved	ug/L	0.05	0.06	<0.050	<0.050	<0.050	<0.050	<0.050
Dissolved Metals	Arsenic, dissolved	ug/L	0.05	2.47	2.4	1.97	1.9	1.88	1.85
Dissolved Metals	Barium, dissolved	ug/L	0.1	41.2	38.9	30.6	31.7	29.9	29.8
Dissolved Metals	Beryllium, dissolved	ug/L	0.01	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010
Dissolved Metals	Bismuth, dissolved	ug/L	0.01	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010
Dissolved Metals	Boron, dissolved	ug/L	2	48.3	41.9	37.2	37.8	33.3	25.5
Dissolved Metals	Cadmium, dissolved	ug/L	0.002	<0.0060	<0.0040	0.0264	0.0231	0.056	0.0345
Dissolved Metals	Calcium, dissolved	ug/L	50	141000	124000	120000	126000	118000	114000
Dissolved Metals	Chromium, dissolved	ug/L	0.5	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
Dissolved Metals	Cobalt, dissolved	ug/L	0.005	2.29	2.04	1.17	0.935	0.997	0.931
Dissolved Metals	Copper, dissolved	ug/L	0.1	<0.10	<0.10	0.11	0.14	<0.10	<0.10
Dissolved Metals	Iron, dissolved	ug/L	2	975	978	677	611	845	828
Dissolved Metals	Lead, dissolved	ug/L	0.05	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050
Dissolved Metals	Lithium, dissolved	ug/L	0.05	52.5	52.9	45.8	53.3	44.6	40.5
Dissolved Metals	Magnesium, dissolved	ug/L	5	197000	196000	203000	211000	209000	191000
Dissolved Metals	Manganese, dissolved	ug/L	0.05	904	848	473	414	580	665
Dissolved Metals	Molybdenum, dissolved	ug/L	0.01	25.9	22.6	21.6	20.6	20.6	18.8
Dissolved Metals	Nickel, dissolved	ug/L	0.04	3.87	3.6	2.86	2.43	3	2.92
Dissolved Metals	Phosphorus, dissolved	ug/L	10	20	20	14	17	21	18
Dissolved Metals	Potassium, dissolved	ug/L	20	12200	11800	11600	12900	11200	12100
Dissolved Metals	Selenium, dissolved	ug/L	0.1	<0.10	<0.10	<0.10	0.1	<0.10	<0.10
Dissolved Metals	Silicon, dissolved	ug/L	100	12900	11900	11100	11900	11600	11200
Dissolved Metals	Silver, dissolved	ug/L	0.01	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010
Dissolved Metals	Sodium, dissolved	ug/L	20	491000	450000	452000	482000	417000	360000
Dissolved Metals	Strontium, dissolved	ug/L	0.1	2770	2790	2580	2670	2640	2950
Dissolved Metals	Sulfur, dissolved	ug/L	1000	461000	424000	368000	400000	359000	368000
Dissolved Metals	Tellurium, dissolved	ug/L	0.05	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050
Dissolved Metals	Thallium, dissolved	ug/L	0.004	<0.0040	<0.0040	0.0043	<0.0040	<0.0040	<0.0040
Dissolved Metals	Thorium, dissolved	ug/L	0.01	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010
Dissolved Metals	Tin, dissolved	ug/L	0.05	0.187	0.069	<0.100	<0.100	<0.100	<0.100
Dissolved Metals	Titanium, dissolved	ug/L	0.2	<0.20	<0.20	<0.20	<0.20	<0.20	0.21
Dissolved Metals	Tungsten, dissolved	ug/L	0.2	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20
Dissolved Metals	Uranium, dissolved	ug/L	0.001	57.3	52.1	50	53.9	51.1	50.6
Dissolved Metals	Vanadium, dissolved	ug/L	1	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00
Dissolved Metals	Zinc, dissolved	ug/L	1	1.1	<1.0	<1.0	<1.0	<1.0	<1.0
Dissolved Metals	Zirconium, dissolved	ug/L	0.02	0.859	0.672	0.591	0.517	0.523	0.498
General Parameters	Alkalinity, Total (as CaCO3)	mg/L	1	811	812	818	802	837	875
General Parameters	Alkalinity, Phenolphthalein (as CaCO3)	mg/L	1	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
General Parameters	Alkalinity, Bicarbonate (as CaCO3)	mg/L	1	811	812	818	802	837	875
General Parameters	Alkalinity, Carbonate (as CaCO3)	mg/L	1	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
General Parameters	Alkalinity, Hydroxide (as CaCO3)	mg/L	1	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
General Parameters	Ammonia, Total (as N)	mg/L	0.05	0.267	0.286	0.184	0.137	0.209	0.215
General Parameters	Carbon, Dissolved Organic	mg/L	0.5	3.29	3.87	2.57	2.71	2.74	3.07
General Parameters	Chemical Oxygen Demand	mg/L	20	<20	<20	<20	<20	<20	<20
General Parameters	Phosphorus, Dissolved Reactive	mg/L	0.005	0.005	<0.0050	0.0065	0.0131	0.0057	<0.0050
General Parameters	Solids, Total Dissolved	mg/L	15	2410	2110	2170	2220	2390	2400
General Parameters	pH	pH units	0.1	7.86	7.95	7.9	8.11	8.09	7.86

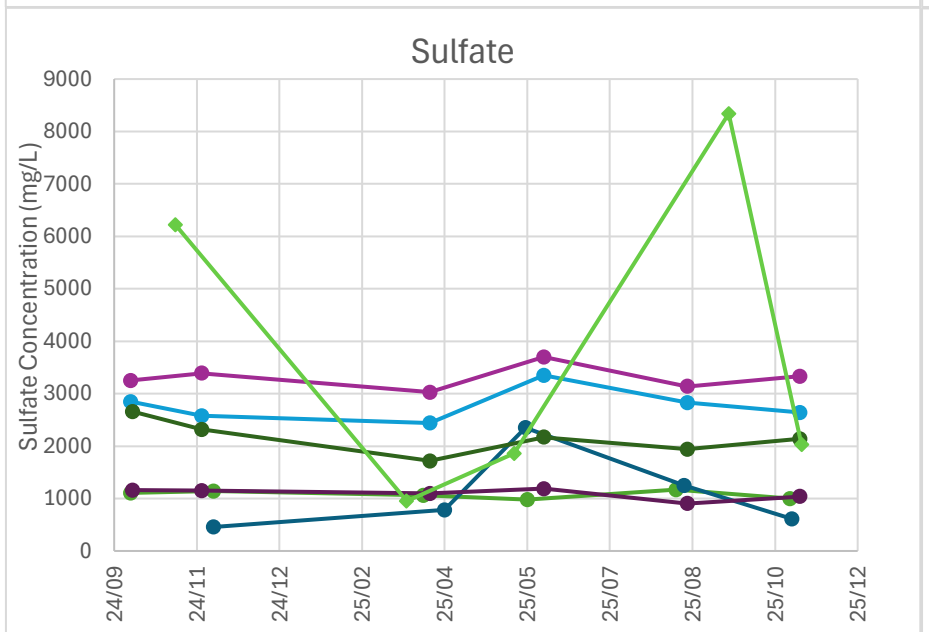
LAB ID				24K1820-04	25D0598-01	25E3100-05	25H3772-03	25J4396-05
CLIENT ID				GL 46-1	GL 46-1	GL 46-1	GL 46-1	GL 46-1
DATE SAMPLED				2024-11-14	2025-04-03	2025-05-22	2025-08-26	2025-10-30
DATE RECEIVED				2024-11-14	2025-04-03	2025-05-22	2025-08-26	2025-10-30
MATRIX				Water	Water	Water	Water	Water
General Method	**Analyte**	**Units**	**MRL**					
Anions	Bromide	mg/L	0.1	<1.00	0.21	0.22	<1.00	<1.00
Anions	Chloride	mg/L	0.1	56.2	60.7	104	65.5	52.5
Anions	Fluoride	mg/L	0.1	<1.00	0.82	0.99	1.25	1.01
Anions	Nitrate (as N)	mg/L	0.01	<0.100	<0.010	<0.010	<0.100	<0.100
Anions	Nitrite (as N)	mg/L	0.01	<0.100	0.011	0.016	<0.100	<0.100
Anions	Sulfate	mg/L	1	457	786	2350	1250	616
Calculated Parameters	Hardness, Dissolved (as CaCO3)	mg/L	0.125	258	509	1920	1300	522
Dissolved Metals	Mercury, dissolved	mg/L	0.00001	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010
Dissolved Metals	Aluminum, dissolved	ug/L	1	10.8	<4.0	<1.0	2.1	2.1
Dissolved Metals	Antimony, dissolved	ug/L	0.05	2.15	0.778	0.511	0.127	<0.100
Dissolved Metals	Arsenic, dissolved	ug/L	0.05	11.9	4.73	5.73	4.43	3.64
Dissolved Metals	Barium, dissolved	ug/L	0.1	279	200	131	183	158
Dissolved Metals	Beryllium, dissolved	ug/L	0.01	0.048	0.022	<0.010	<0.020	<0.020
Dissolved Metals	Bismuth, dissolved	ug/L	0.01	<0.020	<0.020	<0.010	<0.020	<0.020
Dissolved Metals	Boron, dissolved	ug/L	2	107	92.2	58.2	82.6	64
Dissolved Metals	Cadmium, dissolved	ug/L	0.002	0.0345	<0.0040	<0.0060	<0.0040	<0.0040
Dissolved Metals	Calcium, dissolved	ug/L	50	44500	70200	202000	127000	49300
Dissolved Metals	Chromium, dissolved	ug/L	0.5	<1.00	<1.00	<0.50	<1.00	<1.00
Dissolved Metals	Cobalt, dissolved	ug/L	0.005	1.64	0.181	0.784	1.12	0.782
Dissolved Metals	Copper, dissolved	ug/L	0.1	<0.20	<0.20	0.44	<0.20	<0.20
Dissolved Metals	Iron, dissolved	ug/L	2	231	80.8	31.2	751	577
Dissolved Metals	Lead, dissolved	ug/L	0.05	0.111	<0.100	<0.050	<0.100	<0.100
Dissolved Metals	Lithium, dissolved	ug/L	0.05	857	771	414	824	811
Dissolved Metals	Magnesium, dissolved	ug/L	5	35700	80900	343000	237000	96900
Dissolved Metals	Manganese, dissolved	ug/L	0.05	343	197	191	346	277
Dissolved Metals	Molybdenum, dissolved	ug/L	0.01	18.9	16.9	21.6	6.37	3.34
Dissolved Metals	Nickel, dissolved	ug/L	0.04	4.68	2.8	4.83	2.62	1.9
Dissolved Metals	Phosphorus, dissolved	ug/L	10	457	1160	1450	368	332
Dissolved Metals	Potassium, dissolved	ug/L	20	10000	10600	14100	12300	8240
Dissolved Metals	Selenium, dissolved	ug/L	0.1	0.74	1.45	1.19	<0.20	<0.20
Dissolved Metals	Silicon, dissolved	ug/L	100	8800	8480	9410	8730	7360
Dissolved Metals	Silver, dissolved	ug/L	0.01	<0.020	<0.020	<0.010	<0.020	<0.020
Dissolved Metals	Sodium, dissolved	ug/L	20	1310000	1210000	1010000	1240000	995000
Dissolved Metals	Strontium, dissolved	ug/L	0.1	1770	2500	5880	4710	2900
Dissolved Metals	Sulfur, dissolved	ug/L	1000	162000	295000	1010000	578000	194000
Dissolved Metals	Tellurium, dissolved	ug/L	0.05	<0.100	<0.100	<0.050	<0.100	<0.100
Dissolved Metals	Thallium, dissolved	ug/L	0.004	<0.0080	<0.0080	0.0341	<0.0080	<0.0080
Dissolved Metals	Thorium, dissolved	ug/L	0.01	0.022	<0.020	<0.010	<0.020	<0.020
Dissolved Metals	Tin, dissolved	ug/L	0.05	1.13	<0.200	<0.100	<0.200	<0.200
Dissolved Metals	Titanium, dissolved	ug/L	0.2	2.48	0.94	0.69	0.51	0.82
Dissolved Metals	Tungsten, dissolved	ug/L	0.2	0.8	1.25	0.72	1.1	1.13
Dissolved Metals	Uranium, dissolved	ug/L	0.001	29.3	53.2	222	140	55.3
Dissolved Metals	Vanadium, dissolved	ug/L	1	5.81	<2.00	1.82	<2.00	<2.00
Dissolved Metals	Zinc, dissolved	ug/L	1	6.3	<2.0	1.6	<2.0	<2.0
Dissolved Metals	Zirconium, dissolved	ug/L	0.02	17.1	9.93	5.96	7.18	9.58
General Parameters	Alkalinity, Total (as CaCO3)	mg/L	1	2280	1950	1530	2050	2350
General Parameters	Alkalinity, Phenolphthalein (as CaCO3)	mg/L	1	<1.0	<1.0	<1.0	<1.0	<1.0
General Parameters	Alkalinity, Bicarbonate (as CaCO3)	mg/L	1	2280	1950	1530	2050	2350
General Parameters	Alkalinity, Carbonate (as CaCO3)	mg/L	1	<1.0	<1.0	<1.0	<1.0	<1.0
General Parameters	Alkalinity, Hydroxide (as CaCO3)	mg/L	1	<1.0	<1.0	<1.0	<1.0	<1.0
General Parameters	Ammonia, Total (as N)	mg/L	0.05	0.543	0.477	0.279	0.475	0.484
General Parameters	Carbon, Dissolved Organic	mg/L	0.5	7.46	5.23	5.97	4.4	4.8
General Parameters	Chemical Oxygen Demand	mg/L	20	21	<20	<20	<20	<20
General Parameters	Phosphorus, Dissolved Reactive	mg/L	0.005	0.165	0.802	0.983	0.169	0.165
General Parameters	Solids, Total Dissolved	mg/L	15	3310	3590	5430	4610	3390
General Parameters	pH	pH units	0.1	8.07	7.98	7.97	8.11	8.09

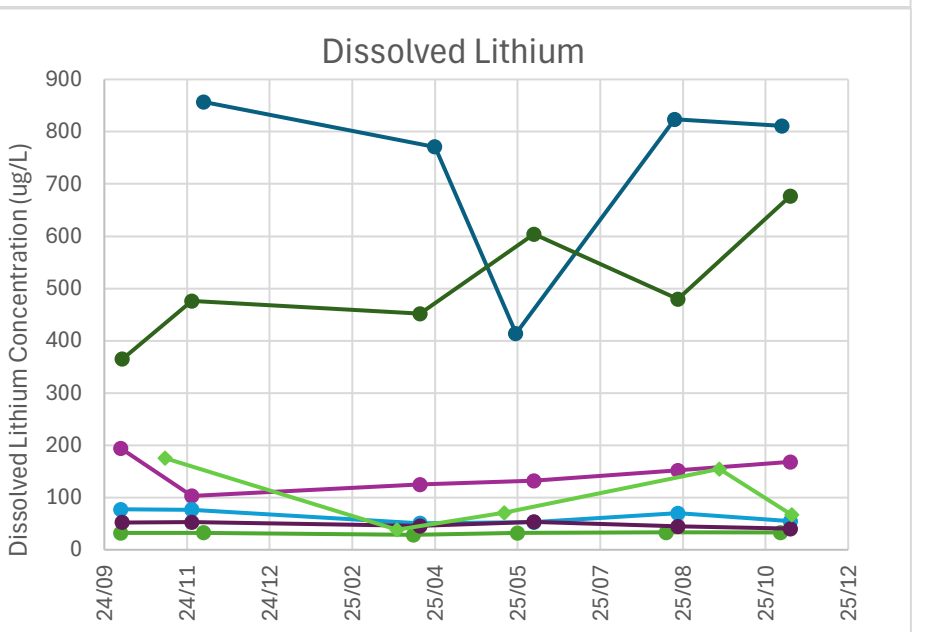
Attachment 3

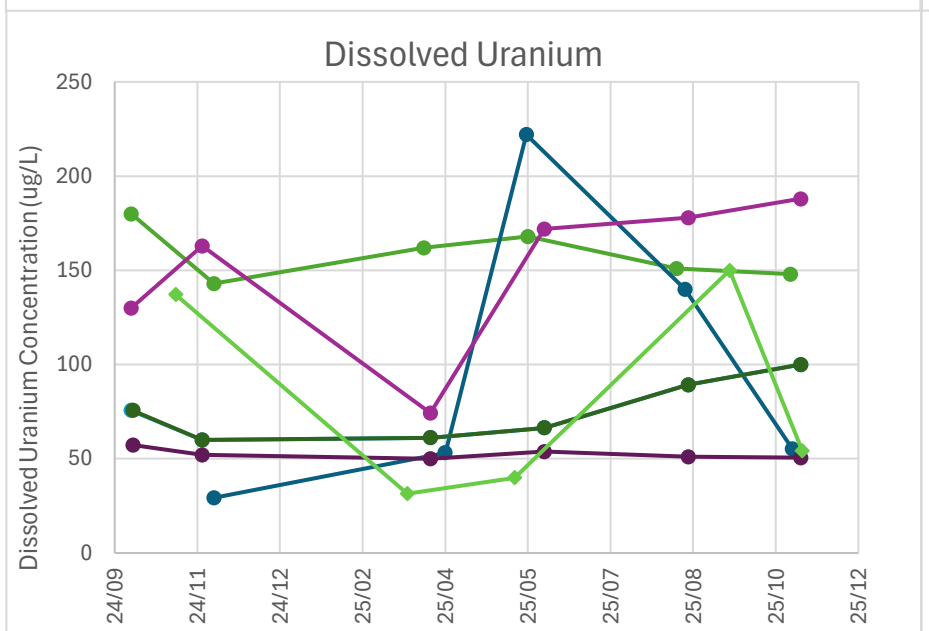
Concentration Versus Time Plots

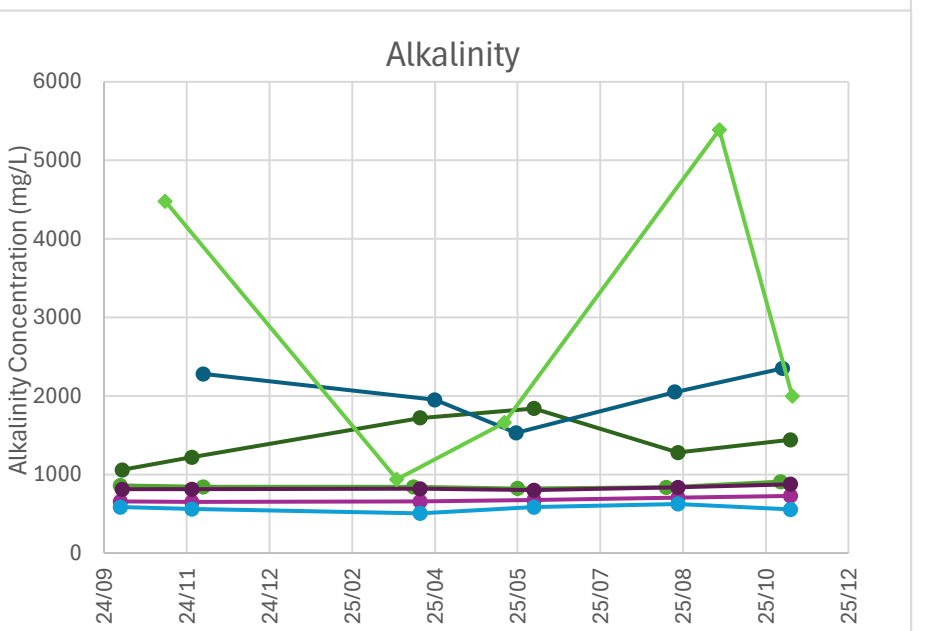


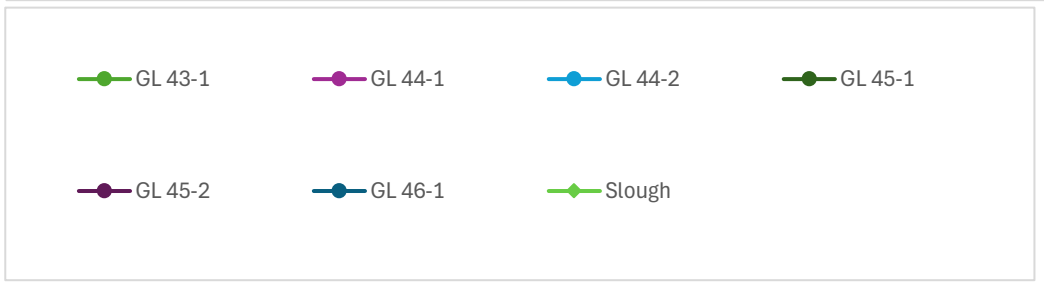








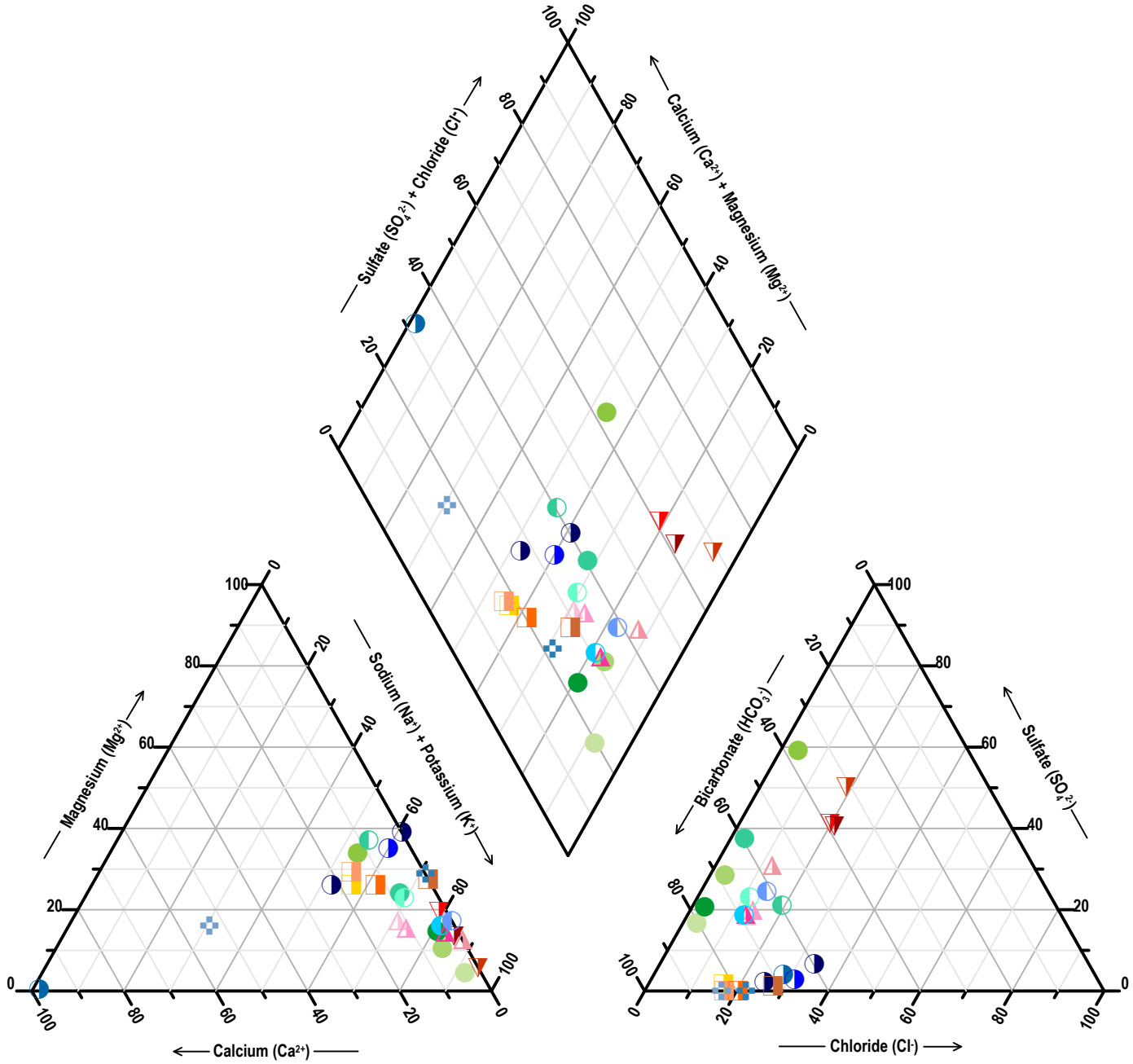




Concentration Vs. Time Plots
Glenmore Landfill
City of Kelowna

Attachment 4

Piper Plots



LEGEND

Groundwater
- GL 46-1(nov24)
- GL 46-1(apr25)
- GL 46-1(may25)
- GL 46-1(aug25)
- GL 46-1(oct25)

Leachate
- slough(oct24)
- slough(sep25)
- slough(nov25)
- South Leachate Wet Well (LS#2)(mar25)
- South Leachate Wet Well (LS#2)(jun25)
- South Leachate Wet Well (LS#2)(sep25)
- South Leachate Wet Well (LS#2)(oct25)
- N Pumphouse MH(mar25)
- N Pumphouse MH(jun25)
- N Pumphouse MH(sep25)
- N Pumphouse MH(oct25)
- P2 A2 Leachate MH(mar25)
- P2 A2 Leachate MH(jun25)
- P2 A2 Leachate MH(sep25)
- P2 A2 Leachate MH(oct25)
- P1 Leachate MH - 2(mar25)
- P1 Leachate MH - 2(jun25)
- P1 Leachate MH - 2(sep25)
- P1 Leachate MH - 2(oct25)
- Area 3 (LS #4)(sep25)
- Area 3 (LS #4)(oct25)

Note:
The date each sample was collected is written as (monthYY)

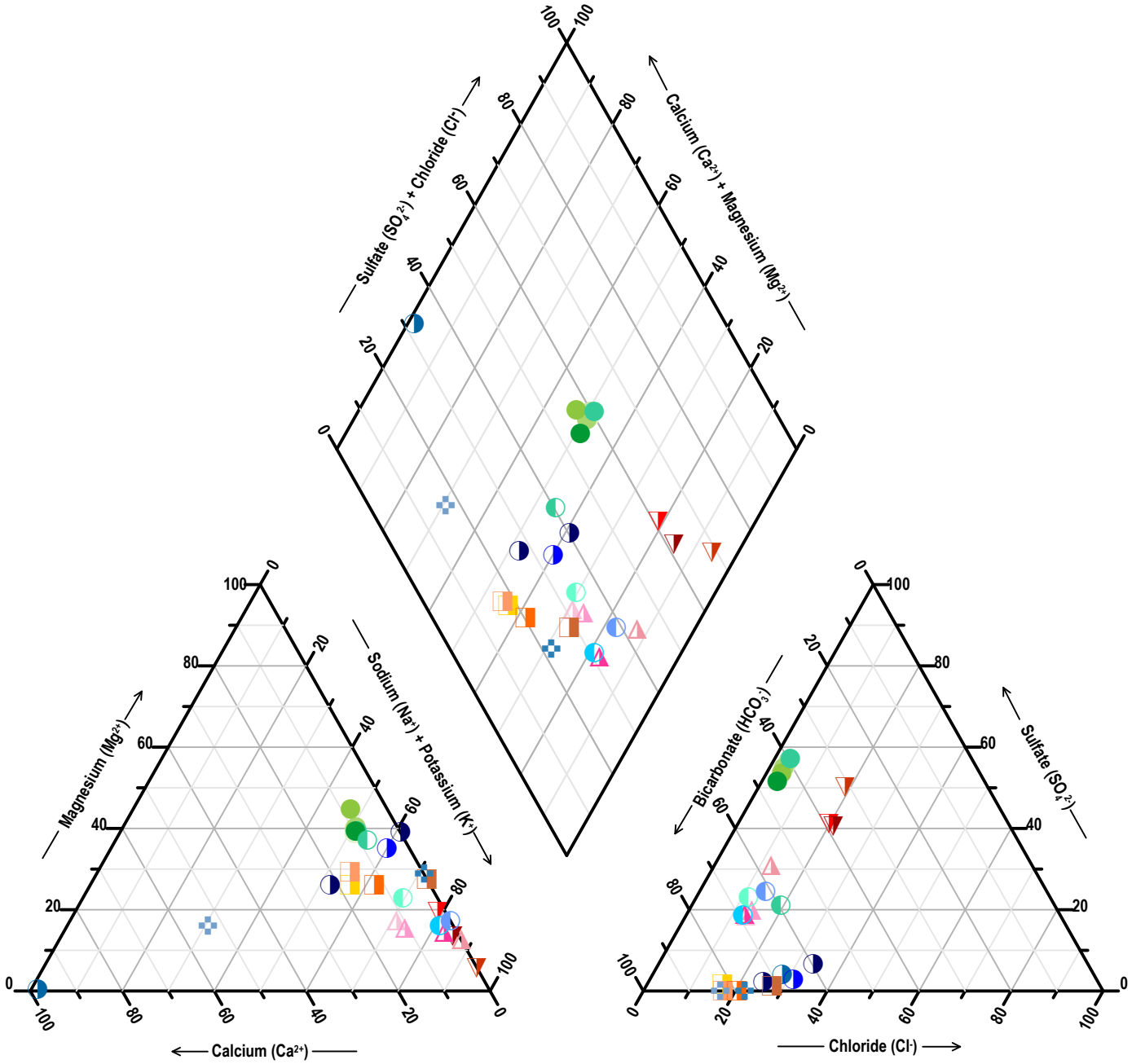
GLENMORE LANDFILL
GLENMORE, BRITISH COLUMBIA
CITY OF KELOWNA

PIPER PLOT - BEDROCK WELLS

Project No. **12676030**
Date **February 2026**

FIGURE 1

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Plot Date: February 12 2026 2:02 PM



LEGEND

Groundwater
- GL 43-1(sep24)
- GL 43-1(nov24)
- GL 43-1(mar25)
- GL 43-1(may25)
- GL 43-1(aug25)
- GL 43-1(oct25)

Leachate
- slough(oct24)
- slough(sep25)
- slough(nov25)
- South Leachate Wet Well (LS#2)(mar25)
- South Leachate Wet Well (LS#2)(jun25)
- South Leachate Wet Well (LS#2)(sep25)
- South Leachate Wet Well (LS#2)(oct25)
- N Pumphouse MH(mar25)
- N Pumphouse MH(jun25)
- N Pumphouse MH(sep25)
- N Pumphouse MH(oct25)
- P2 A2 Leachate MH(mar25)
- P2 A2 Leachate MH(jun25)
- P2 A2 Leachate MH(sep25)
- P2 A2 Leachate MH(oct25)
- P1 Leachate MH - 2(mar25)
- P1 Leachate MH - 2(jun25)
- P1 Leachate MH - 2(sep25)
- P1 Leachate MH - 2(oct25)
- Area 3 (LS #4)(sep25)
- Area 3 (LS #4)(oct25)

Note:
The date each sample was collected is written as (monthYY)

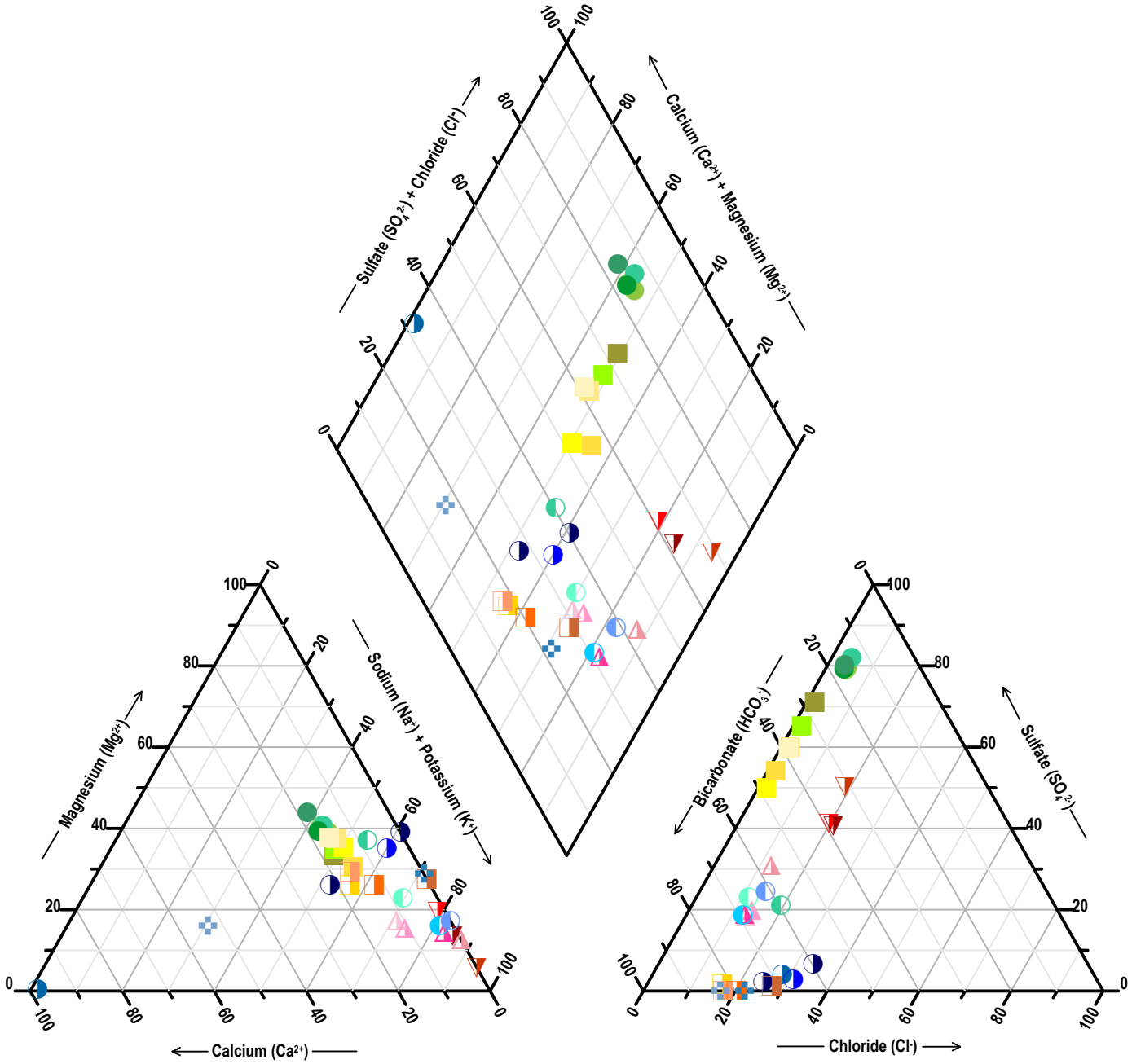
GLENMORE LANDFILL
GLENMORE, BRITISH COLUMBIA
CITY OF KELOWNA

PIPER PLOT - CLAY UNIT WELLS

Project No. **12676030**
Date **February 2026**

FIGURE 2

HEG file: \\ghdnet\ghd\CA\Vancouver\Projects\663\12676030\Tech\Piper plot\12676030-Glenmore 2025 Piper Plot.gpj
Plot Date: February 12 2026 1:02 PM



LEGEND

Groundwater
- GL 44-2(sep24)
- GL 44-2(nov24)
- GL 44-2(mar25)
- GL 44-2(jun25)
- GL 44-2(aug25)
- GL 44-2(nov25)
- GL 45-1(sep24)
- GL 45-1(nov24)
- GL 45-1(mar25)
- GL 45-1(jun25)
- GL 45-1(aug25)
- GL 45-1(nov25)

Leachate
- slough(oct24)
- slough(sep25)
- slough(nov25)
- South Leachate Wet Well (LS#2)(mar25)
- South Leachate Wet Well (LS#2)(jun25)
- South Leachate Wet Well (LS#2)(sep25)
- South Leachate Wet Well (LS#2)(oct25)
- N Pumphouse MH(mar25)
- N Pumphouse MH(jun25)
- N Pumphouse MH(sep25)
- N Pumphouse MH(oct25)
- P2 A2 Leachate MH(mar25)
- P2 A2 Leachate MH(jun25)
- P2 A2 Leachate MH(sep25)
- P2 A2 Leachate MH(oct25)
- P1 Leachate MH - 2(mar25)
- P1 Leachate MH - 2(jun25)
- P1 Leachate MH - 2(sep25)
- P1 Leachate MH - 2(oct25)
- Area 3 (LS #4)(sep25)
- Area 3 (LS #4)(oct25)

Note:
The date each sample was collected is written as (monthYY)

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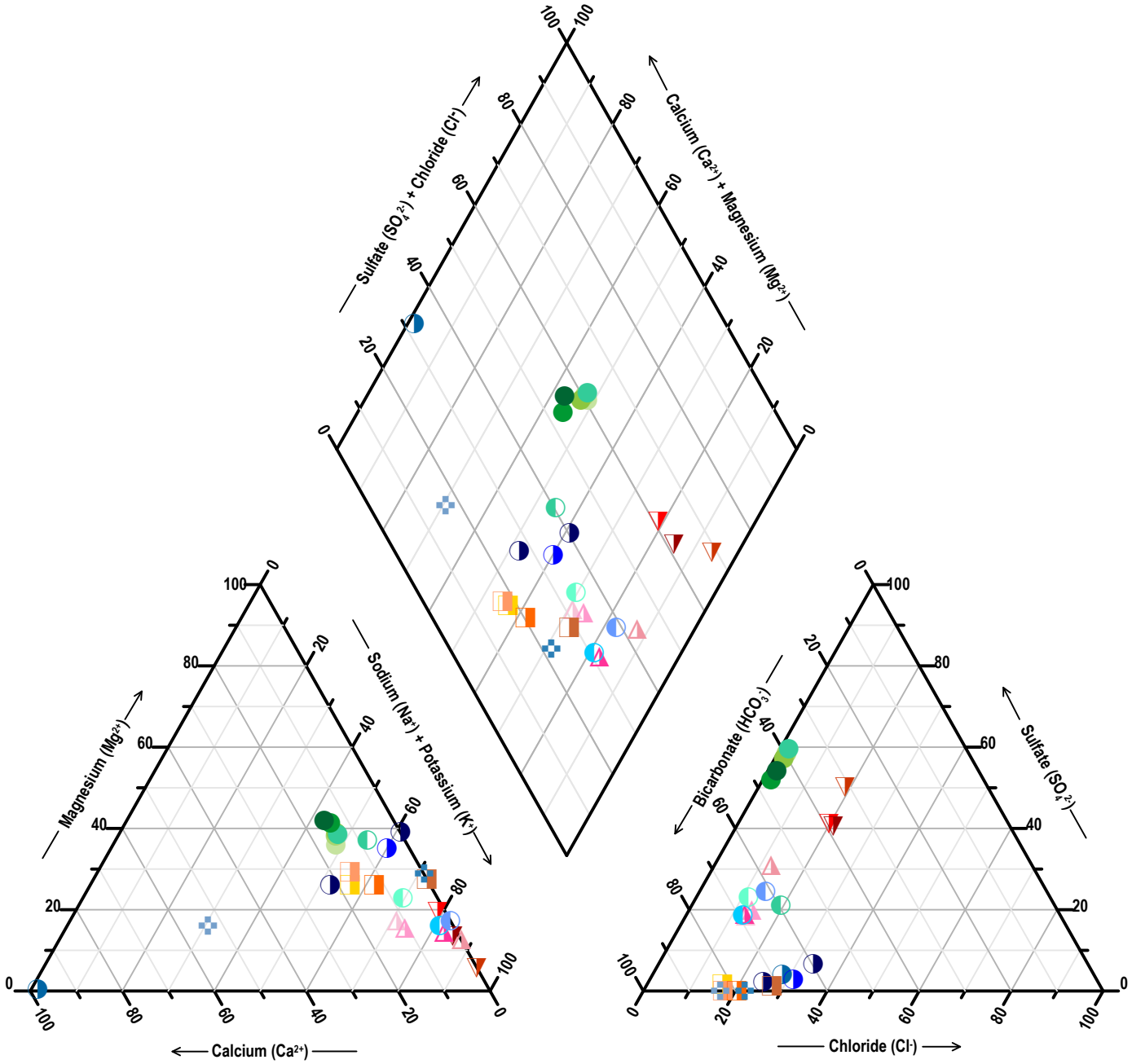
GLENMORE LANDFILL
GLENMORE, BRITISH COLUMBIA
CITY OF KELOWNA

PIPER PLOT - SAND AND GRAVEL WELLS

Project No. **12676030**
Date **February 2026**

FIGURE 3

HEG file: \\ghdnet\ghd\CA\Vancouver\Projects\663\12676030\Tech\Piper plot\2024-2025 Piper Plots by Unit\12676030-Glenmore 2025 Piper Plot - Sand and Gravel.gpj
Plot Date: February 12 2026 2:02 PM



LEGEND

Groundwater
- GL 45-2(sep24)
- GL 45-2(nov24)
- GL 45-2(mar25)
- GL 45-2(jun25)
- GL 45-2(aug25)
- GL 45-2(nov25)

Leachate
- slough(oct24)
- slough(sep25)
- slough(nov25)
- South Leachate Wet Well (LS#2)(mar25)
- South Leachate Wet Well (LS#2)(jun25)
- South Leachate Wet Well (LS#2)(sep25)
- South Leachate Wet Well (LS#2)(oct25)
- N Pumphouse MH(mar25)
- N Pumphouse MH(jun25)
- N Pumphouse MH(sep25)
- N Pumphouse MH(oct25)
- P2 A2 Leachate MH(mar25)
- P2 A2 Leachate MH(jun25)
- P2 A2 Leachate MH(sep25)
- P2 A2 Leachate MH(oct25)
- P1 Leachate MH - 2(mar25)
- P1 Leachate MH - 2(jun25)
- P1 Leachate MH - 2(sep25)
- P1 Leachate MH - 2(oct25)
- Area 3 (LS #4)(sep25)
- Area 3 (LS #4)(oct25)

Note:
The date each sample was collected is written as (monthYY)

GLENMORE LANDFILL
GLENMORE, BRITISH COLUMBIA
CITY OF KELOWNA

PIPER PLOT - TILL UNIT WELLS

Project No. **12676030**
Date **February 2026**

FIGURE 4

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Plot Date: February 12 2026 1:02 PM

2025 Landfill Gas Collection Efficiency Study – Glenmore Landfill

Date:	March 25, 2026
Project Name:	2025 Landfill Gas Collection Efficiency Study – Glenmore Landfill Site
Project No.:	KELGLTSS
Attention:	Scott Hoekstra, City of Kelowna
Client:	City of Kelowna
Prepared By:	Chris Kyriazis, Jacobs
Reviewed By:	Chuck Smith and Channy Shen, Jacobs
Document No.:	260317083229_dce52fcb
Revision No.:	Final
Copies To:	Brian Beulah, City of Kelowna

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1. Introduction

The City of Kelowna (City) has retained Jacobs Consultancy Canada Inc. (Jacobs) to provide the 2025 estimated landfill gas (LFG) collection system efficiency for the Glenmore Landfill (Site) at 2710-2720 John Hindle Drive, Kelowna, British Columbia (BC).

This technical memorandum (TM) has been prepared using three waste composition studies (Tetra Tech 2025, 2021; Morrison Hershfield Ltd. 2016) and various waste filling data (CH2M 2010; Jacobs 2025; Beulah pers. comm. 2026a; and Beulah pers. comm. 2026b). The LFG recovery was assessed, along with the factors influencing actual LFG generation and recovery at the Glenmore Landfill (Site). The collection system's efficiency was calculated using the formulas contained within the BC Ministry of Environment and Parks' (BEP's) LFG Management Facilities Design Guidelines (CRA 2010). Note that the BC Ministry of Environment and Climate Change Strategy (BC MOECCS) was officially renamed to BEP in late 2024.

2. Background

The Site is beside Glenmore Road approximately 1.5 kilometres (km) east of Okanagan Lake and 9 km northeast of the Kelowna city centre. The Site is owned and operated by the City. It has an estimated available airspace of 36,507,715 cubic metres (m^3) and an estimated Site life of 100 years (GHD 2023). The Site has been in operation since 1966 (GHD 2023).

The Site has an active LFG collection system, which is used to manage LFG generated from the buried municipal solid waste. The LFG collection system is made up of a series of horizontal gas recovery wells. LFG generated within the waste is drawn from the horizontal wells under vacuum and conveyed to a third-party–owned and operated biomethane processing facility for upgrading to pipeline-quality gas (renewable natural gas). LFG can also be conveyed to the City's blower and flare facility for thermal destruction when the biomethane facility is offline. The current gas collection system extends through both Phase 1 and Phase 2 sections of the Site as well as into waste fill Areas 1 and 2. The initial LFG collection system was installed in 2005 and has been continually expanded through the addition of new horizonal LFG wells and collection system piping. These infrastructure additions are typically completed on an annual basis by the City as new waste lifts are completed and fill areas are ready and accessible for gas recovery.

In August 2023, the Site was damaged by the Clifton McKinley Fire that swept through portions of the Site. The surface fire swept through the southwestern area of the landfill damaging LFG recovery wells and infrastructure installed from the southern portion of Area 1 down to the southern boundary of Phase 2. The City's LFG collection system operating capacity was reduced by about 50 to 60% of the flow rate before the fire. The damaged gas collection infrastructure construction repairs and commissioning were completed in fall 2024 to restore full operation of the LFG management system.

Landfilling occurred in Phase 1 and Phase 2 and in the Sliver Fill, Areas 1, 2, and 3 during 2025. In 2025, the total annual buried municipal solid waste was estimated at 167,243 tonnes (Beulah, pers. comm. 2026a).

3. Regulatory Framework

On December 8, 2008, BEP ordered and approved a regulation for the management of LFG at BC-regulated landfill sites. In accordance with the Landfill Gas Management Regulation (Regulation), a regulated landfill site is any landfill that has 100,000 tonnes or more of municipal solid waste (MSW) in place or has received 10,000 or more tonnes of MSW annually for disposal into the landfill site in any calendar year after 2008 (BC MOECCS 2008). With over 100,000 tonnes disposed of annually, the Site is classified as a regulated landfill.

Once a landfill falls under the Regulation, a qualified professional is required to conduct an initial LFG generation assessment (Assessment) using their knowledge with respect to solid waste and LFG management to select models for LFG estimation, assess results, and provide required recommendations. The Assessment must be conducted in accordance with the most recent edition of LFG guidance documents, as approved by the BEP Director. The guidance documents include the *Landfill Gas Generation Assessment Procedure Guidelines* (BEP LFG Guideline) that were prepared by Conestoga-Rovers & Associates, dated March 2009, and the Landfill Gas Generation Estimation Tool – for Annual Reporting (Tool) provided by BC Environmental Protection and Sustainability (BC EPS 2022). Both are available on the BC EPS website and must be used in the preparation of the Assessment (CRA 2009). The City submitted its first Assessment report in 2010 (CH2M 2010).

4. Landfill Gas Generation Assessment Methodology

This section summarizes the information required in the Regulation, in accordance with the BEP LFG Guideline, Section 4, Information Collection and Synthesis.

4.1 Annual Waste Buried

Table 1 presents the estimated annual amount of MSW disposed of at the Site between 1996 and 2026, as well as the projected volume of waste to be disposed at the Site for 5 years after the LFG collection efficiency study year, which corresponds to the year 2030. Although wastes have been disposed at the Site since 1966, Table 1 shows tonnages from 1996, as needed to estimate LFG generation using the BC EPS simulation Tool.

The tonnage of refuse disposed at the Site between 2010 and 2024 is based on a previous LFG collection efficiency study (Jacobs 2025). The 2025 tonnage of waste landfilled at the Site is based on personal communication with Brian Beulah, Environmental Technician, LFG Operations at the City, on February 3, 2026. The assumed projected annual tonnage for years 2026 through 2030 is based on the Landfill Design and Operations Closure Plan (GHD 2023).

Table 1. Annual Quantity of Waste Disposed at the Site

Years	Waste Disposed (tonnes)	Cumulative Waste Disposed (tonnes)
1996	80,794	80,794
1997	95,904	176,698

Table 1. Annual Quantity of Waste Disposed at the Site

Years	Waste Disposed (tonnes)	Cumulative Waste Disposed (tonnes)
1998	83,756	260,454
1999	85,258	345,712
2000	89,547	435,259
2001	95,815	531,074
2002	102,522	633,596
2003	96,772	730,368
2004	106,483	836,851
2005	108,597	945,448
2006	116,218	1,061,666
2007	102,688	1,164,354
2008	100,611	1,264,965
2009	114,590	1,379,555
2010	119,861	1,499,416
2011	106,387	1,605,803
2012	108,110	1,713,913
2013	108,917	1,822,830
2014	123,178	1,946,008
2015	136,115	2,082,123
2016	154,510	2,236,633
2017	151,456	2,388,089
2018	166,916	2,555,005
2019	156,566	2,711,571
2020	145,704	2,857,275
2021	154,079	3,011,353
2022	158,114	3,169,468
2023	146,911	3,316,379
2024	152,347	3,468,726
2025	167,243	3,635,969
2026	178,085	3,814,054
2027	182,537	3,996,591
2028	186,918	4,183,509
2029	191,217	4,374,726
2030	195,232	4,569,958

4.2 Waste Characterization Categories

Characterization according to waste type is required to follow the BEP LFG Guideline. Waste must be characterized into three categories: (1) relatively inert, (2) moderately decomposable, and (3) decomposable. The most recent available waste composition study, *Regional District of Central Okanagan 2024 Waste Composition Study* (Tetra Tech 2025) was used to determine the proportions of relatively inert, moderately decomposable, and decomposable waste materials for years 2024 and 2025. The *Regional District of Central Okanagan 2020–2021 Waste Composition Study* (Tetra Tech 2021) was

used for years 2020 to 2023. The *2013 Waste Composition Study of Regional District of Central Okanagan* (Morrison Hershfield Ltd. 2016) was used for year 2019 and earlier.

The various waste streams, including tonnage and percentages of total waste buried at the Site in 2025, were provided by the City and are summarized in Table 2 (Beulah, pers. comm. 2026a).

Table 2. 2025 Waste Stream Tonnage and Percentage of Total

Waste Stream	Tonnes	Percentage (%)
Residential (Cart) Garbage	52,101.42	31.15
Commercial (ICI) Garbage	41,782.34	24.98
C&D Debris	57,089.57	34.14
Contaminated Soil	15,142.86	9.05
Asbestos	990.76	0.59
Gypsum	127.72	0.08
Others	8.00	0.00
Total	167,242.67	100

C&D = construction and demolition

ICI = industrial, commercial, and institutional

Based on the newly available *2024 Waste Composition Study of Regional District of Central Okanagan* (Tetra Tech 2025), the buried wastes for 2025 at the Site are categorized as follows:

- Decomposable waste: 16.70% by weight of total waste buried
- Moderately decomposable waste: 38.18% by weight of total waste buried
- Relatively inert waste: 45.12% by weight of total waste buried

4.3 Waste Tonnage by Waste Characterization Category

Table 3 presents the historical and projected waste tonnages, as well as the waste characterization category, as described in previous sections.

Table 3. Waste Tonnage by Category

Years	Waste Disposed (tonnes)	Relatively Inert (tonnes)	Moderately Decomposable (tonnes)	Decomposable (tonnes)
1996	80,794	21,814	43,629	15,351
1997	95,904	25,894	51,788	18,222
1998	83,756	22,614	45,228	15,914
1999	85,258	23,020	46,039	16,199
2000	89,547	24,178	48,355	17,014
2001	95,815	25,870	51,740	18,205
2002	102,522	27,681	55,362	19,479
2003	96,772	26,128	52,257	18,387
2004	106,483	28,750	57,501	20,232
2005	108,597	29,321	58,642	20,633
2006	116,218	31,379	62,758	22,081
2007	102,688	27,726	55,452	19,511
2008	100,611	27,165	54,330	19,116
2009	114,590	30,939	61,879	21,772

Table 3. Waste Tonnage by Category

Years	Waste Disposed (tonnes)	Relatively Inert (tonnes)	Moderately Decomposable (tonnes)	Decomposable (tonnes)
2010	119,861	32,362	64,725	22,774
2011	106,387	28,724	57,449	20,214
2012	108,110	29,190	58,379	20,541
2013	108,917	29,408	58,815	20,694
2014	123,178	33,258	66,516	23,404
2015	136,115	36,751	73,502	25,862
2016	154,510	41,718	83,435	29,357
2017	151,456	40,893	81,786	28,777
2018	166,916	45,067	90,135	31,714
2019	156,566	42,273	84,546	29,748
2020	145,704	37,883	78,680	29,141
2021	154,079	50,892	70,642	32,545
2022	158,114	49,347	71,989	36,777
2023	146,911	52,082	62,718	32,111
2024	152,347	47,371	69,470	35,506
2025	167,243	75,463	63,854	27,926
2026	178,085	80,355	67,993	29,737
2027	182,537	82,364	69,693	30,480
2028	186,918	84,340	71,366	31,212
2029	191,217	86,280	73,007	31,929
2030	195,232	88,092	74,540	32,600

Note:

Waste Disposed data are from Table 1; other data are based on calculations. Tonnage of each category before 2020 is based on the *2019 Landfill Gas Collection Efficiency Study – Glenmore Landfill Site* (CH2M 2020).

5. Landfill Gas Generation Model

Methane production at the Site was estimated using the Tool specified by BC EPS for annual reporting. The model is based on a first-order kinetic decomposition rate equation for quantifying emissions from the decomposition of wastes in MSW landfills. Table 4 presents the parameters required to run the model.

Table 4. Input Parameters Used in the Tool

Input Parameters or Constants	LFG Generation Model
	BC EPS LFG Guideline and Calculation Tool
First year of historical data used	1996
Year of Assessment	2026
Annual waste tonnage	Annual waste acceptance from 1996 to 2025 Annual waste tonnages for relatively inert, moderately decomposable, and decomposable wastes
k	Methane generation rate
Methane generation rates	For relatively inert, moderately decomposable, and decomposable wastes
Lo	Methane generation potential

Table 4. Input Parameters Used in the Tool

Input Parameters or Constants	LFG Generation Model
	BC EPS LFG Guideline and Calculation Tool
Waste types	Relatively inert, moderately decomposable, and decomposable wastes

The following assumptions were used in the Tool:

- Lag time before start of gas production: 1 year
- Methane by volume: 50%
- Carbon dioxide by volume: 50%
- Methane density at 1 atmosphere, 25 degrees Celsius (°C): 0.6557 kilogram per cubic metre (kg/m^3)
- Carbon dioxide density, 25°C: 1.7988 kg/m^3

5.1 Model Input Parameters Used and Justification

The model input parameters used and the justification for their use are described as follows.

5.1.1 Climate Information

The average annual precipitation of the nearest meteorological station (Kelowna A #1123970, at the Kelowna Airport) is 386.9 millimetres (mm) based on Canadian Climate Normals between 1981 and 2010 (Government of Canada 2022). For this Assessment, the average annual precipitation data from the Kelowna A station were used to calculate the methane generation rate.

5.1.2 Methane Generation Rate

Input parameters used for the constant, k, are based on the BEP LFG Guideline, Table 5.2 (CRA 2009).

According to the annual precipitation of 386.9 mm, the model input k-values for this Site are as follows:

- 0.01 per year (y^{-1}) for relatively inert waste
- 0.02 y^{-1} for moderately decomposable waste
- 0.05 y^{-1} for decomposable waste

However, the *National Inventory Report 1990–2017: Greenhouse Gas Sources and Sinks in Canada* (NIR) (ECCC 2020) adopted a new methodology, which uses a new formula to calculate the k-value from precipitation.

The k-value is calculated as follows:

$$k(y^{-1}) = 7 \times 10^{-5} \times precipitation(mm) - 0.0172 \quad (1)$$

With a precipitation of 386.9 mm, the calculated k-value for Kelowna is 0.00988. The new k-value for each category is proportionally calculated as follows, based on Table 5.2 of the BEP LFG Guidance:

- 0.00371 y^{-1} for relatively inert waste
- 0.00741 y^{-1} for moderately decomposable waste
- 0.01853 y^{-1} for decomposable waste

These new k -values were used in this study.

According to the BEP LFG Guideline, Section 5.4, the selected k-value should be corrected based on the landfill's operations and maintenance practices, including stormwater management, cover properties, and the extent of leachate recirculation or stormwater injection. According to Tables 5.3 and 5.4 of the BEP LFG Guideline, the water addition factor appropriate for the Site conditions in 2025 is 1.0. The reason is as follows: There is partial infiltration of stormwater into the waste.

5.1.3 Methane Generation Potential (Lo)

The input parameters used for the Lo values are based on the BEP LFG Guideline, Table 5.1 (CRA 2009). For this Site, the model uses the following Lo values:

- 20 m^3 of methane per metric tonne of waste for relatively inert waste
- 120 m^3 of methane per metric tonne of waste for moderately decomposable waste
- 160 m^3 of methane per metric tonne of waste for decomposable waste

6. Landfill Gas Model Results

This section presents the results of the Assessment in accordance with the latest available waste disposal data and future waste disposal projections for the Site. Table 5 presents the updated annual methane production using the Tool (Attachment 1).

Table 5. Annual Methane Production Using the BEP Calculation Tool for the Glenmore Landfill

Estimated Quantity of Methane Produced	Year	Tonnes per Year
In the year preceding the Assessment	2025	2086
In the year of the Assessment	2026	2154
1 year after the Assessment	2027	2227
2 years after the Assessment	2028	2302
3 years after the Assessment	2029	2379
4 years after the Assessment	2030	2457

According to the Tool results, 2,086 tonnes of methane were generated in 2025, which corresponds to a methane generation rate (at 25°C, 101.3 kilopascals) of approximately 363.1 cubic metres per hour (m^3/h), or 213.7 standard cubic feet per minute (scfm). Using a typical LFG composition of 50% methane and 50% carbon dioxide by volume, the LFG generation rate in 2025 is about 726 m^3/h (427 scfm).

7. Landfill Gas System Efficiency

This section summarizes the LFG collection data and collection efficiency for 2025.

7.1 2025 Landfill Gas Collection Data

In 2025, 1,450,913 m^3 of LFG were destroyed through flaring, and 2,817,864 m^3 of LFG were processed through the Kelowna Biogas Plant (KGBP) for beneficial use by FortisBC (Beulah, pers. comm. 2026b). This equates to a total of 4,268,778 m^3 (at 16°C and 101,560 pascals [Pa]) of LFG collected from the landfill or 4,411,855 m^3 (at 25°C and 101,325 Pa).

7.2 2025 Landfill Gas Collection Efficiency

In accordance with the BEP LFG Design Guidelines, collection efficiency (CE) is calculated based on the following equation:

$$CE = \left(\frac{Q_c}{Q_p}\right) \times 100\% \quad (2)$$

Where:

CE = Collection efficiency expressed as a percentage (%)

Q_c = Normalized average collected flow rate of LFG in the given calendar year (m^3/h) at 25°C and 101,325 Pa

Q_p = Estimated generated LFG flow rate in given calendar year (m^3/h), which is calculated by the Tool at 25°C and 101,325 Pa

The normalized average collected flow rate of LFG (Qc) is calculated according to the following equation:

$$Q_c = Q_a \times \frac{C_m}{50\%} \quad (3)$$

Where:

Q_a = Average measured LFG flow rate (m^3/h) at 25°C and 101,325 Pa

C_m = Annual average methane concentration measured during LFG management system uptime at a central collection point near the blower or combustion and utilization device of the LFG management system expressed as a percentage (%)

The average measured LFG flow rate (Q_a) is measured according to the following:

$$Q_a = \frac{V_{LFG}}{(24 \times number\ of\ days\ in\ that\ year)} \quad (4)$$

Where:

V_{LFG} = Total volume of LFG collected in the calendar year 2025 (cubic metres per year); 2025 has 365 days

Based on this formula:

$$Q_a = \frac{V_{LFG}}{(24 \times 365)}$$

$$Q_a = \frac{4{,}411{,}855\ m^3}{(24\ h/day \times 365\ days)} = 503.64\ m^3/h$$

$$Q_p = 726.16\ m^3/h\ (from\ tool)$$

Based on record data:

$$C_m = 59.9\%\ (Beulah\ 2026b, pers.comm)$$

$$Q_c = Q_a \times \frac{C_m}{50\%} = 503.64\ m^3/h \times \frac{59.9\%}{50\%} = 603.36\ m^3/h$$

$$CE = \left(\frac{Q_c}{Q_p}\right) \times 100\% = \left(\frac{603.36\ m^3/h}{726.16\ m^3/h}\right) \times 100\% = 83.09\%$$

The final CE of the LFG collection system is estimated to be 83%.

8. Closure

The conclusions represent the best judgment of the assessor based on historical data, predicted waste disposal rates, and current models and guidelines.

Sincerely,

Jacobs Consultancy Canada Inc.



Chris Kyriazis, P.Eng.
Project Engineer

Channy Shen, M. Sc.
Senior Environmental Scientist



Chuck Smith, P.Eng.
Senior Technical Consultant

JACOBS CONSULTANCY CANADA INC.
PERMIT TO PRACTICE # 1003650
ENGINEERS & GEOSCIENTISTS BC

9. Limitations

The findings and conclusions of this TM are based on information provided by the City, which is assumed to be correct, and certain assumptions as outlined in this TM. Except as provided for in this TM, Jacobs has made no independent investigation as to the accuracy or completeness of the information obtained from the City or from other secondary sources during completion of this work. In some cases, however, information data gaps exist. The interpretation and findings of this TM were limited in these situations.

This TM was prepared using analyses and procedures consistent with generally accepted professional engineering consulting principles and practices. No other warranty, expressed or implied, is made. This TM is solely for the use and information of the City of Kelowna (our client) unless otherwise noted. Any reliance on this TM by a third party is at such party's sole risk.

Criteria contained herein apply to conditions existing when services were performed and are intended only for the purposes, locations, and project parameters indicated. Jacobs is not responsible for the impacts of any changes in environmental standards, practices, or regulations subsequent to performance of services.

10. References

Beulah, B., Environmental Technician, Landfill Gas Operations, City of Kelowna. 2026a. Personal communication (email) with Chuck Smith, Jacobs. February 3.

Beulah, B., Environmental Technician, Landfill Gas Operations, City of Kelowna. 2026b. Personal communication (email) with Chuck Smith, Jacobs. March 2.

British Columbia Ministry of Environment and Climate Change Strategy (BC MOECCS). 2008. *Landfill Gas Management Regulation*. Government of BC ordered and approved December 8, 2008. Last amended March 30, 2022. https://www.bclaws.gov.bc.ca/civix/document/id/complete/statreg/391_2008.

British Columbia Environmental Protection and Sustainability (BC EPS). 2022. *Landfill Gas Generation Estimation Tool – for Annual Reporting*. Accessed February 9, 2022. http://www2.gov.bc.ca/gov/content/environment/waste-management/garbage/landfills.

CH2M HILL Canada Limited (CH2M). 2010. *Landfill Gas Generation Assessment Report – Glenmore Landfill Site*.

CH2M HILL Canada Limited (CH2M). 2020. *Final 2019 Landfill Gas Collection Efficiency Study – Glenmore Landfill Site.*

Conestoga-Rovers & Associates (CRA). 2009. *Landfill Gas Generation Assessment Procedure Guidelines*. Prepared for BC Ministry of Environment. March. https://www.env.gov.bc.ca/epd/codes/landfill_gas/pdf/lg-assessment.pdf.

Conestoga-Rovers & Associates (CRA). 2010. *Landfill Gas Management Facilities Design Guidelines*. Prepared for BC Ministry of Environment. March. https://www2.gov.bc.ca/assets/gov/environment/waste-management/garbage/designguidelinesfinal.pdf

Environment and Climate Change Canada (ECCC). 2020. *2019 National Inventory Report 1990–2017: Greenhouse Gas Sources and Sinks in Canada*.

GHD Limited (GHD). 2023. *Design, Operations, and Closure Plan. Glenmore Landfill*. Prepared for the City of Kelowna. December 22.

Government of Canada. 2022. *Station Results – 1981–2010 Climate Normals and Averages*. https://climate.weather.gc.ca/climate_normals/station_select_1981_2010_e.html?searchType=stnName&txtStationName=kelowna&searchMethod=contains. Accessed February 10, 2022.

Jacobs. 2025. *2024 Landfill Gas Collection Efficiency Study – Glenmore Landfill Site*. March 25.

Morrison Hershfield Ltd. 2016. *2013 Waste Composition Study of Regional District of Central Okanagan*. Prepared for the City of Kelowna.

Tetra Tech. 2021. *Regional District of Central Okanagan 2020–2021 Waste Composition Study*. Prepared for the Regional District of Central Okanagan.

Tetra Tech. 2025. *Regional District of Central Okanagan 2024 Waste Composition Study*. Presented to the Regional District of Central Okanagan. January 22.

Attachment 1
British Columbia Ministry of Environment and Parks' Methane Generation Estimation Tool – for Annual Reporting Results for the Glenmore Landfill Site

Year of Assessment	2026		LFG Management Regulation Reference
Annual Tonnage in Preceding Year	167,243	(tonnes/year)	4-2-a
Total waste in Place in the Preceding Year	3,635,969	(tonnes/year)	4-2-c
Methane generation in the Preceding Year	2,086	(tonnes CH4/year)	4-2-d

Next Five Years	Waste Tonnage (tonnes)	Methane Generation (tonnes CH4/year)	
2026	178,085	2,154	4-2-b & 4-2-e
2027	182,537	2,227	4-2-b & 4-2-e
2028	186,918	2,302	4-2-b & 4-2-e
2029	191,217	2,379	4-2-b & 4-2-e
2030	195,232	2,457	4-2-b & 4-2-e

	Relatively Inert	Moderately Decomposable	Decomposable	
Gas Production potential, Lo =	20	120	160	m^3 CH4/tonne
lag time before start of gas production, lag =	1	years		
Historical Data Used (years)	30			
1st Year of Historical Data Used	1996			
4 Years after Reporting Year	2030			
methane (by volume)	50%			
carbon dioxide (by volume)	50%			
methane (density) - 1atm, 25C	0.6557	kg/m^3	(25C,SP)	
carbon dioxide (density)	1.7988	kg/m^3	(25C,SP)	

Year	Year Number	Annual Tonnage (tonnes)	Cumulative Waste-in-place (tonnes)	Waste Tonnage Relatively Inert (tonnes)	Waste Tonnage Moderately Decomposable (tonnes)	Waste Tonnage Decomposable (tonnes)	Methane Generation Rate, k Relatively Inert ($year^{-1}$)	Methane Generation Rate, k Moderately Decomposable ($year^{-1}$)	Methane Generation Rate, k Decomposable ($year^{-1}$)	Annual Methane Production (tonnes/yr)
1996	1	80,794	80,794	21,814	43,629	15,351	0.00371	0.00741	0.01853	0.00
1997	2	95,904	176,698	25,894	51,788	18,222	0.00371	0.00741	0.01853	56.35
1998	3	83,756	260,454	22,614	45,228	15,914	0.00371	0.00741	0.01853	122.50
1999	4	85,258	345,712	23,020	46,039	16,199	0.00371	0.00741	0.01853	179.31
2000	5	89,547	435,259	24,178	48,355	17,014	0.00371	0.00741	0.01853	236.42
2001	6	95,815	531,074	25,870	51,740	18,205	0.00371	0.00741	0.01853	295.78
2002	7	102,522	633,596	27,681	55,362	19,479	0.00371	0.00741	0.01853	358.74
2003	8	96,772	730,368	26,128	52,257	18,387	0.00371	0.00741	0.01853	425.56
2004	9	106,483	836,851	28,750	57,501	20,232	0.00371	0.00741	0.01853	487.50
2005	10	108,597	945,448	29,321	58,642	20,633	0.00371	0.00741	0.01853	555.42
2006	11	116,218	1,061,666	31,379	62,758	22,081	0.00371	0.00741	0.01853	623.93
2007	12	102,688	1,164,354	27,726	55,452	19,511	0.00371	0.00741	0.01853	696.88
2008	13	100,611	1,264,965	27,165	54,330	19,116	0.00371	0.00741	0.01853	759.45
2009	14	114,590	1,379,555	30,939	61,879	21,772	0.00371	0.00741	0.01853	819.77
2010	15	119,861	1,499,416	32,362	64,725	22,774	0.00371	0.00741	0.01853	889.07
2011	16	106,387	1,605,803	28,724	57,449	20,214	0.00371	0.00741	0.01853	961.16
2012	17	108,110	1,713,913	29,190	58,379	20,541	0.00371	0.00741	0.01853	1022.93
2013	18	108,917	1,822,830	29,408	58,815	20,694	0.00371	0.00741	0.01853	1085.12
2014	19	123,178	1,946,008	33,258	66,516	23,404	0.00371	0.00741	0.01853	1147.09
2015	20	136,115	2,082,123	36,751	73,502	25,862	0.00371	0.00741	0.01853	1218.22
2016	21	154,510	2,236,633	41,718	83,435	29,357	0.00371	0.00741	0.01853	1297.47
2017	22	151,456	2,388,089	40,893	81,786	28,777	0.00371	0.00741	0.01853	1388.54
2018	23	166,916	2,555,005	45,067	90,135	31,714	0.00371	0.00741	0.01853	1476.33
2019	24	156,566	2,711,571	42,273	84,546	29,748	0.00371	0.00741	0.01853	1573.78
2020	25	145,704	2,857,275	37,883	78,680	29,141	0.00371	0.00741	0.01853	1662.78
2021	26	154,079	3,011,354	50,892	70,642	32,545	0.00371	0.00741	0.01853	1745.83

Year	Year Number	Annual Tonnage (tonnes)	Cumulative Waste-in-place (tonnes)	Waste Tonnage			Methane Generation Rate, k			Annual Methane Production (tonnes/yr)
				Relatively Inert (tonnes)	Moderately Decomposable (tonnes)	Decomposable (tonnes)	Relatively Inert ($year^{-1}$)	Moderately Decomposable ($year^{-1}$)	Decomposable ($year^{-1}$)	
2022	27	158,114	3,169,468	49,347	71,989	36,777	0.00371	0.00741	0.01853	1830.39
2023	28	146,911	3,316,379	52,082	62,718	32,111	0.00371	0.00741	0.01853	1922.75
2024	29	152,347	3,468,726	47,371	69,470	35,506	0.00371	0.00741	0.01853	1999.50
2025	30	167,243	3,635,969	75,463	63,854	27,926	0.00371	0.00741	0.01853	2085.51
2026	31	178,085	3,814,054	80,355	67,993	29,737	0.00371	0.00741	0.01853	2153.69
2027	32	182,537	3,996,591	82,364	69,693	30,480	0.00371	0.00741	0.01853	2227.18
2028	33	186,918	4,183,509	84,340	71,366	31,212	0.00371	0.00741	0.01853	2302.26
2029	34	191,217	4,374,726	86,280	73,007	31,929	0.00371	0.00741	0.01853	2378.87
2030	35	195,232	4,569,958	88,092	74,540	32,600	0.00371	0.00741	0.01853	2456.95